

Annual Report

Department of Health Services
2075/76 (2018/19)



Government of Nepal
Ministry of Health and Population
Department of Health Services

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मा. भानु भक्त ढकाल
Hon. Bhanu Bhakta Dhakal

स्वास्थ्य तथा जनसङ्ख्यामन्त्री
Minister for Health and Population



नेपाल सरकार
Government of Nepal



रामशाहपथ, काठमाडौं, नेपाल ।
Ramshahpath, Kathmandu, Nepal
Website: www.mohp.gov.np

☎ : ०१-४-२६२५३४
☎ : ०१-४-२६२५३४
फ्याक्स : ०१-४-२६२५६५
Fax : ०१-४-२६२५६५

स्वास्थ्य तथा जनसङ्ख्या मन्त्रालय
Ministry of Health and Population



MESSAGE

The Government of Nepal, Ministry of Health and Population is committed to deliver the highest possible quality of health care to all Nepalese. The ministry is determined to translate the aspirations of the Constitution of Nepal 2072, National Health Policy 2071 and the Nepal Health Sector Strategy 2072-2077, in achieving Universal Health Coverage together with all stakeholders including private sector, public sector and external development partners. I am pleased to note that several outstanding achievements have been made in the health sector in the past decade. The health outcomes achieved so far are the results of joint effort of the ministry and all health sector stakeholders.

I am pleased to know that Department of Health Services (DoHS) is bringing out the annual report of fiscal year 2075/76 (2018/19), 25th report in its series. The annual report is a comprehensive document based on the annual performance of all components of the health care delivery system along with their reviews accomplished at the local, provincial and federal levels. It provides detailed and up to date information with regards to resources, services provided, analytical trends and disease patterns in the country. Data on disease conditions, people are suffering from service utilization and other data related to health care delivery services are very much important for planning purposes. Furthermore, as the country has been transformed from unitary system to federal system of governance; the information provided by the annual report would be very fruitful for each level during planning, implementation and evaluation of health-related activities.

I am hopeful that, this annual report of DoHS will be helpful for policy makers, managers, decision makers, evaluators, researcher and students. I hope this document will be very helpful for further improvement of health services in Nepal.

To conclude, I congratulate all involved in the preparation and publication of this Annual Report for their technical and financial co-operation.

Ashar, 2077

Minister

नवराज रावत
Navraj Rawat



नेपाल सरकार
Government of Nepal

मा. राज्यमन्त्री
Hon. State Minister

स्वास्थ्य तथा जनसङ्ख्या मन्त्रालय
Ministry of Health and Population

रामशाहपथ, काठमाडौं, नेपाल ।
Ramshahpath, Kathmandu, Nepal

फोन : ०१-४-२४३६७२
Phone : 01-4-243672
फ्याक्स : ०१-४-२६२४६८
Fax : 01-4-262468

पत्र संख्या (Ref.No.):

चलानी नं. (Dispatch No.):

मिति (Date):



MESSAGE



In line with the article 35 of the Constitution of Nepal 2072, the Nepal Government is committed to provide health care services to its citizens residing all over the country. Universal Health Coverage is one of the priority agendas of the National Health Policy 2071 and Nepal Health Sector Strategy. As a signatory to Sustainable Development Goals (SDG), Nepal is also committed to achieve the SDG targets. I am excited to peruse the progress that has been achieved during fiscal year 2075/76; the current challenge is to sustain the progress in the days to come.

This annual report of Department of Health Services (DoHS) describes the activities that were conducted in fiscal year 2075/76 throughout the health system of the country. This is a result of the hard work of the entire team of DoHS. I would like to thank all the team members who are directly and indirectly involved during preparation and finalization of this report.

I am confident that this annual report of DoHS will be helpful for policy makers, public health professionals, researchers and students. This report will play an important role in policy formulation, planning and programming.

I would like to extend my sincere gratitude to all health-related cadres; from FCHV level to the top-level policy makers who had tried their level best to improve the health of the Nepalese people. Again, I would like to thank all the key stakeholders including governmental and non-governmental agencies involved in the preparation of this annual report.

Mr. Navraj Rawat
Hon'ble State Minister

Shrawan, 2077

नवराज रावत
राज्यमन्त्री



Government of Nepal
Ministry of Health and Population



Phone: 4.

262987
262590
262802
262706
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262862

**Ramshahpath, Kathmandu
Nepal**

Ref.:

Date :

PREFACE



It is my immense pleasure to release the annual report of Department of Health Services (DoHS) for the fiscal year 2018/19. Health sector is one of the priority sectors of the Government of Nepal. I am delighted to share that major indicators of the health sector are progressing in the right direction towards the achievement of Universal Health Coverage and Sustainable Development Goals.

Nepal has moved into a federal form of governance from unitary systems. The health system has also been restructured that is in-line with the constitutional mandate. At this stage, Nepal's health sector experiences a number of challenges as well as opportunities for uplifting the health status of the Nepalese people. I am confident that the data presented in this annual report will play an important role in planning and implementing evidence based program in the changed context. Additionally, this report is instrumental in reporting the progress against the indicators outlined in Government of Nepal's 15th Periodic Plan.

This report would not have been possible if FCHVs, health cadres, Programme managers at all levels had not performed their tasks with complete dedication and sincerity for their untiring efforts to bring improvements in the health status of the Nepalese people.

Strong collaboration between governmental and non-governmental sector has played an instrumental role in achieving success in health in the past years. I hope this collaboration continues and the bond will only get stronger. The Ministry of Health and Population is committed to develop necessary policies strategies and guidelines to boost this coordination in the days to come.

Finally yet importantly, I would like to extend my sincere gratitude to all the stakeholders and development partners for their valuable contributions to the health sector. I hope this annual report will be a valuable resource for all the stakeholders to design and implement evidence-based programs.

Mr. Laxman Aryal
Secretary
Ministry of Health and Population
Shrawan, 2077



Government of Nepal
Ministry of Health and Population
Department of Health Services

4-261712
4-261436
Fax: 4-262268



Division

Pachali, Teku
Kathmandu, Nepal

Ref No.:

Date:.....

Sub:

FOREWORD



This is the 25th edition in the uninterrupted series of annual reports published by the Department of Health Services (DoHS), Ministry of Health and Population (MoHP). This annual report is one of the outcomes of the annual performance review workshops conducted at various levels. It reflects the performances of all major programs and activities implemented by various health institutions at all levels from community to the centre. This report covers major health issues, challenges and way forward to improve the health service delivery.

The facts and figures presented in the report are based on the information generated through Health Management Information system (HMIS) and other sources in the health sector. This report provides comprehensive information regarding health policies, strategies, plan activity, service coverage and achievements made in the last three fiscal years, as well as program issues that emerged during the fiscal year 2075/76. This report also covers progress of activities carried out by other departments under the MoHP and External Development Partners (EDPs) during the reference years.

As the country has transitioned to a new health care delivery structure following federalization, this report provides information as per provincial as well as local levels. There definitely is a room for improvement in the overall quality of routine HMIS data and other data sources included in this report, which we aspire to improve in the days to come. The facts provided in this report will act as the basis for planning health care service delivery for citizens of Nepal in the coming year. Furthermore, using this year's lessons, we will also focus on routine and regular use of data generated at each level in the upcoming year.

I am pleased to state that most of the activities planned by different Divisions/Centres have been carried out successfully. This achievement would not have been possible without the commitment and dedication of the staff of the DoHS working in difficult remote areas. However, more collaborative efforts are required to deliver quality health care services to meet the aspiration of the people as envisaged by the National Health Policy 2071 and National Health Sector Strategy 2072-2077.

I would like to extend my sincere appreciation to all Female Community Health Volunteers, all categories of health workers working in the health facilities for their untiring efforts in providing health services at the community level. I would also like to thank the Directors of Divisions and Centres, Provincial Health Directors, Chief of Sections, the Municipal health team for their meticulous support to implement the health programs. My appreciation also goes to all the EDPs, INGOs, NGOs, and private health sector for contributing significantly to improve the health status of the people in all corners of the country.

I am also grateful to all the officials of the DoHS for their support and coordination. Finally, I would like to thank the Director of the Management Division and in particular the staff of the Integrated Health Information Management Section for their valuable contribution in preparation and publication of this report.

Dr. Dipendra Raman Singh
Director General
Director General
Shrawan, 2077



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Ministry of Health and Population
Department of Health Services

4-261712
4-261436
Fax: 4-262268

.....Division



**Pachali, Teku
Kathmandu, Nepal**

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ACKNOWLEDGEMENT



It is my pleasure to bring forth coming of the 25th Annual Report of the Department of Health Services (DoHS) for the fiscal year 2075/76 (2018/19). This report is also a reflection of annual performance of all components of the health care delivery system along with their reviews conducted at various levels of health service delivery. It is a compilation of major activities carried out by the health institutions at all levels. The data presented in this report is based on the information submitted by the institutions to the Health Management Information System (HMIS) and other sources.

The report includes information about health care services and activities of public and private institutions providing health care to the Nepalese people. It also highlights the trend and patterns in service coverage and continuum of care. Furthermore, it also informs us about the program target and achievement with respect to budget allocation and expenditure. The report not only identifies pertinent issues, problems and constraints but also suggests actions to be taken to address these issues in order to improve the services in the days to come. All most importantly, this fiscal year 2075/76 (2018/19) annual report provides the information for all three levels of government as the country has been transformed into federal structure. This imperative publication provides detailed statistical analysis of health program target verses achievement and indicators. DoHS has published excel sheet of raw and analysed data in the webpage of DoHS, so that it can be used by the researchers and program managers effectively.

I express my sincere gratitude to the Hon'ble Minister of Health and Population Mr. Bhanu Bhakta Dhakal for praiseworthy message. Furthermore, I would like to thank Hon'ble State Minister of Health and Population Mr. Navraj Rawat for commendable messages and direction. I am also thankful to the Secretary of Ministry of Health and Population Mr. Laxman Aryal for his leadership of the overall health sector and providing a meaningful preface for the report. Similarly, I express my sincere gratitude towards Dr. Dipendra Raman Singh, Director General, DoHS for his leadership, future directions and thoughtful guidance.

I would like to thank the Mr. Badri Nath Jnawali, Director of the Integrated Health Information Management Section (IHIMS) and his team members for their contribution in preparation and publication of this report. I also take this opportunity to offer my sincere appreciation to EDPs, INGOs and NGOs who have joined us in service delivery programs and submitting their brief annual activity progress report.

To conclude, I hope that this report will be of great help in strengthening the health services in Nepal. I also hope that it will provide validated information to all those who work for uplifting the health status of all citizens, particularly the poor and vulnerable group of the Nepali society.

Dr. Ramesh Kumar Kharel
Director

Shrawan, 2077



Government of Nepal
Ministry of Health and Population
Department of Health Services

4-261712
4-261436
Fax: 4-262268



.....Division

Pachali, Teku
Kathmandu, Nepal

Ref No.:

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Date:.....



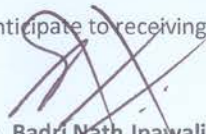
It is a matter of great pleasure for me to release the Annual Report of the Department of Health Services (DoHS) for the fiscal year 2075/76 (2018/19) within anticipated time. The report is being published regularly since the last 25 years. It is a comprehensive report covering all major activities and achievements of the DoHS along with other departments under the Ministry of Health and Population (MoHP). It also includes the contributions of external development partners, non-governmental organizations and private sectors as well.

This report is the official record of the services provided and the achievements made within the last year in the health sector. This report provides information as per the federal structure of the country. The information included in this report will thus be instrumental for newly formed provincial and local level governments to understand the issues in the health sector and to plan for provision of high quality services to their constituents in the coming year. For researchers, academics and students, I hope that this report provides an opportunity to learn and innovate new approaches to improve the quality of health services in Nepal. This report can also serve as a tool to assess the areas where we were successful, so that interventions can be replicated and scaled up.

I express my sincere gratitude to the Hon'ble Minister of Health and Population Mr. Bhanu Bhakta Dhakal and Hon'ble State Minister of Health and Population Mr. Navraj Rawat for commendable messages. I am also thankful to the Secretary of Ministry of Health and Population Mr. Laxman Aryal for providing a meaningful preface for the report. Similarly, I express my sincere gratitude towards Dr. Dipendra Raman Singh, Director General and Dr. Ramesh Kumar Kharel, Director of Management Division of DoHS for his leadership, future directions and thoughtful guidance for the preparation of report.

I also extend my thanks to the Directors of the different divisions, centres and section Chiefs for providing analytical reports. My colleagues working in the Integrated Health Information Management Section's Mr. Puspa Lal Shrestha, Mr. Diwakar Sapkota, Mr. Bir Bahadur Rawal, Mr. Shiva Lal Sharma, Mr. Sameer Kumar Adhikari, Mr. Sushil Nepal, Mrs. Nabina Pradhananga, Mrs. Minu Adhikari Khanal and Mr. Gopal Adhikari deserve special appreciation for their meticulous and hard work in bringing out this report. I feel indebted to all those who worked restlessly for recording, reporting, compiling, processing and analysing service and progress reports timely, without which this report publication would not have been possible.

I anticipate to receiving valuable suggestions for further improvement in the coming years report.


Mr. Badri Nath Jnawali
Director

Integrated Health Information Management Section (IHIMS)

Shrawan, 2077

ABBREVIATIONS AND ACRONYMS

AEFI	Adverse event following immunization	DPT	Diphtheria, Pertussis, Tetanus
AES	Acute encephalitis syndrome	DQSA	Data quality self-assessment
AFP	Acute flaccid paralysis	DSS	Dengue shock syndrome
AFS	Adolescent-friendly services	EDP	External development partners
AGE	Acute gastroenteritis	EHCS	Essential health care services
AIDS	Acquired immuno-deficiency syndrome	EID	Early infant diagnosis
AMR	Antimicrobial resistance	EmOC	Emergency obstetric care
ANC	Antenatal care	EOC	Essential obstetric care
API	Annual parasite incidence	EPI	Expanded Programme on Immunization
ARI	Acute respiratory infection	EQA	External quality assurance
ART	Antiretroviral therapy	EWARS	Early Warning and Reporting System
ARV	Anti-rabies vaccine and antiretroviral	FCHV	Female community health volunteer
ASBA	Advanced skilled birth attendant	FSW	Female sex worker
ASRH	Adolescent sexual and reproductive health	G2D	Grade 2 disability
ASVS	Anti-snake venom serum	GIS	Geographic information system
BC	Birth centre	GMP	Good manufacturing practice
BCC	Behaviour change communication	GGBV	Geriatric and Gender Based Violence
BMEAT	Biomedical equipment assistant training	HFOMC	Health facility operation and management committee
BMET	Biomedical equipment training	HIB	Health Insurance Board
bOPV	Bivalent oral polio vaccine	IMIS	Insurance Management Information System
BTSC	Blood transfusion service centre	IHIMS	Integrated Health Information Management System
IMCI	Integrated Management of Childhood Illness programme	HIV	human immunodeficiency virus
IMNCI	Integrated Management of Neonatal and Childhood Illness	ICD	International Classification of Diseases
NCP	Integrated Management of Newborn Care Programme	ICT	immunochromatographic test
CBO	Community-based organisation	IDA	Iron deficiency anaemia
PMTCT	Prevention of Mother to Children Transmission	IDD	Iodine deficiency disorder
CCE	Comprehensive centres of excellence	IEC	Information, education and communication
CDD	Control of diarrheal disease	IFA	Supplementary iron folic acid
CEONC	Comprehensive emergency obstetric and neonatal care	IMAM	Integrated Management of Acute Malnutrition
CHX	Chlorhexidine	IPV	Inactivated polio vaccine
cMYPoA	Comprehensive Multi-Year Plan of Action	IRS	Indoor residual spraying
CNR	Case notification rate	ISMAC	Iodized salt social marketing campaign
CoFP	Comprehensive family planning	IUCD	Intrauterine contraceptive device
CPR	Contraceptive prevalence rate	JE	Japanese encephalitis
CRS	Congenital rubella syndrome	LAMA	left against medical advice
CTEVT	Council for Technical Education and Vocational Training	LAPM	Long acting and permanent methods
DAMA	Discharged against medical advice	LARC	Long acting reversible contraceptive
DHF	Dengue haemorrhagic fever	LLIN	Long lasting insecticidal (bed) nets
DHIS	District Health Information System	LMIS	Logistics Management Information System
DOTS	Directly Observed Treatment Short Course	LTF	Lost to follow-up
		MA	Medical abortion
		MAM	Management of Acute Malnutrition
		MB	Multibacillary leprosy

MCH	Maternal and child health	PCD	Pulmonary clinically diagnosed
mCPR	Modern contraceptive prevalence rate	PCV	Pneumococcal conjugate vaccine
MCV	Measles-containing vaccine	PDR	Prenatal death review
MD	Management Division	PEM	Protein energy malnutrition
MDA	Mass drug administration	PEN	Package of Essential Non-communicable Diseases
MDG	Millennium Development Goal	Pf	Plasmodiumfalciparum
MDGP	Doctor of Medicine in General Practice	PHC-ORC	Primary health care outreach clinics
MDIS	Malaria Disease Information System	PLHIV	People living with HIV
MDR	Multi-drug resistant	PMTCT	Prevention of mother to child transmission
MDT	Multi-drug therapy	PNC	Postnatal care
MDVP	Multi-dose vaccine vials	POP	Pelvic organ prolapse
MIYCN	Maternal, Infant, and Young Children Nutrition programme	PPH	Postpartum haemorrhage
MNCH	Maternal, newborn and child health	PSBI	Possible severe bacterial infection
MNH	Maternal and newborn health	Pv	Plasmodium vivax
MNP	Micro-Nutrient Powder	PWID	People who inject drugs
MoHP	Ministry of Health and Population	QI	Quality improvement
MPDSR	Maternal and perinatal death surveillance and response	RDT	Rapid diagnostic tests
MR	Measles/rubella	RTI	Reproductive tract infection
MSM	Men who have sex with men	SARC	Short acting reversible contraceptive
MSNP	Multi-sector Nutrition Plan	SARI	Severe acute respiratory infection
MVA	Manual vacuum aspiration	SBA	Skilled birth attendant/attendance
NAHD	National Adolescent Health and Development (Strategy)	SHSDC	Social Health Security Development Committee
NAMS	National Academy for Medical Sciences	SRH	Sexual and reproductive health
NCD	Non-communicable disease	SS+	Smear positive
NCDR	New case detection rate	STI	Sexually transmitted infections
NDHS	Nepal Demographic and Health Survey	SUN	Scaling-Up-Nutrition
NEQAS	National External Quality Assurance Scheme	TABUCS	Transaction Accounting and Budget Control System
NHCP	National Health Communication Policy	Td	Tetanus and diphtheria
NHSP-IP	Nepal Health Sector Programme-Implementation Plan	TIMS	Training Information Management System
NHSS	Nepal Health Sector Strategy (2015-20),	TSCL	Technical school leaving certificate
NIP	National Immunization Programme	TT	Tetanus toxoid
NMICS	Nepal Multiple Indicator Cluster Survey	TTI	Transfusion transmissible infection
NTP	National Tuberculosis Programme	VA	Verbal autopsy and visual acuity
OCMC	One Stop Crisis Management Centre	VAD	Vitamin A deficiency
OPD	Outpatient	VPD	Vaccine-preventable disease
OPV	Oral polio vaccine	VSC	Voluntary surgical contraception
ORS	Oral rehydration solution	WASH	Water, sanitation and hygiene
OTTM	Operation theatre technique and management	WPV	Wild poliovirus
PAM	Physical assets management	WRA	Women of reproductive age
PB	Paucibacillary leprosy		
PBC	Pulmonary bacteriological confirmed		

Department of Health Services
Trend of Health Service Coverage Fact Sheet
Fiscal year 2073/74 to 2075/76 (2016/17 to 2018/19)

Programme Indicators	National			FY 2075/76 (2018/19) by Province							National Target	
	2073/74 (2016/17)	2074/75 (2017/18)	2075/76 (2018/19)	1	2	Bag mati	Gandaki	5	Karnali	Sudur Paschim	2020	2030
NUMBER OF HEALTH FACILITIES												
Public hospitals	123	125	125	19	13	35	16	17	12	13		
PHCCs	200	198	196	40	32	41	23	30	14	16		
HPs	3808	3808	3806	647	745	641	491	570	335	377		
Non-public facilities	1715	1822	2168	150	203	1417	119	156	74	49		
HEALTH FACILITIES & FCHVs REPORTING STATUS (%)												
Public facilities:												
Public hospitals	93	96	88	100	97	64	91	94		99	100	100
PHCCs	98	98	99	100	100	97	100	100	100	100	100	100
HPs	100	98	99	100	100	99	99	100	100	100	100	100
Non-public facilities:												
FCHVs	72	72	95	91	94	94	93	99	94	97	100	100
IMMUNIZATION STATUS (%)												
BCG coverage	91	92	91	87	107	81	72	98	102	84		
DPT-HepB-Hib3 coverage	86	82	86	83	105	71	72	90	99	82	90	>95%
MR2 coverage (12-23 months)	57	66	73	75	71	60	77	84	78	75		
Fully Immunized children*	73	70	68	71	71	54	61	74	79	71	90	95
Dropout rate DPT-Hep B- Hib 1 vs 3 coverage	4.7	7.4	4.3	2.9	7.9	3.2	2	4	2.4	2.7	< 10 %	< 5 %
Pregnant women who received TD2 and TD2+	64	73	64	59	83	48	52	73	69	63		
NUTRITION STATUS (%)												
Children aged 0-11 months registered for growth monitoring	85	84	84	78	78	69	92	100	117	86	100	100
Underweight children among new GM visits (0- 11m)	3.5	3.6	3.0	1.7	4.2	2.1	0.9	3.0	5.0	4.0		
Children aged 12-23 months registered for growth monitoring	54	56	58	49	59	44	69	64	80	58	100	100
Underweight children among new GM visits (12- 23m)	5.7	5.7	4.5	2.9	5.6	1.8	1.5	5.4	8.5	7.2		
Pregnant women who received 180 tablets of Iron	44	45	81	39	5.7	30	62	61	61	68		
Postpartum mothers who received vitamin A supplements	72	66	65	57	91	41	46	65	98	68		
IMNCI STATUS												
Incidence of pneumonia among children U5 years (per 1000) (*HF and PHC/ORC only)	66	54	83	116	65	55	58	76	159	110		
% of children U5 years with Pneumonia treated with antibiotics	156	165	136	128	203	111	145	127	120	113		
% of children U5 years with Pneumonia treated with antibiotics (Amoxicillin)	na	102	136	128	203	145	127	116	114	111	100	100
Incidence of diarrhea per 1,000 under five years children	400	385	375	351	347	240	268	404	683	624		
% of children under 5 with diarrhea treated with ORS and zinc	92	95	95	90	102	93	97	94	99	94	100	100
SAFE MOTHERHOOD (%)												
Pregnant women who attended first ANC visit (any time)	102	103	110	114	118	106	108	110	127	90		
Pregnant women who attended four ANC visits as per protocol	53	50	56	61	41	51	70	65	62	58	70	90

Programme Indicators	National			FY 2075/76 (2018/19) by Province							National Target	
	2073/74 (2016/17)	2074/75 (2017/18)	2075/76 (2018/19)	1	2	Bag mati	Gandaki	5	Karnali	Sudur Paschim	2020	2030
Institutional deliveries *	55	54	63	62	53	62	48	79	73	71	70	90
Deliveries conducted by skilled birth attendant*	52	52	60	61	51	61	47	73	59	61	70	90
Mothers who had three PNC check-ups as per protocol*	19	16	16	9	15	14	13	9	24	31	50	90
FAMILY PLANNING (%)												
Contraceptive prevalence rate (CPR-unadjusted)*	43.6	40.0	40	41	47	33	34	43	35	39	56	60
CPR (Spacing methods)	21	18	19	19	9	17	17	28	21	23		
FEMALE COMMUNITY HEALTH VOLUNTEERS (FCHV)												
Number of FCHVs	49416	51420	51420	8990	7534	9004	5709	8795	4108	6060		
% of mothers' group meeting held	86	98	95	92	95	95	93	99	94	98	100	100
MALARIA AND KALA-AZAR												
Annual blood slide examination rate (ABER) per 100	0.79	1.3	1.6	2.6	1.8	1.2	1.0	2.6	1.0	1.6	4.0	
Annual parasite incidence (API) per 1,000 population at risk	0.08	0.08	0.09	0.01	0.03	0.02	0.03	0.1	0.2	0.2	0.05	
% of PF among Malaria Positive case	13.1	7.1	5.4	26.3	16.7	30.8	17.2	4.6	0.4	3.1		
Number of new Kala-azar cases	225	239	216	34	19	25	4	42	50	39		
TUBERCULOSIS												
Case notification rate (all forms of TB)/100,000 pop.	111	112	109	89	112	123	90	127	78	110	NA	NA
Treatment success rate	91	91	91	90	91	91	94	90	94	88	>90	>90
LEPROSY												
New case detection rate (NCDR) per 100,000 population	11	11	11	10	24	3	4	14	5	9	10	7
Prevalence rate (PR) per 10,000	0.9	0.9	0.9	0.9	1.9	0.5	0.4	1.1	0.5	1.1	0.1	0.4
HIV/AIDS and STI												
Number of new positive cases	1781	2101	2298	287	373	583	165	552	25	313		
CURATIVE SERVICES												
% of population utilizing outpatient (OPD) services	72	74	78	76	58	85	106	81	92	72		
Average length of stay at hospital	3	4	4	3	2	4	4	5	3	3		
Note: *NHSS RF and/or SDG indicators												
Source: HMIS, EDCC, NSSD, NCASC & NTC/DoHS												

EXECUTIVE SUMMARY

INTRODUCTION

The annual report of the Department of Health Services (DoHS) for fiscal year 2075/76 (2018/19) is the twenty-fifth consecutive report of its kind. This report focuses on the objectives, targets and strategies adopted by Nepal's health programmes and analyses their major achievements and highlights trends in service coverage over three fiscal years. This report also identifies issues, problems and constraints and suggests actions to be taken by health institutions for further improvements.

The main institutions that delivered basic health services in 2075/76 were the 135 public hospitals including other ministries, the 2,168 non-public health facilities, the 196 primary health care centers (PHCCs) and the 3,806 health posts. Primary health care services were also provided by 12,532 Primary Health Care Outreach Clinic (PHCORC) sites. A total of 16,428 Expanded Programme of Immunization (EPI) clinics provided immunization services. These services were supported by 51,420 Female Community Health Volunteers (FCHV). The information on the achievements of the public health system, NGOs, INGOs and private health facilities were collected by DoHS's Health Management Information System (HMIS).

PROGRESS OF OTHER DEPARTMENTS UNDER MoHP

The Department of Drug Administration (DoA) Government of Nepal has promulgated the Drug Act 1978, to prohibit the misuse or abuse of medicines and allied pharmaceutical materials as well as the false or misleading information relating to efficacy and use of medicines and to regulate and control the production, marketing, distribution, export-import, storage and utilization of those medicines which are not safe for the use of the people, efficacious and of standard quality.

In accordance with the objectives of the National Health Policy 1991, the National Drug Policy 1995 has been formulated and implemented. It focuses on establishing co-ordination among government, non-government and private organizations involved in the activities related to medicine production, import, export, storage, supply, sales, distribution, quality assessment, regulatory control, rational use and information flow. Achieving the aims and objectives of National Drug Policy is another important area for DDA.

Department of Ayurveda and Alternative Medicine (DoAA) primarily manages the delivery of Ayurveda & Alternative Medicine Services and promotes healthy lifestyles through its network facilities all across the country.. Its manages Ayurveda health services are being delivered through one Central Ayurveda Hospital (Nardevi), one Provincial Hospital (Dang), 14 Zonal Ayurveda Dispensaries, 61 District Ayurveda Health Centers and 305 Ayurveda dispensaries across the country. The Ayurveda and Alternative Medicine unit in the Ministry of Health & population (MoHP) is responsible for formulating policies and guidelines for Ayurveda and other traditional medical system.

Fifteen plan of government of Nepal (2019/20-2023/24) has guided planned development & expansion of Ayurveda, Naturopathy, Homeopathy & other alternative medicines. More specifically, it says: 1) Structural development suitable for identification, prevention, collection & promotion of locally available medicinal herbs, minerals & animal origin medicines. 2) Management & regulation of other alternative medicines based on standards & norms. 3) Establishment of Ayurveda, Yoga & Naturopathy Center and utilization of Ayurveda for promotion of health tourism.

Department of Health Services under programs:

National Immunization Program (NIP)

NIP of Nepal (Expanded Program on Immunization) was started in 2034 BS and is a priority 1 program. It is one of the successful public health programs of Ministry of Health and Population, and has achieved several milestones contributing to reduction in morbidity and mortality associated with vaccine preventable diseases. NIP has cMYP 2017 - 2021 aligned with global, regional and national guidelines, policies and recommendations to guide the program for five years. All activities outlined in the cMYP are costed and has strategies for implementation.

NIP has a very good track record of meeting the targets for control, elimination and eradication of vaccine preventable diseases. Small pox has now become history due to eradication in 2034 BS (1977 AD). Maternal and neonatal tetanus (MNT) was eliminated in 2005 and the elimination status has been sustained since then. The last case of polio in Nepal was in 2010, and along with other countries of the South East Asia Region, Nepal was certified polio free in 2014. This status has been maintained since then.

In August 2018, Nepal was certified as having achieved control of rubella and congenital rubella syndrome. This certification is two years ahead of the regional target year of 2020 and one year ahead of the national target of 2019. However, even though measles burden has been reduced by > 95% compared to 2003, the national target of achieving measles elimination by 2019 has not been met. In September 2019, member countries of WHO South-East Asia Region, including Nepal, have resolved to eliminate both measles and rubella by 2023 to prevent deaths and disabilities caused by these highly infectious childhood killer diseases. Measles, which is one of the most infectious diseases, will require very high coverage (> 95%) with both first and second routine immunization doses of measles-rubella (MR) vaccine in every community, municipality, district, province, and nationally. To quickly close the immunity gap to measles (and rubella), MoHP has planned nation-wide MR campaign from mid-February to mid-April 2020 (in Falgun and Chaitra 2076) including OPV in 19 selected districts of Terai.

In July 2019, Nepal was certified of having achieved hepatitis B control among children through immunization as the prevalence of the disease (sero-prevalence of HBsAg) dropped to less than < 1% (0.13% only) among 5-6 year old children.

Nepal is the first country in the South East Asia Region to have Immunization Act, thus supporting and strengthening the National Immunization Program. Immunization Act 2072 was published in the Official Gazette on 26 January 2016. Based on the Act, Nepal has Immunization Regulation 2074, which was published in the Official Gazette on 6 August 2018.

National immunization coverage of BCG has decreased by 1% point in FY 2075/76. However, the coverage of DTP-HepB-Hib 3 and OPV 3 has increased compared to previous year. IPV global shortage started from FY 2073/74. Instead of IPV (given one dose intramuscular at 14 weeks), fractional dose of IPV (given Intradermal at 6 and 14 weeks) was launched in Nepal in October 2018. For, therefore the coverage of fIPV is 60% in FY 2075/76. PCV 1 coverage has been maintained at 88%, whereas coverage of PCV 2 and 3 has increased by 1% point compared to previous year. MR 1 coverage has increased by 3% compared to previous year and MR2 coverage has increased significantly by 7% points compared to previous year. For measles elimination, high coverage of both MR 1 and 2 is required (> 95%). Therefore, coverage of both MR 1 and MR 2 is still not satisfactory. The coverage of JE vaccine has been decreased by 5% point. The coverage of TD vaccine has increased by 2% point compared to previous year. The wastage rate is 27% which is very

low than the previous wastage rate of IPV, but should be lower than 20%. For all re-constituted vaccine (BCG, MR and JE) than need to be discarded within 6 hours (1 hour for JE) or at the end of the immunization session whichever comes first, so wastage rates are expected to be higher. National dropout rates for BCG vs MR1, DPT-HepB-Hib 1st vs 3rd and MR 1 vs MR 2 all have decreased compared to previous year showing improvement and all dropout rates are within 10%. The reporting rate for immunization dataset in HMIS was only 80% in FY 2075/76. Therefore, it can be assumed that vaccine coverage in actual is higher than reported.

Integrated Management of Neonatal and Childhood Illnesses (IMNCI)

This integrated package of child-survival intervention addresses the major problems of sick newborn such as birth asphyxia, bacterial infection, jaundice, hypothermia, low birth-weight, counseling of breastfeeding and address major childhood illnesses like Pneumonia, Diarrhea, Malaria, Measles and Malnutrition among under five years children in a holistic way.

In FY 2075/76, a total of 29,106 newborn cases were registered and treated at health facilities and PHC/ORC which is higher than that of previous FY by 3,428 cases. Out of total registered cases in FY 2075/76, 11.7 percent cases were classified as Possible Severe Bacterial Infection (PSBI) which is slightly less than that of previous year (13.9%).

Among the total registered cases at the national level (HF and PHC-ORC level), 43.7 percent cases were classified as LBI, 5.3 percent as Jaundice, and 5.7 percent as Low Birth weight or Breast Feeding Problem. The proportion of LBI slightly increases than that of previous year but the proportion of Jaundice and LBW decreases compared to last year. Among total cases, 4.8 percent cases were referred and 0.4 percent were reported dead from health facilities and PHC-ORC level. 14,321 sick newborn were identified by FCHV and among them 28 percent were treated with amoxicillin and referred. 1,254 newborn were identified dead by FCHV.

In FY 2075/76, 29,77,254 children were estimated to have been prone to diarrhoea (2-59 months). Among them, total 11,24,873 diarrhoeal cases were identified (381,206 at HF and ORC & 7,43,667 by FCHV). The incidence of diarrhoea was 375/1000 with case fatality rate 0.17/1000. 95.5 percent of diarrhoeal cases were treated with zinc and ORS, whereas 0.26 percent were given IV fluids.

Similarly, 29,59,086 under 5 children were estimated to have been prone to ARI. Total 7,89,777 children were identified to have ARI in HF and ORC and 10,33,059 ARI cases were identified by FCHV. Among total ARI cases found in HF and ORC, 19.1 percent were identified having pneumonia whereas 0.27 percent have severe pneumonia. 177.2 percent of pneumonia cases were treated with antibiotic. 178 under five children died due to ARI in HF and ORC with case fatality rate of 0.06 per 1000. As per CBIMNCI protocol, the total of 140 falciparum and 774 non falciparum malaria cases; 1,262 measles cases; 97,782 ear infection; 9,116 severe malnutrition and 6,081 anaemia cases were identified among under five children in FY 2075/76.

Nutrition

The National Nutrition Programme is priority programme of the government. It aims to achieve the nutrition well-being of all people so that they can maintain a healthy life and contribute to the country's socioeconomic development. There is a high-level commitment to improve the nutritional status especially of Adolescence, Pregnant and Lactating mother, and Children under five.

In FY 2075/76, the percentage of new-born with low birth weight (<2.5 kg) was 11.2 %. Nationally in these fiscal years average number of growth monitoring visit per child (0-23) months is 3.1. Seventy

Executive Summary

one percent of the children age 0-23 months were registered for growth monitoring. From these 3.5 % of the children were reported as underweight.

During growth monitoring, 33.3 % children were exclusively breastfed, 6-8 months registered for growth monitoring who receive solid, semi solid or soft foods was 33%.

Total 12,139 children of 0 months to 5 years with SAM admitted in outpatient and inpatient therapeutic centers. Among discharged SAM cases, 75 percent were recovered, less than 1 percent died and 20 percent were defaulter. Similarly, 2226 children were admitted in Nutrition Rehabilitation Home (NRH). Out of these children 1102 were male 1124 were female. Among these NRH children 1891 children were less than five years, 391 were more than or equal to five years. From these total discharge children were 2193.

In context of micronutrient supplementation, the compliance of taking 180 tablets throughout the pregnancy is 61 percent and 45-days during post-partum period is 56%. Average 51 percent of children aged 6 to 23 months had taken their first cycle of MNP in the 41 programme districts.

Households using adequately iodized is 95 percent. Vitamin A supplementation coverage is around 80% and deworming tablet distribution coverage is 82%. Likewise, coverage of school deworming is 19 percent for girls and 38 percent for boys.

In case of emergency, Nepal experienced continuous rainfall for days starting from 11 July 2019. This triggered widespread flooding and landslides in 35 of the country's 77 districts. After two weeks of flood, Nutrition cluster conducted rapid nutrition assessment of 6-59 months children by using MUAC tape. Total 5,310 flood affected children aged 6-59 months were assessed out of them 192 children were identified as severe acute malnutrition (4.53%), and 882 children were found as Moderate Acute Malnutrition (16.61%) and Global Acute Malnutrition is 21.14%. Treated 2,248 children with Severe Acute Malnutrition in the eight flood affected districts of Province number 2.

- Initiated IYCF counseling services through FCHVs and MSNP volunteers to the family of G1000D
- Provided blanket supplementary feeding programme to 28,658 children aged 6-59 months and 9,858 pregnant and lactating women.
- Nutrition cluster BCC working group developed Joint messages on nutrition, health and WASH in three languages (Maithili, Bhojpuri and Nepali) and aired through 50 local FM radios in 8 districts (Nepali-29, Maithili-12, Bojpuri-9) of province 2 and Sunsari and Udayapur of Province number 1.

In 2075/76 response for the floods, Nutrition cluster reached 1,400,772 children of 6-59 months and 160,950 pregnant and lactating women in 18 flood affected districts. Vitamin A supplemented (1,400,772), counselling on breast feeding and complementary feeding to the caretakers of 0-23 months children (297,281), screening of children (630,976), treatment of SAM (15,201), deworming of 12-59 months children (1,209,568), iron and folic acid tablets to PLW (160,950). Similarly, 190,379 children aged 6-59 months and 52,902 PLW reached with blanket supplementary feeding; and 23,392 children aged 6-59 months with MAM and 6,617 women with acute malnutrition reached with Targeted supplementary feeding programme.

On 31 March 2019 at night, massive storm with strong hurricane hit several places in southern district of Bara and adjoining to Parsa. From the storm, 26 deaths were reported in Bara and one death in Parsa districts due to hurricane and lightning on Sunday night. From the hurricane, about 20 wards of local government were affected. Immediate after this hurricane, nutrition cluster members met together and planned for the response actions. Immediately district-based nutrition

cluster was also mobilized along with the UNICEF team from Janakpur, MSNP district coordinators from Bara, Parsa and Rautahat, MSNP volunteers, health workers and FCHVs, the following response actions were implemented:

- Activated eight Outpatient Therapeutic Centers of Bara district are in the Tornado affected Palikas such as; Kalaiya Hospital, Motairwa Health Post, Bariayarpur Health post, Herdiya PHCC, Piparbatijabdhhi Health Post, Pheta Health Post, Prasauni health Post and Rampur Health Post. Pheta and Rampur.
- Treated a total 132 Children with Severe acute malnutrition with Ready to Use Therapeutic Food.
- Radio Messages on Infant and Young Child Feeding in emergencies, newborn care, care of pregnant and lactating women was prepared by nutrition cluster and broadcasted from FM radio stations on local language.

Safe Motherhood and Newborn Health

Family Welfare Division (FWD) has been implementing National Safe Motherhood Programme to reduce maternal and neonatal morbidity and mortality and improve maternal and neonatal health through preventive and promotive activities and by addressing avoidable factors that cause death during pregnancy, childbirth and the postpartum period. The proportion of pregnant women attending at least 4 ANC visits as per the protocol has increased from 53 percent in 2073/74 and 50 percent in 2074/75 to 56 percent in 2075/76. The percentage of women who had at least one ANC check-up in FY 2075/76 is 110% at national level. Institutional deliveries as percentage of expected live births has increased to 63 percent in 2075/76 from 54 and 55 percent in FY 2073/74 and FY 2074/75 respectively. In FY 2075/76, 18 percent of institutional deliveries were conducted by CS and in comparison to last fiscal year there was one percentage point increase in the percentage of CS delivery.

By the end of 2075/76, CEONC services were established in 72 districts and altogether 2101 HPs and 188 PHCCs reported to have providing delivery services. Similarly, a total of 320 municipalities of 33 districts implemented onsite clinical coaching and mentoring programme based on coaching/mentoring guideline and tool in 2075/76. FWD also expanded hospital quality improvement process (HQIP) in 45 CEONC hospitals in 43 districts in this year. The percentage of births attended by SBAs increased to 60 percent in FY 2075/76 from 52 percent for both FY 2073/74 and FY 2074/75. However, the proportion of mothers attending three PNC visits as per the protocol declined from 19 percent in 2073/74 to 16 percent in FY 2074/75 and FY 2075/76. Comprehensive abortion care (manual vacuum aspiration [MVA]) services were made available in all 77 district hospitals and majority of PHCCs in this year.

A total of 158 sites for MA and 33 sites for MVA were listed to provide safe abortion services in FY 2075/76. A total of 61,160 women received MA and 37,480 received surgical abortion services in this fiscal year. Total SAS users were 96,417 women in 2073/74, 98,640 in 2074/75 and 95,746 in 2075/76. Share of medical abortion among total safe abortion service users was increased over the last few years, from 53 percent in 2072/73 to 66 percent in 2075/76. The proportion of women who had a safe abortion and then used contraceptives increased from 75 percent in 2074/75 to 76 percent in 2075/76.

Family Planning and Reproductive Health

National family planning programme (FP) in 2075/76 experienced a downturn in uptake of family planning services. National and Provincial mCPR has decreased. The modern contraceptive prevalence rate (mCPR) for modern FP at national level 40%. mCPR of Terai (43%) is higher than

national average. Province 2 has the highest mCPR of 46% while Bagmati Province the lowest (32%). Nationally, current users (absolute numbers) of all modern methods have decreased by 26,355 in 2075/76 than in previous year. The number of districts with mCPR below 30 % has decreased from 18 in 2074/75 to 13 in 2075/76 indicating below par performance among the low mCPR districts. The trends of current users of permanent methods are in decreasing trend while that of long acting reversible contraceptive (LARCs) currents users is almost stagnant at national level but is in increasing trend in Provinces 1, 2, Bagmati, 5 and Sudurpashchim Province. Female sterilization is popular in Terai and male sterilization is more popular in Mountain and Hiil than Terai. Contraceptive implant compared to IUCD seems to be more popular among women of reproductive age in all ecological region of Nepal. Contraceptive defaulters, a proxy indicator for contraceptive discontinuation, are high in Nepal. About 59% of contraceptive users have discontinued using the method or switched to another contraceptive method. Compared to SARCs (short acting reversible contraceptives—pills and Depo), LARCs has low defaulter rate in all Provinces. Trends of contraceptive discontinuation have increased in 2075/76.

Depo (37%) occupies the greatest part of the contraceptive method mix for all method new acceptors, followed by condom (24%), implant (13%), IUCD (3%), female sterilization (ML 3%) and lastly male sterilization (NSV 1%) in 2075/76. Nationally, new acceptors of all modern methods (absolute numbers) have increased by 25,000 while new acceptors of all temporary methods (absolute numbers) have also nominal increased in 2075/76. LARCs, implant new acceptors significantly dominated over IUCD in all provinces and ecological regions. There has been nominal increase in post-partum uptake of FP method. Post abortion FP use is encouraging. Contraceptive uptake among total reported abortion services is 75.4%, an increase from past year (70.7%) but only 23% is contributed by LARCs indicating women after abortion are relying on less effective methods.

Adolescent sexual and reproductive health

Nepal is one of the country in South Asia which has developed and endorsed the first National Adolescent Health and Development (NAHD) Strategy in 2000. National Adolescent Sexual and Reproductive Health (ASRH) is one of the priority programs of Family welfare Division. To address the needs of emerging issues of adolescents in the changing context, the NAHD strategy is revised in 2018 the main aim of revision of strategy was to address the problem face by the adolescent in Nepal. Adolescents aged 10 to 19 constitute 24% (6.4 million) of the population in Nepal. To enable all adolescents to be healthy, Happy, competent and responsible and To create safe, supportive and protective environment for all adolescents is ensured through increase in adolescents' access to scientifically sound and age appropriate information about their health and development and enhancing life skills and improve the health status of adolescent.

The National ASRH program has been gradually scaled up to 74 of the 77 districts (Khotang, Chitawan, Tanahu not implemented in this three district) 1,331 health facilities till the end of current fiscal year 2075/76. In Fiscal year 2075/76 ANC 1st check up in women less than 20 years is significantly increased in province 2 in comparison to previous years. Gandaki province remains the lowest in 1st antenatal checkups in age below 20 years women amongst all provinces. Likewise, the new acceptors for the Modern method of family planning is highest in province 2 for Depoprovera whereas lowest in province for Intra uterine contraceptive devices (IUCD)among women below 20 years of age.

The proportion of women receiving the safe abortion services has significantly decreased in the Province 5 in FY 2075/76 in comparison with previous years Whereas Sudurpaschhim. Province has the lowest numbers of all the women receiving the safe abortion service in all 3 fiscal Years compared to the other provinces. Whereas the total number of the women less than 20 years

receiving the abortion services is dropped in FY 2075/76 in comparison to FY 2074/75 and 2075/76.

High rates of child marriage, low contraceptive use among adolescent population and Lack of disaggregated ASRH data (by age/sex) and integration in HMIS still remains the strong challenges for the effective implementation of the ASRH program in the nation. However utilizing the minimum resources to the maximum capacity Adolescent friendly health listed health facility has been reached to 1331 and certified sites are 73 nationwide ensuring rights of every adolescent to quality sexual and reproductive health rights through information counseling and health services with integration to the other sectors.

Primary Health Care Outreach Clinics

Based on the local needs PHC/ORCs are conducted every month at fixed locations of the VDC on specific dates and time. The clinics are conducted within half an hour's walking distance for the population residing in that area. Primary health care outreach clinics (PHC/ORC) extend basic health care services to the community level.

In 2075/76, 2.8 million people were served at 138,125 outreach clinics (Table 4.7.1). A total of 138,125 clinics were run which represents 92% of the targeted number (138,125 clinics x 12 = 1,657,500 in a year). There has been slight increase in conduction of PHC-ORC Clinics and an average 21 clients were served per day per outreach clinic. There has been a gradual increment in the conduction of PHC-ORC and number of clients served to Last FY. In last FY 2074/75, 90% of PHC-ORC clinics were conducted and an average 20 clients were served per day per outreach clinics.

Malaria

Nepal has surpassed the Millennium Development Goal 6 by reducing malaria morbidity and mortality rates by more than 50% in 2010 as compared to 2000. Therefore, Government of Nepal has set a vision of Malaria free Nepal by 2025. Current National Malaria Strategic Plan (NMSP) 2014-2025 was developed based on the epidemiology of malaria derived from 2012 micro-stratification. The aim of NMSP is to attain "Malaria Free Nepal by 2025".

Total positive cases of malaria slightly decreased from 1187 in 2074/75 to 1065 in 2075/76, where 440 cases are indigenous cases and 625 are imported cases due to active surveillance. The proportion of *P. falciparum* infections is in decreasing trend and reached 5.4% in FY 2075/76 as compared to the previous year, however still the proportion is high which may be due to high number of imported *P. falciparum* cases. The trend of indigenous pf malaria cases are decreasing while imported cases of pf are in increasing trend. The trend of clinically suspected malaria case, slide positivity rate, pf and pv malaria cases also decreasing year by year, mainly due to increased coverage of RDT, microscopic laboratory service at peripheral level, high coverage of LLINs in high and moderate districts and increased socio-economic status of community people.

Kala-azar

Kala-azar is one of the high priority public health problems of Nepal. Most of the districts have been continuously reported new cases of Kala-azar in recent years. Therefore, to eliminate Kala-azar from Nepal, strategies to improve health status of vulnerable and risk population has been made focusing on endemic areas of Nepal, which leads to elimination of Kala-azar, and it no longer becomes a public health problem. The incidence of kala-azar at national and district level has been less than 1/10,000 population since 2013. The trend of KA cases has been decreasing significantly for the last several years. In 2075/76, there has been slight decrease in reported cases (228 Kala-azar cases) compared to previous year (239).

Lymphatic filariasis

Lymphatic Filariasis (LF) is a public health problem in Nepal. The goal of national Lymphatic Filariasis programme is the people of Nepal no longer suffer from lymphatic filariasis. As of 2075/76, MDA has been stopped (phased out) in 48 districts, post-MDA surveillance initiated in 48 districts and morbidity management partially initiated in all endemic districts. All endemic districts completed the recommended six rounds of MDA in 2018. The LF elimination programme has also indirectly contributed to strengthening of health system through trainings and capacity building activities. The transmission assessment survey in 20 districts in 2018 found that the prevalence of infection had significantly reduced. Since 2003 more than 100 million doses of lymphatic filariasis drugs have been administered to at-risk population. 9002 hydrocele surgeries have been performed since 2016 to till 2075/76.

Dengue

Dengue, a mosquito-borne disease emerged in Nepal in since 2005. The goal of national Dengue control program is to reduce the morbidity and mortality due to dengue fever, dengue haemorrhagic fever (DHF) and dengue shock syndrome (DSS). The number of reported dengue cases has decreased significantly since 2010 but cases of dengue were increased in recent years. During FY 2075/76, 3424 dengue cases were reported from 44 districts (Table 5.1.4.1). The majority of cases have been reported from Sunsari (88%), Makawanpur (2.4%), Morang (2.3%) and Rupandehi (1.6%). As well there were 2 confirmed deaths due to Dengue — one each from Sunsari and Morang.

Leprosy

During the FY 2075/76 (2018/2019), total number of 3282 new leprosy cases were detected and put under Multi Drug Therapy (MDT). 2921 cases were under treatment and receiving MDT at the end of the fiscal year. Registered prevalence rate of 0.99 cases per 10,000 populations at national level was reported this year which is below the cut-off point means below 1 case per 10,000 population as per the standard set by WHO. 156 (4.75%) new leprosy cases of Grade 2 Disability (G2D), 260(7.92%) new child leprosy cases and 1376 (41.93%) new female leprosy cases were recorded. The increasing trend of registered prevalence rate after the elimination in 2009 is a serious concern for leprosy control program hence early and active case detection activities, verification and validation of records/reports of local health facility level/municipalities and capacity building of health workers are undergoing but need to be amplified to obtain the goal of Zero Leprosy Nepal.

Epidemiology and Disease Control Division (EDCD) is the focal unit of Ministry of Health and Population to oversee leprosy, injury, short and long term disabilities. This division is leading the development of national rehabilitation system including assistive technology & products. EDCD is coordinating with entities of MoHP, rehabilitation professional associations, service providers, Disability Peoples' Organizations and international agencies for the development of policy and guideline related to rehabilitation and disability.

Zoonoses

Nepal has dual burden of disease and zoonotic diseases of epidemic, endemic and pandemic potentials are major public health concerns. Globally more than 300 Zoonotic diseases are identified among which about 60 have been identified in Nepal as emerging and re-emerging diseases. No people die of rabies or poisonous snake bites due to the unavailability of anti-rabies vaccine (ARV) or anti-snake venom serum or timely health care services and to prevent, control and

manage epidemic and outbreak of zoonoses is the goal of zoonoses program. Around 30,000 cases in pets and more than 100 human rabies cases occur each year with the highest risk are in the Tarai. During the FY 2075/76, 35,250 dog and other animal bites cases has been reported throughout the Nepal and 4,567 cases of Snake bite has been reported

Tuberculosis

Tuberculosis (TB) remains a major public problem in Nepal. In 2075/76, the total of 32,043 cases of TB were notified and registered at NTP. Among these, 98% (31,397) were incident TB cases (New and Relapse). 71% of among all TB cases were pulmonary TB, and out of them, 71% were bacteriologically confirmed. Province 3 holds the highest proportion of TB cases (24%). Kathmandu district alone holds around 41% (3,183 TB cases) of the TB cases notified from the province 3 while its contribution is around 10% in the national total. Whereas in terms of eco-terrain distribution, Terai belt reported more than half of cases (18,590, 57%) .Most cases were reported in the productive age group (highest of 50% in 15-44 year of age).The childhood TB is around 5.5% while men were nearly 1.73 times more than women among the reported TB case.

Case notification rate (CNR) of all forms of TB is 109/100,000 whereas CNR for incident TB cases (new and relapse) is 107/100,000 population. Among all new cases of drugs sensitive TB cases registered last year, 91% of them were treated successfully, with nearly 88% treatment success rates for Retreatment cases as well. There are estimated around 1500 (0.84 to 2.4) cases of DR TB annually. However, 350 to 450 MDR TB cases are notified annually. This year 635 MDR TB cases were notified. In 2075/76, a total of 392 RR/MDR TB were enrolled for treatment. TSR of RR/MDR patients was 72%. However, the TSrof Pre-XDR TB is 58% and XDR TB is 61%, which were marginally lower than the RR/MDR TB cases.

TB services were provided through 4,382 treatment centers. Regarding diagnostic services, there are 604 Microscopic centers and 56 GeneXpert centers throughout the country. DRTB services were provided through 20 treatment centers and 86 Treatment Sub-centers. Though the DRTB services are ambulatory, facility-based services were also provided through 6 hostels and 1 DR home.

HIV/AIDS AND STI

Making up 4.3% of the total estimated people living with HIV (PLHIV) (29,944), there are about estimated 1,296 children aged up to 14 years who are living with HIV in Nepal in 2018, while the adults aged 15 years and above account for 95.7%. Almost 71.5% of total estimated infections (21,408) among population aged 15-49 years. By sex, males account for almost two-thirds (59%) of the infections and the remaining more than one-third (41%) of infections are in females. The prevalence of HIV among 15-49 years of age group is 0.14% in 2018. Total 17,987 PLHIV are on ART treatment by the end of FY 2075/76.

Non Communicable Diseases

Non-Communicable Diseases (NCDs) are emerging as the leading cause of death in Nepal due to changes in social determinants like unhealthy lifestyles, urbanization, demographic and economic transitions. The deaths due to NCDs (cardiovascular disease, diabetes, cancer and respiratory disease) have increased from 60% of all deaths in 2014 to 66% in 2018 (WHO Nepal Country profile 2018). They are already killing more people than communicable diseases. Thus, Nepal has adapted and contextualized the PEN intervention for primary care in low resource setting developed by WHO. The epidemic of Non communicable disease is recognized by UN and addressed in Sustainable Development Goal 3 i.e. “ensure healthy life and promote well being for all at all ages”

of this goal 3.4 targeted to “reduce by one third premature mortality from NCDs through prevention and treatment and promote mental health and well being”. PEN Implementation Plan (2016–2020) has been developed in line with the Multisectoral Action Plan for prevention and control of NCDs (2014-2020).

Mental Health

Mental health and substance abuse is recognize as one of health priorities and also addressed in Sustainable Development Goals (SDG). Within the health goal, two targets are directly related to mental health and substance abuse. Target 3.4 requests that countries: “By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.” Target 3.5 requests that countries: “Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.” Nepal has high burden of mental illness but there are limited interventions to address the epidemic of mental diseases.

Surveillance and Research

Disease surveillance and research is an integral part of Epidemiology and Disease Control Division. The mission of the communicable diseases Surveillance program is to protect and improve the health of Nepalese citizens by tracking and responding to the occurrence of disease in the population across the country. In 2075/76 an additional 36 sentinel sites were established as a EWARS sentinel sites to 118 included medical colleges and non public hospitals. DHIS2 event capture is initiated for reporting from sentinel sites.

Similarly Water Quality Surveillance Central Committee (WQSCC) meeting with stakeholder and organized water quality surveillance workshop at different districts. Surveillance of reportable diseases is responsible for collecting, analyzing, interpreting, and reporting information for infectious diseases.

Nursing Capacity Development

There was no approval program under this section in the fiscal year 2075/76. For the fiscal year 2076/77 various programmers are running.

Geriatric and Gender Based Violence

The MoHP has established geriatric ward in eight referral hospitals providing geriatric services and is in the process of establishing four more in different hospitals those providing comprehensive and free services for elderly across the country. Office of Prime Minister and Council of Ministers (OPMCM) developed a multi-sectoral action plan to address the GBV issues in 2010 with the celebration of the international GBV years. In line with the action plan and to address needs of GBV survivors in an effective and efficient way, MoHP has established a Hospital Based “One Stop Crisis Management Centres” (OCMCs) in forty-four districts. Each OCMC aims to provide an integrated package of services for survivors of gender based violence (GBV) through a ‘one-door’ system that follows three core principles: (i) ensuring the security and safety of GBV survivors; (ii) maintaining confidentiality, and (iii) respecting the dignity, rights and wishes of survivors at all times. The guideline for running OCMCs is the “Hospital-based OCMC Operational Manual (MoHP, 2011)”. Based on the multi-sectoral approach, OCMCs are supposed to provide comprehensive services such as medical treatment, counseling, temporary shelter, security (including support provisions for police for necessary services), legal and rehabilitation. OCMCs are an innovative and challenging

initiative for GoN's health system.

Bipanna Nagrik Aaushadi Upchar Programme

The Impoverished Citizens Service Scheme of Social Health Security Section provides the funding for impoverished Nepalese citizens to treat serious health conditions. The provisions for free medication and treatment of severe type of diseases namely cancer, heart disease, Traumatic Head Injury and Traumatic Spinal Injury, Alzheimers diseases, Parkinson's and sickle cell anaemia. In FY 2075/76, fifty three thousand three hundred thirty (53,330) number of patients were managed in the provision of free treatment to impoverished citizens services scheme. Top most number of patients from Cancer (37,121), followed by Heart disease (6828), Kidney (5297), Traumatic Spinal Injury (1547), Sickel Cell Anaemia (1026), Traumatic Head Injury (761) and from Parkinsons diseases (377) and these disease rank 2nd, 3rd, 4th, 5th and 6th in number of patients subsequently, whereas number of patients from Alzimers diseases were 121 which was lowest in number under the provision of free treatment to impoverished citizens services scheme.

Female Community Health Volunteers

The major role of the Female Community Health Volunteers (FCHVs) is promotion of safe motherhood, child health, family planning, and other community based health services to promote health and healthy behavior of mothers and community people with support from health workers and health facilities. At present there are 51,420 FCHVs actively working all over the country. FCHVs contributed significantly in the following activities namely; distribution of oral contraceptive Pills, Condoms and Oral Rehydration Solution (ORS) packets and counseling and referring to mothers in the health facilities for the service utilization. In FY 2075/76, the number of mothers participating in health mother's group meetings were increased, despite of that FCHVs distributed fewer pills, condoms where as more iron tablets distributed by FCHVs in comparisons to FY 2074/75 . Service statistics also show that, FCHVs assisted the immunization against polio for children below 5 years on National Immunization Day, the community-based management and treatment of acute respiratory infections and control of diarrheal diseases, community nutrition programmes and other public health activities.

Inpatients/OPD services

In 2075/76, curative health services were provided to outpatients, including emergency patients, and inpatients including free health services. Inpatient services were provided different level of hospitals including INGOs/NGOs, Private medical college hospitals, nursing homes, and private hospitals. In this fiscal year 2075/76, 78% of the total population received outpatients (OPD) services. 1,333,892 patients were admitted for hospital services and 2,126,600 patients received emergency services from hospitals.

Health Training

The National Health Training Centre is the central body for human resource development in Nepal's health sector. The overall goal of NHTC is to build a technical and managerial capacity of health service providers at all levels to deliver quality health care services towards attainment of the optimum level of health status. National health training network co-ordinates seven Provincial Health Training Centers and 49 hospital-based clinical training sites throughout the country.

Vector Borne Disease Research & Training

The primary objective of Vector Borne Disease Research and Training Center is to fill the knowledge gap and generate scientific evidences in the field of Vector Borne Diseases (VBDS). In the FY 2075/76, VBDS trainings for physicians/ pediatricians, VBDS focal persons, health workers, basic as well as refresher malaria microscopic trainings were conducted to enhance their level of knowledge and skills related with prevalent vector borne diseases. The study on the dengue serotyping, microepidemiology of Post Kala-azar Dermal Leishmaniasis (PKDL) and entomological surveys of dengue vector in Pokhara Metropolitan, Kaski and Dharan, Sunsari district was carried out in this fiscal year.

Health, Education, Information and Communication

National Health Education, Information and Communication Centre is responsible for health promotion activities and delivery of health information and messages using multimedia, methods and channels up to individual level for the demand creation and increased use of available health services under Ministry of Health and Population.

In coordination with concern divisions and centres, evidence based annual plans and programmes are formulated and implemented by NHEICC in line with the health policy and sustainable development goals. Modern digital media as well as print, audio-visual and social media are used in promoting health behaviours in the areas of communicable and non-communicable diseases, reproductive and child health, mental health, birth defect, organ donation and environmental sanitation. Social behaviour change communication approaches are applied with social mobilization through health volunteers and communication channels at the door step of target audiences. The health promotion activities are currently more focused on capturing hard to reach areas and marginalized populations through new technology and programmes.

Health Service Management

The Management Division (MD) is responsible for DoHS's general management functions. DoHS's revised Terms of References (ToR) of MD describing it as the focal point for information management, planning, coordination, supervision, and the monitoring and evaluation of health programmes. The division is also responsible for monitoring the quality of air, water and food products. It also monitors the construction and maintenance of public health institution buildings and supports the maintenance of medical equipment. More activities assigned to this division include including policy and planning related to health infrastructure and logistics management. The current HMIS software system (DHIS 2 software) meet the basic requirements of the recently revised HMIS. Existing software related errors have been resolved with upgrading of System to dHIS 2.3. Few problems related to Nepali Calender are on the progress of sorting out with the help of DHIS 2

Logistics Management

The main role of Logistics Management (LM) is to support in delivering quality health care services providing by program divisions and centers through logistics supply of essential equipments, vaccines, family planning commodities and free health drugs to all regional/district stores and health facilities. The major function of MD is to forecast, quantify, procure, store and distribute health commodities, equipments, instruments and repairing & maintaining of the bio-medical equipments/instruments and transportation vehicles. The quarterly LMIS and monthly Web-based LMIS have facilitated evidence based logistics decision making and initiatives in annual logistics planning, quarterly national pipeline review meetings, the consensus forecasting of health

commodities and the implementation of the pull system. MD has formed an authorized 23 members Logistics Working Group (LWG) under the chairmanship of MD Director with representation of Divisions, Centers, supporting partners and other stakeholders. LWG address all issues and challenges on procurement and supply chain on health commodities and materials in center, region and district level.

Health Laboratory Services

The National Public health laboratory (NPHL) is the Nodal Institute for capacity building and for the development of public health laboratory sector. There are diagnostic health laboratories those are categorized as central, provincial, hospitals, PHCCs and Health posts

In the fiscal year 2075/76, NPHL provided various types of specialized laboratory services with routine services in the areas of Biochemistry, Haematology, Parasitology, Immunology, Virology, Endocrinology, Microbiology, Histopathology/Cytology and Immunohistochemistry tests carried out in this fiscal year. NPHL has improved the test result qualities by implementing automated reporting system with machine to LIS (Laboratory Information System) to minimize human errors. It has also organized various workshops planning on building province based public health laboratories with latest technology. It has performed licensing and regulatory activities related to health laboratory and blood bank transfusion centre related services.

Personnel Administration

The Personnel Administration Section (PAS) is responsible for routine and programme administrative function. Its major functions include upgrading health institutions, the transfer of health workers, level upgrading of health workers up to 7th level, capacity building as well as internal management of human resources of personnel.

Financial Management

An effective financial support system is imperative for efficient health service management. The preparation of annual budgets, the timely disbursement of funds, accounting, reporting, and auditing are the main financial management functions needed to support the implementation of health programmes. Finance Administration Section is the focal point for financial management for all DoHS programmes. Out of total National Budget of Rs. 1,315,161,700,000 a sum of Rs. 34,082,300,000 (2.59%) was allocated for the health sector during the fiscal year 2075/76. of the total health sector budget, Rs. 7,639,936,209 (22.42%) was allocated for the execution of programs under the Department of Health Services.

Monitoring and Evaluation

As in previous years the Integrated Health Information Management System (IHIMS) Section collected, collated and provided information on the activities undertaken at the district level to all DoHS divisions, centers and the 77 districts. Annual performance review workshops were conducted in all districts/national level. Several trainings were conducted on programme management to improve the skills of health workers.

Eye care

Nepal's eye care programme is run by Nepal Netra Jyoti Sangh and is a successful example of an NGO-run eye care programme. The prevalence of blindness in Nepal has reduced at the current

time. In the fiscal year 2075/76, Nepal's hospitals, eye care centres and outreach clinics provided 4,848,812 outpatient consultations and performed 379,366 eye surgeries.

Human Organ Transplant services

National Transplant Center's main objectives are to strengthen and expand organ transplantation services, provide specialized services beyond transplantation along with high quality health care at a low price/free of cost and produce high level human resources by providing structured training in various aspects of services to expand the services across the country.

The number of patients in all these aspects has increased remarkably in the FY 2075/76. There were 34,469 patients served in outpatient department, while the rate of admission and discharge were almost similar with 1,793 and 1,802 respectively.

There were 799 minor surgeries and 652 major surgeries in the FY 2075/76. The number of kidney transplantation escalated from 152 to 179 in FY 2075/76. The number of sessions of paid dialysis decreased from 2826 in FY 2075/76 to 3,229 in fiscal year 2074/75. There has been a slight decrease also in the free dialysis sessions from 26,051 in FY 2074/75 to 21,202 in FY 2075/76.

Medico-legal Services

Medico-legal services include forensic, pathology, autopsy, clinical forensic medicine and toxicology services. The report presents five recommendations for improving medico-legal services in Nepal: recognizing the specific nature of the forensic/medico-legal service sector, training district medical officers and other health professionals to provide medico-legal services, providing facilities, providing incentives and remuneration and improving coordination between investigating authorities.

Time has compelled to recognize medico-legal field and it is shown by other way with spontaneous appearance of more than four dozens of Nepali doctors specialized in the field of forensic. Now it is high time for Nepal Government to facilitate the environment to utilize those experts in medico-legal field for providing their specialist service to Nepali people.

Health Councils

The six professional health councils (Nepal Medical Council, Nepal Nursing Council, Nepal Ayurvedic Medical Council, Nepal Health Professional Council, Nepal Pharmacy Council and Nepal Health Research Council) accredit health-related schools and training centers and regulate care providers.

Health Insurance

The Health Insurance Program (HIP) is a social security program of the Government of Nepal that aims to enable its citizens to access to quality health care services minimizing a financial burden on them. HIB is responsible to carry out the health insurance program in Nepal. Although good progress has been made on improving access, much remains to be done. Health insurance program is a family-based program. The health insurance program in present framework is started from Kailali district on 25th, Chaitra, 2072. Then it is expanded to Illam and Baglung district on FY 2073/74. The end of FY 2074/75 the program is implemented in 36 districts of the country. Till the end of FY 2075/76 the program is implemented in 46 districts of the country and next 7 districts are in pipe line. HIB is planning to implement this program all over the country as well.

There were 13,507 people insured in FY 2072/73 and 228,113 people were insured in FY 2073/74 and 1,130,575 people were insured in the FY 2074/75. A total of 147,938 peoples reenrolled 16,40,879 peoples are active members and 507,059 peoples are drop out of Insurees respectively in the health insurance program at the end of FY 2075/76 . Among them 293,958 people are insured on the basis of ultra-poor category whose contribution is paid solely by Nepal Government in FY 2075/76.

Development Partners Support in health

Development partners support the government health system through a sector-wide approach (SWAp). The SWAp now supports the implementation of the new Nepal Health Sector Strategy (NHSS, 2016–2021). The Joint Financing Arrangement (JFA) has been signed by various partners and the government. The JFA describes in detail the arrangement for partners' financing of the NHSS. The JFA elaborates the pool funding arrangement and parallel financing mechanism as bilaterally agreed between the government and the donor partners. This time the World Bank has allocated all its commitment through a Program-for-Results, a tool which disburses fund against a verifiable set of results, called Disbursement Linked Results (DLRs). DFID and GAVI are also disbursing part of their commitments against some DLRs identified and agreed with the Ministry of Health and Population (MoHP).

National Health Policy, 2019

1. Background

The constitution of Nepal has established basic health care as a fundamental right of its citizens. As the country has moved to federal governance system, it is the responsibility of the state to ensure the access of quality health services for all citizens based on contextual norms of federal system. This National Health Policy, 2019 has been formulated on the basis of the lists of exclusive and concurrent powers and functions of federal, state and local levels as per the constitution; the policies and programmes of the Government of Nepal; the international commitments made by Nepal at different times; and the problems, challenges, available resources and evidences in the health sector.

2. Review

With the establishment of Singhadarbar Vaidyakhana in the seventeenth century, Ayurvedic treatment system was initiated in Nepal. Institutional development of modern medical system started in Nepal with the establishment of Bir Hospital in 1889. The planned development in the health sector began with the start of periodic planning in 1956. The first 15-year long-term health plan was introduced in 1975 and the second 20-year long-term health plan, in 1997.

After the political change in 1990, to address the aspirations of people, the National Health Policy 1991 was introduced. Under this policy, sub-health posts in all erstwhile village development committees, health posts in all areas (the then Ilakas - administrative unit) and one primary health centre in each electoral constituency were established in order to expand primary health services to the village level. The policy also promoted structural development and expansion, and involvement of private sectors to invest in the health sector. Similarly, the National Health Policy, 2014 stressed on participatory free basic health services in line with the spirit of the interim constitution of Nepal, 2007.

Begun with the International Conference on Primary Health Care Alma-Ata in 1978, the global campaign on primary health services has been reinforced by the Millennium Development Goals and the Sustainable Development Goals. These international commitments have contributed to the development and expansion of Nepal's health system. Similarly, Nepal expressed its commitment to the global campaign of expanding people's access to quality primary health care in the Global Conference on Primary Health Care that took place in Astana, Kazakhstan in October 2018 to review the achievements of Alma-Ata Conference.

3. Current Situation

Local and state governments have also started delivering social services including health services after the implementation of federalism in Nepal. Although the central government expanded a network of primary health care throughout the country so far, there are still needs to enhance the quality of services, to classify services, to distribute skilled technical human resources, to add new service centres and to improve their quality as per the expectations of people. Most of the private sector hospitals are concentrated in urban areas and there is a need of collaboration in monitoring and regulating them. Human resources required for almost all levels of health care are being produced within the country with the investment of public and private sectors. However, there is again a need of quality assessment and regulation in the production of human resources since they are the foundation of quality health services. Around 40 percent of drugs required for the country is

being supplied internally. Since there is no difference between the price of domestically produced and imported drugs, it is necessary to technically regulate and scientifically monitor the production, distribution and management of drugs. Similarly, numerous super-specialized treatment facilities relating to eye, heart, kidney, neurology, orthopedic, organ transplant, plastic surgery and cancer have been established in Nepal. International partnership is essential for development and expansion of modern technology in diagnostic and laboratory services for those treatments.

Owing to effective continuation of public health activities, maternal and newborn tetanus, leprosy and trachoma have been eradicated. Similarly, the major health problems seen in the past such as kala-azar, filariasis, malaria, tuberculosis, HIV, measles, whooping cough, diphtheria, Japanese encephalitis, diarrhea, respiratory infections, typhoid are being controlled and the morbidity is decreasing. Public health activities need to be made more effective and sustained to improve maternal health, child and newborn health.

Several regulatory bodies (Medical Council, Nursing Council, Pharmacy Council, Health Professional Council, Ayurvedic Medical Council and National Health Research Council) have been active in ensuring quality of and regulating production of human resources, health services, and health researches. It is essential to develop such regulatory bodies and make them more effective.

With the increase in public awareness and expectations about health and treatment services, it is essential to make such services accountable to the people and develop and expand health institutions, hospitals and health science academies in a contemporary manner. For this, it is necessary to make partnerships with supporting countries, donor agencies and international organisations transparent and responsive to people.

Similarly, it is essential to collaborate and coordinate with concerned agencies to control and regulate environmental pollutions such as air pollution, sound pollution, food pollution, water pollution, which have been directly or indirectly affecting public health and causing chronic diseases like cancer. It is imperative to develop quality control methods to test, monitor and regulate the effects of agricultural produces, food grains and consumable goods on human health.

4. Problems, Challenges and Opportunities

4.1. Problems

Main problems in promoting and availing quality health services at all levels include: inability to ensure consistent access to quality health services as expected by the people; inability to develop services and human resources accountable to public health and services; no proportionate return from investment in the health services; unavailability of necessary modern equipment and specialized doctors in public health institutions; prevalence of health problems related to communicable and non-communicable diseases, malnutrition, accidents and disasters; and increase in the burden of non-communicable diseases and mental health problems generated from globalisation and changes in food habits and lifestyles.

The other problems include imbalance between the production and use of human resources in health services; humanitarian health problems stemmed from increased food insecurity and natural disasters; increase in the incidences of antimicrobial resistance due to inappropriate use of antibiotics; slow pace of decrease in maternal mortality ratio; absence of adequate nutrition in more than one-third of children of 0-5 age and women of reproductive age; and absence of reasonable partnership with and effective regulation of the private sector in community level health services.

4.2. Challenges

The challenges in health sector include ensuring equal access of all citizens to all health sectors; providing free, quality basic health services through all local levels; providing health services with priority to ultra-poor and vulnerable citizens; reducing the existing high level of out of pocket expenditure for health care; ensuring the required financial resources; establishing and operating health institutions in line with the federal system; effectively implementing health insurance policy; making the health sector responsible towards human health by transforming it from profit-orientation to service-orientation; managing skilled human resources with a blend of skills in health services and social responsibility in the health sector; becoming self-reliant on drugs production; solving health problems associated with climate change, urbanisation and changes in lifestyles; managing and regulating medicines and medical products effectively; increasing the use of data in monitoring, evaluation, review, policy making and decision making processes by making the health management information system more effective, integrated and technology-friendly to address the needs of all levels; developing a system to record the causes of deaths and continually conducting researches on them; and to maintain good governance in overall health and nutrition sectors by means of conforming quality health services and regulation.

4.3. Opportunities

The existing opportunities in health sector include sharing of responsibilities in health services among the federal, state and local levels as per the constitution; implementation of health insurance through policies and laws; operation of health programmes funded by state and local governments; increase in the availability of new information technologies, drugs and equipment; development of infrastructure and continuous increase in public awareness; expansion of health network up to the community level; stress of current health policies and programmes on management and quality; use of statistics in policy making and decision making processes and prioritisation of health services by all levels of the government.

5. Relevance, Guiding Principles, Vision, Mission, Goal and Objectives

5.1. Relevance

In order to address existing problems and challenges and to ensure the constitutional rights of citizens to quality health services, it is relevant to amend existing health policy, strategies and programmes and formulate a National Health Policy in accordance with the federal context. It is indispensable to continue existing health services and to sustain their achievements as well as to guide the development and expansion of health service infrastructure as per the federal context, given mandates and responsibilities. This policy is also imperative to address the national and international commitments made by Nepal and to achieve the Sustainable Development Goals while safeguarding the achievements of Millennium Development Goals.

5.2. Guiding Principles

In order to ensure constitutional rights of citizens to health services through a federal health system and to ensure universal access to quality health services, this policy has been formulated on the basis of the following guiding principles:

- a. Universal access to, continuous availability of, transparency and comprehensiveness in quality health services;

- b. Multi-sectoral involvement, collaboration and partnership in health system in accordance with the federal structure;
- c. Special health services targeted to ultra marginalised, Dalit and indigenous communities;
- d. Good health governance and assurance of adequate financial investments;
- e. Diversification of equitable health insurance;
- f. Restructuring in the health services;
- g. Health and multi-sectoral coordination and collaboration in all policies;
- h. Professionalism, honesty and occupational ethics in health service delivery.

5.3. Vision

Healthy, alert and conscious citizens oriented to happy life.

5.4. Mission

To ensure the fundamental health rights of citizens through optimum and effective use of resources, collaboration and partnerships.

5.5. Goal

To develop and expand a health system for all citizens in the federal structure based on social justice and good governance and ensure access to and utilisation of quality health services.

5.6. Objectives

- 5.6.1. To create opportunities for all citizens to use their constitutional rights to health;
- 5.6.2. To develop, expand and improve all types of health systems as per the federal structure;
- 5.6.3. To improve the quality of health services delivered by health institutions of all levels and to ensure easy access to those services;
- 5.6.4. To strengthen social health protection system by integrating the most marginalised sections;
- 5.6.5. To promote multi-sectoral partnership and collaboration between governmental, non-governmental and private sectors and to promote community involvement; and
- 5.6.6. To transform the health sector from profit-orientation to service-orientation.

6. Policies

- 6.1. Free basic health services shall be ensured from health institutions of all levels as specified;
- 6.2. Specialised services shall be made easily accessible through health insurance;
- 6.3. Access to basic emergency health services shall be ensured for all citizens;
- 6.4. Health system shall be restructured, improved, developed and expanded at federal, state and local levels as per the federal structure;

- 6.5. In accordance with the concept of universal health coverage, promotional, preventive, curative, rehabilitative and palliative services shall be developed and expanded in an integrated manner;
- 6.6. Collaboration and partnerships among governmental, non-governmental and private sectors shall be promoted, managed and regulated in the health sector and private, internal and external investments in health education, services and researches shall be encouraged and protected;
- 6.7. Ayurveda, naturopathy, Yoga and homeopathy shall be developed and expanded in an integrated way;
- 6.8. In order to make health services accessible, effective and qualitative, skilled health human resources shall be developed and expanded according to the size of population, topography and federal structure, hence managing health services;
- 6.9. Structures of Health Professional Councils shall be developed, expanded and improved to make health services provided by individuals and institutions effective, accountable and qualitative;
- 6.10. Domestic production of quality drugs and technological health materials shall be promoted and their access and proper utilisation shall be ensured through regulation and management of efficient production, supply, storage and distribution;
- 6.11. Integrated preparedness and response measures shall be adopted to combat communicable diseases, insect-borne and animal-borne diseases, problems related with climate change, other diseases, epidemics and disasters;
- 6.12. Individuals, families, societies and concerned agencies shall be made responsible for prevention and control of non-communicable diseases and integrated health system shall be developed and expanded;
- 6.13. In order to improve nutritional situation, adulterated and harmful foods shall be discouraged and promotion, production, use and access to qualitative and healthy foods shall be expanded;
- 6.14. Health researches shall be made of international standards and the findings and facts of such reports shall be effectively used in policy formulation, planning and health system development;
- 6.15. The health management information system shall be made modern, qualitative and technology-friendly and integrated health information system shall be developed;
- 6.16. Right to information related to health and right of a beneficiary to know about the treatment shall be ensured;
- 6.17. Mental health, oral, eye, ENT (ear, nose and throat) health services shall be developed and expanded;
- 6.18. Quality of health services provided by all health institutions including hospitals shall be ensured;

- 6.19. Good governance and improvement shall be ensured in policy-related, institutional and managerial structures in the health sector through timely amendments;
- 6.20. In accordance with the concept of health across the lifecycle, health services around safe motherhood, child health, adolescence and reproductive health, adult and senior citizen shall be developed and expanded;
- 6.21. Necessary financial resources and special fund shall be arranged for sustainable development of the health sector;
- 6.22. Urbanisation, internal and external migration shall be managed and public health problems associated with such phenomena shall be resolved;
- 6.23. Demographic statistics shall be managed, researched and analysed to link them with the policy decisions and programme designing;
- 6.24. Antimicrobial resistance shall be reduced, one-door health policy shall be developed and expanded for the control and management of communicable diseases, environmental pollution such as air pollution, sound pollution and water pollution shall be scientifically regulated and controlled;
- 6.25. Necessary arrangements shall be made to reduce the risks of immigration process on public health and to provide health protection to Nepalese staying abroad.

Strategies for each policy

- 6.1. **Free basic health services shall be ensured from health institutions of all levels as specified;**
 - 6.1.1. Basic health services shall be provided by health institutions free of cost.
 - 6.1.2. The government of Nepal shall arrange resources and provide basic health services to people through the local levels. The state and local governments may include additional services to the specified ones as per the need. However, expenditures for such additional services shall be borne by concerned governments.
 - 6.1.3. Necessary policy, legal and institutional arrangements shall be made by state and local governments to make basic health services effective.
- 6.2. **Specialized services shall be made easily accessible through health insurance;**
 - 6.2.1. Treatment services that are not included in the basic health services shall be strengthened and integrated into the insurance system.
 - 6.2.2. Based on the principles of social justice, poor and prioritised target groups shall be linked with the state-subsidised health insurance system.
 - 6.2.3. Formal sectors shall be compulsorily brought into the health insurance system and ultimately, all citizens shall be covered by the health insurance system.
 - 6.2.4. The access of poor people to special health services specified by the state shall be gradually ensured.

- 6.3. **Access to basic emergency health services shall be ensured for all citizens;**
- 6.3.1. Specified emergency health services shall be regularly provided through health institutions of all levels including basic health service centres and primary hospitals. Two-way referral system shall also be arranged.
- 6.3.2. Targeting possible road accidents in the main highways, trauma service centres shall be built and made operational for immediate treatment services.
- 6.3.3. At least one ambulance with minimum facilities shall be arranged for each local level and ambulance services with specified standards, classification and modern technologies shall be arranged.
- 6.3.4. **Air ambulance shall be arranged with specified norms to rescue people from ultra-remote areas with critical health conditions.**
- 6.3.5. Emergency treatment fund shall be arranged and mobilised as specified in the guidelines.
- 6.3.6. In order to make the quality of emergency treatment at par with the international standards, training for doctors, nurses and other health workers shall be given compulsory life support training.
- 6.4. Health system shall be restructured, improved, developed and expanded at federal, state and local levels as per the federal structure;
- 6.4.1. Existing structure of the health sector shall be amended as per the need and necessary structures shall be established including National Disease Control Centre for disease control, epidemic control and research.
- 6.4.2. Necessary legal and institutional arrangements shall be made to strengthen the health system in line with the federal structure.
- 6.4.3. Hospitals and health institutions, health services and human resources at the federal, state and local levels shall be developed and expanded in accordance with the demographic distribution, geographic situation and needs. Basic health service centres shall be established under each ward of the local levels, primary hospitals under each local level, secondary hospitals and provincial hospitals under the state level and super specialized hospitals under the federal level shall be established. Similarly, at least one tertiary hospital and one health science academy in each state under the federal government shall be established.
- 6.4.4. Two-way referral system from community level to the super specialized service providers shall be effectively implemented to make the treatment service more systematic.
- 6.4.5. E-health shall be institutionalized and modern technologies such as mobile health, telemedicine shall be developed, expanded and regulated. Health services, health education, medical services and health systems shall be digitalized.
- 6.4.6. Diagnostic services shall be made modern and technology-friendly and the national public health laboratory shall be strengthened to the international standards. A reference laboratory and a diagnostic centre shall be established in each state.

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- 6.4.7. In order to improve the quality of health services provided by all governmental, non-governmental, community and private health institutions, Nepal health infrastructure development standards and minimum service standards shall be implemented. Similarly, specified standards for non-governmental, community and private health institutions shall also be gradually implemented.
 - 6.4.8. Partnership, collaboration between governmental and non-governmental sectors and community participation shall be promoted and blood transfusion services shall be institutionally developed and expanded to all state and primary hospitals.
 - 6.4.9. With public-private partnership and through volunteer blood donors, availability of safe blood and blood-related items shall be ensured.
 - 6.4.10. Human organ transplant, organ donation services and organ donation of brain-dead persons shall be managed, developed and expanded.
 - 6.4.11. Medico-legal services shall be developed and expanded to all states and primary hospitals.
 - 6.4.12. Home health service, school health service and health services provided by various institutions shall be managed and regulated.
 - 6.4.13. Relevant modern technology shall be used or modernized to make health services qualitative and cost-effective
 - 6.5. **In accordance with the concept of universal health coverage, promotional, preventive, curative, rehabilitative and palliative services shall be developed and expanded in an integrated manner;**
 - 6.5.1. People's responsibility to keep themselves healthy and healthy lifestyle shall be promoted through health awareness programmes.
 - 6.5.2. In coordination with the education sector, school health programme and health awareness campaigns shall be gradually expanded to higher secondary schools ensuring the availability of at least one health personnel in each school.
 - 6.5.3. Contemporary vaccination services shall be adopted depending on prevalence of disease and cost-effectiveness. Right of target groups to receive vaccination shall be ensured and compulsory vaccination shall be implemented.
 - 6.5.4. In order to promptly identify health hazards among various population groups, regular health check-ups shall be arranged.
 - 6.5.5. Universal and equitable access to health services shall be ensured with priority to population of various age groups, genders, classes and regions.
 - 6.5.6. Private and non-governmental organisations shall be promoted to establish rehabilitative and palliative service centres with physiotherapy services at federal, state and local levels.
 - 6.5.7. In order to address local health needs and behaviours, the production, broadcasting and dissemination of health-related messages and materials shall be made scientific, managed, effective and regulated.
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- 6.5.8. Surveillance system shall be implemented on environment, sanitation, drinking water and food items, etc. in coordination with concerned stakeholders.
- 6.5.9. Standards, mechanisms and level-wise mandates for public health impact assessment of specified industries, professions or projects shall be determined to identify, prevent and minimize their adverse effects on public health.
- 6.5.10. In order to address social determinants of health, multi-sectoral partnership and cooperation among various state mechanisms shall be made more effective. Inclusion of policies from other sectors in the health policies and plans shall be encouraged and advocated for.
- 6.6. **Collaboration and partnerships among governmental, non-governmental and private sectors shall be promoted, managed and regulated in the health sector and private, internal and external investments in health education, services and researches shall be encouraged and protected;**
- 6.6.1. Partnerships with private and non-governmental organisations shall be done based on specified parameters to ensure health and treatment facilities for targeted groups and areas.
- 6.6.2. Professionalism, efficiency, entrepreneurship, technical skills and financial resources of the private sector shall be utilised for the development and expansion of health services, and social responsibility shall also be promoted.
- 6.6.3. Parameters for approval of hospitals shall be equal and practical for governmental non-governmental or private sectors. Similarly, private hospitals shall be encouraged to open outside the Kathmandu valley and in rural communities. Regular reports from hospitals and health institutions on their services shall be made mandatory and effective monitoring and regulation shall be put in place.
- 6.6.4. In order to ensure access of quality health services to all, fees shall be determined depending on the classified facilities of treatment and health services provided by all levels and types of hospitals and health institutions.
- 6.6.5. Health tourism shall be promoted by developing specialized and super-specialized health services and through partnership between the governmental, private and non-governmental sectors.
- 6.6.6. Volunteerism in health services shall be promoted and female health volunteers shall be mobilized and managed through local levels.
- 6.7. **Ayurveda, naturopathy, Yoga and homeopathy shall be developed and expanded in an integrated way;**
- 6.7.1. In line with the federal structure, level-wise institutions related with Ayurvedic healthcare shall be systematically developed and expanded.
- 6.7.2. Other healthcare systems, such as Yoga and naturopathy, homeopathy, Unani, acupuncture shall be developed and expanded as per the federal structure.

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- 6.7.3. Locally available medicinal herbs, minerals and animal substances shall be identified, conserved, collected and promoted. Those items shall be used in scientific researches on Ayurvedic healthcare and self-reliance shall be promoted.
 - 6.7.4. Existing and traditional healthcare systems shall be enlisted, managed and regulated as per specified parameters.
 - 6.7.5. A national Ayurveda, Yoga and Panchakarma Centre with specialized services such as Ayurveda, Panchakarma, Yoga and naturopathy shall be established to support health tourism and such initiatives shall be gradually expanded as per the federal structure.
 - 6.7.6. Ayurveda health science academy and Ayurveda university shall be established and studies, treatment and researches shall be carried out on Ayurveda science and naturopathy system.
 - 6.8. **In order to make health services accessible, effective and qualitative, skilled health human resources shall be developed and expanded according to the size of population, topography and federal structure, hence managing health services;**
 - 6.8.1. Necessary health human resources shall be obtained, developed and utilised based on short-term and long-term plans for the federal structure.
 - 6.8.2. In collaboration with concerned agencies, integrated national curriculum shall be developed to produce necessary health human resources at all levels.
 - 6.8.3. The concept of 'one doctor/health professional - one health institution', in which a doctor or a health professional stays only in one government health institution, shall be gradually implemented in all government health institutions. In order to make it more effective and to expand access to health services, extended hospital services shall be implemented in government hospitals with financial and other incentives.
 - 6.8.4. In order to ensure availability of basic health services in all basic health centres at all wards, integrated treatment services shall be implemented which shall include primary treatment for emergencies, primary lab services and other basic services.
 - 6.8.5. An MDGP doctor and necessary posts shall be created and arranged for emergency treatment, lab, pharmacy, nursing and public health services shall be availed at the primary hospitals of all local levels.
 - 6.8.6. Clear pathways and opportunities for the professional growth of health human resources through higher education, in-service training, continuous professional training, professional development shall be put in place and professional researches shall be encouraged and promoted.
 - 6.8.7. Arrangements shall be made for the production of specialized human resources required for contemporary genres of quality health services (e.g. midwife, hospital management, medical leadership, health economics, etc.).
 - 6.8.8. An umbrella act shall be formulated and implemented for the development and expansion of health science academies. The concept of teaching district shall be implemented throughout the country.

- 6.8.9. Information technology-friendly documentation of health institutions and human resources of all levels and types shall be maintained and updated.
- 6.9. **Structures of Health Professional Councils shall be developed, expanded and improved to make health services provided by individuals and institutions effective, accountable and qualitative;**
 - 6.9.1. An integrated umbrella act for health-related professional councils shall be implemented and expanded to the state levels.
 - 6.9.2. Institutional and technical capacity of health-related councils shall be increased.
 - 6.9.3. Code of conduct shall be enforced to make the service providers professional and accountable to the health of beneficiaries.
 - 6.9.4. Performance based pay and incentives shall be arranged to make the health professionals responsible to their work and services.
- 6.10. **Domestic production of quality drugs and technological health materials shall be promoted and their access and proper utilisation shall be ensured through regulation and management of efficient production, supply, storage and distribution;**
 - 6.10.1. Mechanisms shall be developed as per the federal structure to determine price and quality of drugs, equipment and technological health materials and to regulate them. Generic prescription and hospital pharmacies with skilled technicians shall be implemented.
 - 6.10.2. National production of essential drugs and technological health materials shall be encouraged and self-reliance shall be increased.
 - 6.10.3. Medicines and food items management divisions shall be set up at the federal Health Ministry and the Ministry of Social Development at the state level as per the food security policy and drugs quality and price control policy. National standards for domestically produced and imported drugs and medical supplies shall be prepared to ensure their quality.
 - 6.10.4. Procurement, transportation, quality storage and distribution system shall be made more effective and systematic by preparing specifications of drugs and medical supplies.
 - 6.10.5. Guidelines and standards shall be developed to receive and utilise medicines, equipment, medical supplies as per the need from international, national and local government, non-government and private entities.
 - 6.10.6. National medical surveillance shall be extended to all levels and made effective to manage import and export of drugs.
 - 6.10.7. Surveillance and research shall be strengthened to address antimicrobial resistance and preventive and control measures shall be applied in coordination with livestock, agriculture and food sectors.
 - 6.10.8. Effective regulation shall be put in place to ensure quality of Ayurvedic medicines and herbal products.

6.11. Integrated preparedness and response measures shall be adopted to combat communicable diseases, insect-borne and animal-borne diseases, problems related with climate change, other diseases, epidemics and disasters;

- 6.11.1. Effective programmes shall be implemented for study, researches, surveillance, prevention, control, elimination and eradication of communicable diseases including tuberculosis, HIV/AIDS and malaria.
- 6.11.2. Notification system for classified diseases shall be developed and implemented.
- 6.11.3. Capacity and mechanisms shall be developed at federal, state and local levels to gradually prevent, eliminate and eradicate diseases as per the International Health Regulations, 2005.
- 6.11.4. Environment and health-friendly technologies shall be encouraged; state and local levels shall be made responsible for proper management, regulation and continuous monitoring of waste and medical garbage produced by hospitals, health institutions and laboratories.
- 6.11.5. Coordination and advocacy shall be done to promote domestic and community waste management and environment cleanliness.
- 6.11.6. Programmes to minimize climate change-induced health problems shall be revised and developed in collaboration and coordination with stakeholders.
- 6.11.7. Mechanisms shall be set up at all levels to immediately address disasters and epidemics; their capacity development, response plans, preparedness and mobile hospital services shall be arranged.
- 6.11.8. Citizen and community participation and contribution in overall health services including in disaster management, risk reduction and health promotion shall be encouraged.

6.12. Individuals, families, societies and concerned agencies shall be made responsible for prevention and control of non-communicable diseases and integrated health system shall be developed and expanded;

- 6.12.1. Programmes to promote healthy life style shall be developed and extended through health institutions of all levels.
- 6.12.2. Multi-sectoral coordination with institutions related with drinking water, environmental cleanliness, food security, education and so on shall be strengthened to promote health.
- 6.12.3. Multi-sectoral partnership shall be implemented and necessary standards shall be developed and implemented to reduce adverse effects and risks caused from enterprises and to make workplace secure and healthy.
- 6.12.4. Proper systems shall be developed to prevent and treat hereditary diseases.
- 6.12.5. Processed and readymade food items that are harmful to human health shall be discouraged and use of hazardous chemicals, pesticides, adulteration during the production, storage, processing and sales shall be controlled and regulated.

6.12.6. Use of stimulating drugs and alcohol shall be discouraged through multi-sectoral

- coordination and sales, spread and use of tobacco products shall be effectively regulated.
- 6.12.7. Promotional programmes and structural arrangements shall be implemented to prevent road accidents and other disasters (fire, lightning strike, etc.).
- 6.12.8. Coordination and advocacy with concerned stakeholders shall be done for construction of cycle lane, public parks, etc. to promote healthy lifestyle and to reduce adverse effects of environmental pollutions and development works on public health.
- 6.13. **In order to improve nutritional situation, adulterated and harmful foods shall be discouraged and promotion, production, use and access to qualitative and healthy foods shall be expanded;**
- 6.13.1. Multi-sectoral nutrition policy and programmes including food security shall be updated and implemented with priority.
- 6.13.2. In order to improve micronutrient situation of women, children and people of different age groups, food diversification and balanced diet shall be emphasised and short-term, medium-term and long-term measures at all levels shall be adopted.
- 6.13.3. School health programme and nutrition education programmes shall be strengthened, developed and implemented.
- 6.13.4. Consumption of nutritious and healthy food items shall be promoted and domestic production shall be encouraged.
- 6.14. **Health researches shall be made of international standards and the findings and facts of such reports shall be effectively used in policy formulation, planning and health system development;**
- 6.14.1. Institutional structure, capacity and scope of Nepal Health Research Council shall be updated, developed and expanded to federal structures and made as per international standards.
- 6.14.2. Capacity of all levels shall be developed in health researches; and health researchers and technical human resources shall be motivated to researches in coordination with academic and educational institutions.
- 6.14.3. Results of health research conducted by all sectors and entities shall be integrated and those facts, reports and conclusions shall be used in formulation of policies and plans and health system development and expansion.
- 6.14.4. Books, knowledge, skills on indigenous medicinal herbs, minerals, animal substances, Ayurveda and traditional healthcare shall be researched and recorded, protected and promoted as intellectual property.
- 6.15. **The health management information system shall be made modern, qualitative and technology-friendly and integrated health information system shall be developed;**
- 6.15.1. Health management information systems of all levels as per federal structure shall be developed and managed in an integrated manner.

- 6.15.2. Health management information system shall be made integrated, technology-friendly, contemporary and regular and capacity of all levels shall be enhanced to use the information.
- 6.15.3. The facts and information obtained from health management information system, researches, surveys and surveillance shall be used in monitoring, evaluation, policy formulation, programme development and decision making processes at various levels.
- 6.15.4. Security of health information shall be ensured and health information of beneficiaries shall be maintained in e-recording system.
- 6.15.5. Existing surveillance system in the health sector shall be strengthened and an integrated surveillance system shall be developed and implemented.
- 6.16. **Right to information related to health and right of a beneficiary to know about the treatment shall be ensured;**
- 6.16.1. The service providers shall be made responsible in health information flow, health institutions shall be developed as information-friendly and the rights of beneficiaries to informed consent, privacy and information shall be ensured.
- 6.16.2. Communication materials that may directly or indirectly have adverse effects on people's health and on society shall be discouraged and regulated.
- 6.17. **Mental health, oral, eye, ENT (ear, nose and throat) health services shall be developed and expanded;**
- 6.17.1. Primary treatment of eyes shall be integrated into basic health services.
- 6.17.2. Eye health services shall be developed and expanded with public-private partnership and an eye health unit shall be set up in the federal Ministry of Health for coordination, partnership and regulation.
- 6.17.3. Oral health services and control and treatment of dental diseases shall be developed and expanded at all levels including basic health centres.
- 6.17.4. Ear, nose, throat treatment services shall be developed and expanded to all levels.
- 6.17.5. People's access to mental health and psychosocial services shall be ensured through primary hospitals by promoting transfer of knowledge and skills, service-oriented skills and special training.
- 6.17.6. Other specialized health services shall be developed and expanded as per needs.
- 6.18. **Quality of health services provided by all health institutions including hospitals shall be ensured;**
- 6.18.1. In order to ensure quality of health services, a regulatory mechanism (accreditation entity) shall be established and developed at the federal level.
- 6.18.2. Minimum service standards for health institutions of all levels shall be developed and

implemented after necessary amendments.

6.18.3. Guidelines, quality standards and standard treatment (treatment protocol) shall be developed and amended for the provision of quality health services.

6.18.4. Quality testing guidelines for health materials including vaccines, medicines, medical equipment, biological reagents and health products from production to distribution shall be developed, updated and implemented.

6.18.5. Medical and managerial audit of health institutions shall be carried out and the quality of services and institutional capacity shall be strengthened.

6.18.6. Necessary standards for effective management of health services that use radiation shall be prepared and implemented.

6.19. **Good governance and improvement shall be ensured in policy-related, institutional and managerial structures in the health sector through timely amendments;**

6.19.1. Health governance procedures shall be developed and implemented to make health services transparent, accountable and responsive.

6.19.2. Necessary mechanisms shall be developed and used to address grievances, complaints and suggestions of beneficiaries.

6.19.3. Provisions of existing laws shall be amended and implemented for the security of health service providing individuals and institutions.

6.19.4. Integrated monitoring and evaluation framework shall be developed, updated and implemented to assess the health services and management of health institutions of all levels.

6.19.5. Public hearing and social audits shall be arranged about the health services provided by all health institutions.

6.19.6. Institutional capacity shall be improved for effective management of health services at all levels.

6.19.7. In view of community cultures, the health services shall be made beneficiary-friendly and consumer rights shall be ensured.

6.20. **In accordance with the concept of health across the lifecycle, health services around safe motherhood, child health, adolescence and reproductive health, adult and senior citizen shall be developed and expanded;**

6.20.1. Safe motherhood and reproductive health services shall be made of good quality, affordable and accessible.

6.20.2. Health services targeted to vulnerable age groups such as maternal-infant health, child health, adolescent health, adult health and geriatric health shall be strengthened and professional midwifery and nursing services shall be expanded.

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- 6.20.3. In view of social determinants that affect women's health, special programmes shall be implemented in coordination with concerned stakeholders.
 - 6.20.4. In order to strengthen safer motherhood and reproductive health, skilled birth attendants shall be arranged in all wards.
 - 6.20.5. Abortion services shall be made qualitative and effective as per the law.
 - 6.20.6. Health services related with infertility shall be gradually extended to the state levels.
 - 6.21. **Necessary financial resources and special fund shall be arranged for sustainable development of the health sector;**
 - 6.21.1. Integrated health finance strategy shall be formulated and implemented to ensure equitable access of all to health services, to reduce out of pocket expenditure on health and to mobilise financial resources in the health sector in a cost-effective manner.
 - 6.21.2. State expenditure on health shall be gradually increased and the burden of expenditure for individuals shall be reduced.
 - 6.21.3. National health accounts with analytical details of overall income, expenditure, distribution and use of resources in the health sector shall be annually published and used in the preparation of policies, programmes and plans.
 - 6.21.4. Maximum portion of revenue generated from tobacco and alcohol products shall be used in public health promotion programmes.
 - 6.21.5. Economic support received from international development partners shall be mobilised based on results, priority and with avoidance of duplication.
 - 6.21.6. Federal Ministry of Health shall arrange a special fund for remote, rural and marginalized communities. State and local governments shall add some amounts in the fund and conduct outreach clinics and integrated basic health mobile services.
 - 6.22. **Urbanisation, internal and external migration shall be managed and public health problems associated with such phenomena shall be resolved;**
 - 6.22.1. Demographic information shall be analysed to prepare plans for overall development, to formulate projects and to develop programmes.
 - 6.22.2. A system to examine the cause of deaths shall be developed and linked with the vital registration system.
 - 6.22.3. External and internal migration and urbanisation shall be effectively managed. Measures to minimise the effects of such phenomena in public health shall be adopted.
 - 6.22.4. Guidelines shall be prepared and implemented to ensure health security of citizens going for foreign employment.
 - 6.23. **Demographic statistics shall be managed, researched and analysed to link them with the policy decisions and programme designing;**

- 6.23.1. Actual demographic data with age distribution shall be updated through the ward level health institutions and targeted health programmes shall be designed for age-specific groups.
- 6.23.2. Based on the concept of health across the lifecycle, demographic data management, researches and analyses shall be done to link with the decision making process and programme designing.
- 6.23.3. In order to ensure access of handicapped and people with disability to health services, disability-friendly structures and mechanisms shall be ensured at all levels.
- 6.23.4. Coordination shall be made with concerned agencies to establish senior citizen care centres with public-private partnership.
- 6.24. **Antimicrobial resistance shall be reduced, one-door health policy shall be developed and expanded for the control and management of communicable diseases, environmental pollution such as air pollution, sound pollution and water pollution shall be scientifically regulated and controlled;**
- 6.24.1. Concrete scientific plans and programmes shall be developed and implemented in partnership with concerned authorities to minimise adverse effects of environmental pollution including air pollution, sound pollution, water pollution and chemical pollution on public health.
- 6.24.2. A plan of action shall be developed and implemented to regulate and control food pollution and adulteration.
- 6.24.3. In order to reduce antimicrobial resistance, necessary plan of action shall be developed and implemented to effectively regulate and control the misuse of antibiotics.
- 6.25. **Necessary arrangements shall be made to reduce the risks of immigration process on public health and to provide health protection to Nepalese staying abroad.**
- 6.25.1. Necessary arrangements shall be made to ensure pre-departure, in-destination-country and post-return health check-up, to promote access to and use of health services.
- 6.25.2. Necessary mechanisms and procedures shall be developed and used to promote and ensure access to and use of health services for Nepalese abroad.
- 6.25.3. Health examination for foreign nationals before entering Nepal shall be made compulsory.
- 6.25.4. Migration Health Management Information System shall be developed and implemented to manage the migration health information

7. Institutional Arrangement

The following arrangements shall be made for the implementation of this national health policy.

- 7.1. This policy shall remain as a guiding policy for the state and local governments to develop their respective policies within their mandates for operation of health activities and flow of services.

- 7.2. For effective implementation of this policy, the present structure of health institutions in federal, state and local levels and other health-related institutions shall be reviewed, improved, revised and reformed to discharge responsibilities as defined by the constitution.
- 7.3. Act, regulations, standards, guidelines, procedures and protocols shall be developed and implemented as envisioned by this policy.
- 7.4. Institutional capacity shall be strengthened by creating necessary staff posts as per the federal structure.
- 7.5. Existing theme-wise policies in the health sector shall be developed and amended as thematic comprehensive strategies, as needed.
- 7.6. State and Local levels shall develop and expand structures in respective levels as per this National Health Policy, 2019.
- 7.7. A detailed plan of action for this policy shall be prepared and implemented.

8. Financial Resources

Government budget allocated by federal, state and local levels, foreign loan and grant, investment from private and non-governmental sectors shall be the financial resources to implement this policy.

9. Monitoring and Evaluation

- 9.1. Appropriate mechanism shall be managed and devised to regularly monitor and evaluate the health programmes implemented at various levels of the state.
- 9.2. Results-based monitoring and evaluation framework developed and used by the National Planning Commission and the monitoring and evaluation system used by the Ministry of Federal Affairs and General Administration shall be taken into account while developing a monitoring and evaluation system for this policy.
- 9.3. Health management information system shall be updated, monitoring and evaluation system shall be made easier and regular with the use of electronic system.

10. Risks

- 10.1. Although this National Health Policy, 2019 has been formulated based on the constitution that guarantees basic health services for all citizens as a fundamental right and the policy and programmes of the Government of Nepal that envision equitable access to quality health services through the federal structure, unavailability of adequate budget may pose difficulty in the implementation of this policy and strategies.
- 10.2. Health services may be affected due to complexities associated with the development of health infrastructure, organisational reforms and the management of health human resources.

11. Repeal and Saving

The National Health Policy, 2014 has been repealed. Existing theme-wise policies of health sector shall be repealed once concerned thematic strategies are formulated.

Summary of Nepal Health Sector Strategy 2015-2020

Under the auspices of National Health Policy 2014, Nepal Health Sector Strategy 2015-2020 (NHSS) is the primary instrument to guide the health sector for the next five years. It adopts the vision and mission set forth by the National Health Policy and carries the ethos of Constitutional provision to guarantee access to basic health services as a fundamental right of every citizen. It articulates nation's commitment towards achieving Universal Health Coverage (UHC) and provides the basis for garnering required resources and investments. NHSS places health at the centre of overall socio-economic development. It guides the health sector's response in realizing government's vision to graduate Nepal from 'Least Developed Country' to 'Middle Income Developing Country' by 2022.

NHSS is developed within the context of Sector Wide Approach (SWAp) and it sees partnership as a cornerstone for health development in Nepal. NHSS was developed jointly by the government and its development partners. Both the government and development partners commit to align their efforts to NHSS priorities and are jointly accountable to achieve the results. NHSS also harnesses multi sectoral approach to address social determinants of health. In the past two decades, Nepal has made notable progress on improving the overall health outcomes of the citizens. Between the period of 1990 and 2014, Nepal impressively reduced under-five mortality by 73% and infant mortality by 67%. Similarly, Nepal was able to reduce maternal mortality by 76% between the period of 1996 and 2013. During this period, polio is towards eradication phase while leprosy is at elimination stage. Considerable efforts have been made to halt and reverse the trends of tuberculosis, HIV and malaria. However, comparably less progress was made in reducing neo-natal mortality and malnutrition.

Despite this progress, the country faces many health challenges including inequity. Many citizens continue to face financial, socio-cultural, geographical, and institutional barriers in accessing health services. Despite efforts to reduce gender inequality, the women of Nepal are still marginalized in society which affects their health and wellbeing. Therefore, the government has introduced special programmes and incentives, such as free health care programme and safe delivery incentive scheme, to reduce inequity in health. For the last few decades, the government has emphasized on improving access to health care services by expanding health facilities and strengthening community based interventions. Extension of access to health care services and improving the quality of health care remain a major challenge. The expansion of urban health services, owing to rapid urbanization is a burning challenge. Shifting burden of diseases and natural disaster induced health problems is yet another challenge. While communicable diseases continue to pose problems, there is now a growing prevalence of non-communicable diseases. There are also increasing threats of natural disasters due to climate change. Likewise, there are increasing number of deaths and injuries due to road accidents.

The devastating earthquake of April 2015 and subsequent aftershocks resulted in 1200 health facilities being affected. Reconstruction and maintenance of these health facilities is another challenge. This calls for a strong effort for emergency preparedness and response management. The current structure of MoHP, which is more than 25 years old, may not be prepared enough to address the contemporary and emerging health challenges. There is a need of restructuring of MoHP in line with the federalist structure as provisioned by the constitution and ensure equitable distribution of health facilities with reference to geography and population. Apart from that, certain components of health systems need further strengthening to improve the health outcome of the citizens.

To sustain the achievements made in the health sector and address the aforementioned challenges,

NHSS stands on four strategic principles:

1. Equitable access to health services
2. Quality health services
3. Health systems reform
4. Multi-sectoral approach

Under these strategic principles, NHSS envisions for equitable service utilization, strengthening service delivery and demand generation to underserved populations, including the urban poor. NHSS calls for greater partnerships with local level institutions and community groups to empower women, promote supportive cultural practices and curb gender-based violence in the society. NHSS focuses on improving the quality of care at points of service delivery. As warranted by National Health Policy 2014, an autonomous accreditation body will be established during NHSS period for quality assurance of health services in public and private sectors. NHSS emphasises on strengthening research and promoting the use of evidence. It also aspires to leverage modern technologies for better health information management, increased access to health services, better management of procurement and supply chain, and more effective and efficient construction of health facilities.

To strengthen decentralization planning and budgeting, NHSS prioritises the implementation of the Collaborative Framework for Strengthening Local Health Governance in Nepal. NHSS also expands state and non-state partnership by building mutually beneficial partnerships between the public and private sectors. At the same time, NHSS aims to strengthen institutional capacity of MoHP to better regulate public and private health systems.

NHSS recognises the importance of multi-sector approach to address social determinants of health. While the culture of inter-sectoral workings in health has been going on for a long time, NHSS emphasises on more institutionalized way of setting-up multi-sectoral approaches. For the next five years, NHSS focuses on promoting healthy lifestyles and healthy environment through multi-sectoral action. This includes: recognizing young people as a starting point to promote healthy lifestyle; leveraging health facilities as a learning environment for healthy lifestyle and behaviour; tackling malnutrition and promoting the consumption of healthy foods; reducing the ever-rising deaths and injuries through road traffic accidents; and promoting healthy environment including better response to climate change related health risks.

NHSS strives towards the goal to 'improve health status of all people through accountable and equitable health service delivery system.' NHSS stipulates the following nine outcomes to achieve this goal:

1. Rebuilt and strengthened health systems: Infrastructure, HRH management, Procurement and supply chain management.
2. Improved quality of care at point-of-delivery
3. Equitable utilization of health care services
4. Strengthened decentralised planning and budgeting
5. Improved sector management and governance
6. Improved sustainability of health sector financing
7. Improved healthy lifestyles and environment
8. Strengthened management of public health emergencies

9. Improved availability and use of evidence in decision-making processes at all levels.

In order to move towards UHC, NHSS lays out the necessary service delivery arrangements. It calls for Basic Health Services, which is delivered free of charge to the citizens, and defines the Basic Health Package. Services that are beyond the scope of basic health package are delivered through different social health protection arrangements, including health insurance.

The government will assess the financial needs and identify the resource gap to implement this strategy. The Government of Nepal will progressively seek to fund the implementation of this strategy from its own internal resources. Specifically, over the next five years, the government will aspire to fund the provision of Basic Health Services entirely from government revenues. Likewise, as guided by the Development Cooperation Policy (2014), external resources will also be mobilized to narrow the resource gap.

The NHSS Implementation Plan (IP) and subsequent Annual Work Plan and Budget (AWPB) will translate the NHSS into action. The MoHP will lead the implementation, monitoring and evaluation of this strategy with participation of line ministries, development partners, non-governmental agencies, civil society, private sector, cooperatives and local communities. The NHSS Results Framework will be the basis to monitor the sector performance through annual reviews and a Mid Term Review (MTR).

INTRODUCTION

1.1 Background

Constitution of Nepal 2015 has clearly mentioned health as fundamental right of the citizen. Article 35 of this constitution further elaborates provision of free health care, information about health care, equal access to health care and access to clean drinking water and sanitation. Furthermore, it also emphasizes right to information on any matter of his or her interest or public interest to every citizen. Good Governance Act 2008, in clause 41, vividly mentioned that every department should submit annual report. In line with the constitution of Nepal and Good Governance Act, Department of Health Services (DoHS) has published this Annual Report of fiscal year 2075/76 (2018/19). This is the 25th consecutive report of its kind and it is the third Annual Report after restructuring of Ministry of Health and Population (MoHP).

This report focuses on DoHS performance in 2075/76 and content of the report include following areas

- Programme's policy statements, including goals, objectives, strategies, major activities and achievements.
- Programme's indicators.
- Problems, issues, constraints and recommendations on improving performance and achieving targets.

This report also provides information on the contributions of the Department of Ayurveda and Alternative Medicine (DoAA), Department of Drug Administration (DoA), the health councils, partners and stakeholders on contemporary issues in the health sector as well as the progress of major programmes implemented by DoHS, health directorates of seven provinces, provincial health offices (PHOs), and health facilities.

This report is basically the result of the National Annual Review (NAR) workshop that was held at Bode-Bhaktapur district from 18-19 Mangshir 2076 (4th to 5th December 2018). The workshop was attended by senior personnel from the ministry, departments, health directorates, divisions, centres and sections, central level hospitals, and by representatives of external development partners (EDPs) and non-governmental organizations (NGOs and INGOs).

Workshop participants reviewed the policy statements of each programme and analysed data generated by the Integrated Health Management Information System (IHIMS) and from other sources on selected indicators. These data were interpreted during the technical program's presentations and panel discussions.

The objectives of National Annual Review Workshop were:

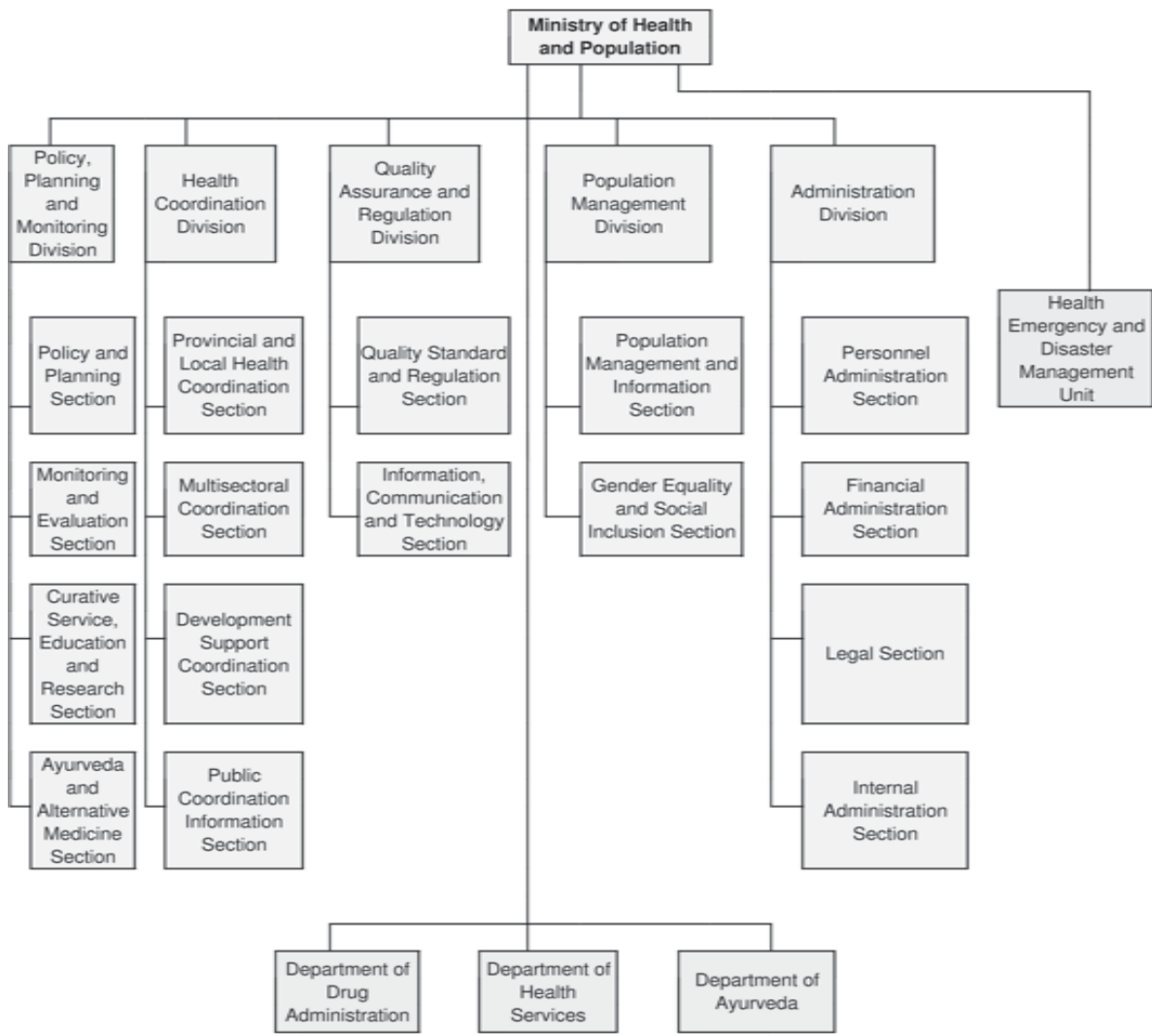
- Jointly review the annual progress of Nepal Health Sector Strategy (2015/16 – 2020/2021) and ensure all stakeholders develop a shared understanding of progress in the sector;
- Identify the strategic priority areas that need to be addressed to strengthen health system in the changing context;
- Agree on the strategic actions to be included in the next year's Annual Work Plan and Budget (AWPB).

Introduction

The MoHP provides guidance to DoHS as well as provincial- and local-level governments to deliver promotional, preventive, diagnostic, curative, and palliative health care services and carries out related policy, planning, human resource, financial management and monitoring and evaluation functions. In newly restructured MoHP organ gram, it has five divisions: The Policy, Planning & Monitoring Division; the Health Coordination Division; the Quality Assurance & Regulation Division; the Population Management Division and the Administration Division. In addition, the six professional councils: Nepal Medical Council, Nepal Nursing Council, Nepal Ayurvedic Medical Council, Nepal Health Professional Council, Nepal Pharmacy Council and Nepal Health Research Council) accredit health-related schools and training centres and regulate care providers.

Department of Health Services (DoHS), the Department of Ayurveda and Alternative Medicine (DoAA) and the Department of Drug Administration (DDA) come under MoHP. These three departments are responsible for formulating and implementing programmes, the use of financial resources and accountability, and monitoring and evaluation. DDA is the regulatory authority for assuring the quality and regulating the import, export, production, sale and distribution of drugs. The Department of Ayurveda and Alternative Medicine is responsible to care with Ayurvedic services and implements health promotional activities (Figure1.1).

Figure 1.1 Organogram of Ministry of Health and Population (MoHP)



1.2 Department of Health Services (DoHS)

According to the recently restructured DoHS organogram (Figure 1.2), Nepal's public health system has the following five centres that have a degree of autonomy in personnel and financial management: National Health Education, Information and Communication Centre (NHEICC); National Health Training Centre (NHTC); National Centre for AIDS and STD Control (NCASC); National Tuberculosis Centre (NTC); National Public Health Laboratory (NPHL). The NHTC coordinates all training programmes of the divisions and implements training by sharing common inputs and reducing the travelling time of care providers. All information, education and communication (IEC) and behaviour change communication (BCC) activities are coordinated by NHEICC. The centres support the delivery of essential health care services (EHCS) and work in coordination with the respective divisions.

The DoHS is responsible for delivering preventive, promotive, diagnostic and curative health services. The director general is the organisational head. The DoHS has five divisions, major responsibilities of the divisions are summarized in Table 1.1 and Figure 1.2.

Table 1.1: Summary responsibilities area of DoHS's five divisions

	Division	Areas of responsibility
1	Management Division (MD)	Integrated Health Information Management, Infrastructure Development, Environmental Health and Logistics Management
2	Family Welfare Division (FWD)	Expanded Programme on Immunization (EPI), Nutrition and Integrated Management of Childhood Illness (IMCI) and Newborn Care, Reproductive Health Care (including Safe Motherhood and Neonatal Health) and Family Planning (FP).
3	Epidemiology and Disease Control Division (EDCD)	Outbreak Management, Control of Epidemics, Pandemic and Endemic Diseases, Neglected Tropical Diseases (NTD), Vector Borne Diseases, Zoonotic and other Communicable Diseases, Non Communicable Diseases (NCD), Mental Health, Leprosy control, Disability Prevention, Surveillance, Early Warning and Reporting System (EWARS), Water Quality and Research (WQR) activities.
4	Curative Service Division (CSD)	Hospital service monitoring and strengthening including emergency and basic health care, ENT, Eye, Oral health.
5	Nursing and Social Security Division (NSSD)	Capacity building of nursing professional, social security, Geriatric and gender based violence

Figure 1.2: Organogram of the Department of Health Services (DoHS)

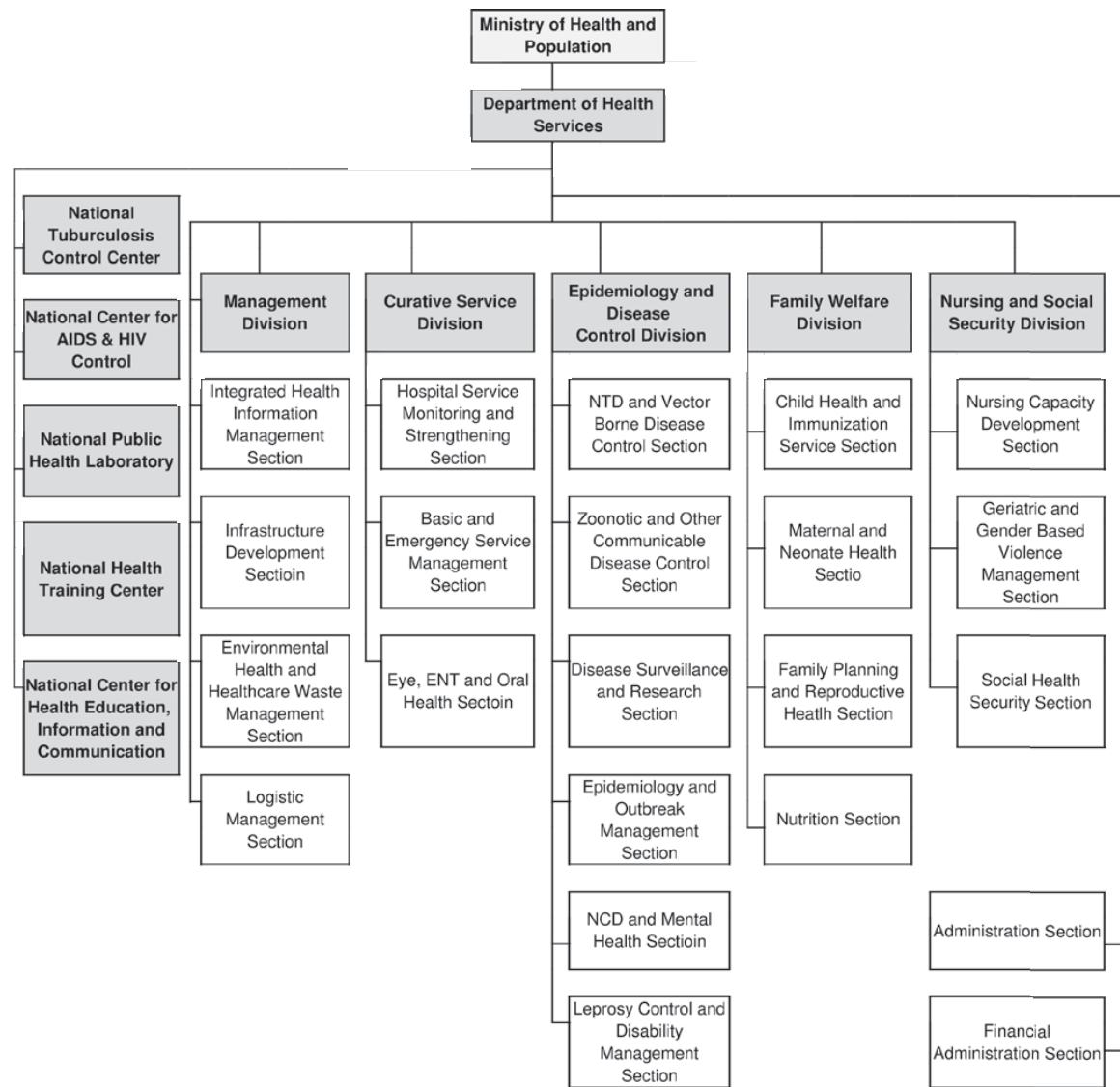
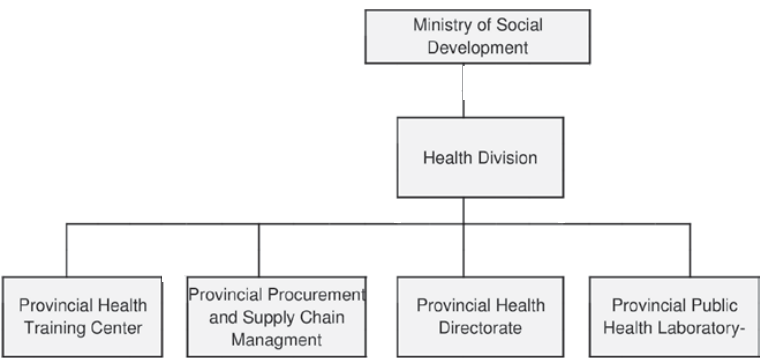


Figure 1.3: Organogram of the health system at province Level



DoHS's main functions are as follows:

- Advise the Government of Nepal (GoN) on formulating health related policies and developing and expanding health institutions in line with these policies.
- Determine the required human resource for health institutions and developing them by preparing and implementing short and long term plans.
- Manage the procurement and supply of drugs, equipment, instruments and other logistics at regional, district and below levels.
- Coordinate activities and mobilize resources for the implementation of approved programmes.
- Manage the immediate solution of problems arising from natural disasters and epidemics.
- Establish relations with foreign countries and international institutions to enhance and develop health services and assist MoHP in receiving and mobilizing foreign resources by identifying areas of cooperation.
- Encourage the private sector and non-government and foreign institutions to participate in health services, maintain relations and coordination, and control the quality of health services by regular supervision and monitoring.
- Manage free medication and treatment for severe diseases (cancer, heart disease, Alzheimer's, Parkinson's disease, head injuries, spinal injuries, renal failure and sickle-cell anaemia and Kidney Dialysis, Kidney Transplant and Kidney Treatment) for impoverished citizens.
- Manage information systems related to health facilities, health services, logistics, training and finance to support the planning, monitoring, and evaluation of health programmes.
- Maintain data, statements and information on health services update & publication of DoHS Annual Report.
- The financial management of DoHS, and the settlement of irregularities.

The seven-provincial health directorate provide technical backstopping and programme monitoring to district health systems and come directly under Ministry of Social Development of Province. The regional, sub-regional, zonal hospitals and district hospitals are planned to be categorized into three level of hospitals; Primary, Secondary and Tertiary. There are also training centres, laboratories, TB centres and medical stores at the provincial level.

Furthermore, Cabinet has decided to establish one health office in 77 districts which are under provincial health directorate. All Primary Health Care Centres (PHCC) are planned to be upgrade into primary level hospital which will be under local authority. Health Posts (HP) are present at ward level in the changed context. Moreover, on the need basis, community health units and urban health clinics are being run by local bodies.

Health posts are the first institutional contact point for basic health services. These lowest level health facilities monitor the activities of Female Community Health Volunteers (FCHVs) and the community-based activities of Primary Health Care Outreach Clinics (PHC-ORCs) and Expanded Programme on Immunization (EPI) clinics. In addition, they are the referral centres of FCHVs as well as venues for community based activities such as PHC-ORC and EPI clinics. Each level above the health post level is a referral point in a network from PHCCs on to primary and secondary level hospitals, and finally to tertiary level hospitals. This hierarchy is designed to ensure that most of the population can receive public health and minor treatment in accessible places. Inversely, the system works as a supporting mechanism for lower levels by providing logistical, financial, monitory upervisory and technical support from the centre to the periphery.

1.3 Sources of Information and Data Analysis

The Integrated Health Information Management System (IHIMS) provided the main source of information for this report. The report also uses information from other management information systems (MISs), disease surveillance systems, vital registration, censuses, sentinel reporting, surveys, rapid assessments and research. The main health sector MISs include the IHIMS, the Logistics Management Information System (LMIS), the Financial Management Information System (FMIS), the Health Infrastructure Information System (HIIS), the Planning and Management of Assets in Health Care System (PLAMAHS), the Human Resource Information System (HuRIS), the Training Information Management System (TIMS), the Ayurveda Reporting System (ARS) and the Drug Information Network (DIN).

All data are downloaded from the DHIS-2 software and analysed and explained by the respective divisions and sections. A technical working group ultimately finalized each sections and chapters of annual report.

1.4 Structure of the Report

This report has eleven chapters. Chapter 1 covers the background to annual report preparation, the structure of DoHS, and sources of information on Nepal's health sector. Chapters 2 covers progress against Nepal Health Sector Strategy (NHSS), Chapter 3 presents of others departments (DoA and DoAA) progress under MoHP, Chapter 4 to 8 covers DoHS's different health care related and support programmes; Chapter 9 presents the programmes of the health sector councils, Chapter 10 presents the progress on national health insurance while Chapter 11 gives details of the health sector external development partners (EDPs, INGOs and NGOs) contributions in the health sectors. Majority of the data source is abstracted from Integrated Health Information Management System (IHIMS). The data presented here were downloaded through dHIS-2 system which was retrieved after the completion of national annual review workshop. The service statistics of reported data is only presented here; those who didn't report in time are excluded.

Annex 1 presents the targets Vs achievement of fiscal year 2075/76 of DoHS's programmes major activities while Annex 2 gives the major programme targets for the next fiscal year 2076/77. Due to the bulky nature of DoHS Annual Report in the past years, raw and analysed data are not incorporated in this report. To make it easy for annual report users the electronic version of raw data by all 753 municipalities has been uploaded in the website of DoHS- "www.dohs.gov.np".

PROGRESS AGAINST NHSS

The Mid-Term Review (MTR) of the Nepal Health Sector Strategy (NHSS) was carried out in 2018/19 by a group of independent consultants under the guidance of the Technical Working Group (TWG) formed by the Ministry of Health and Population (MoHP). The review assessed the relevance, efficiency, effectiveness of NHSS in relation to health sector priorities using the following tools: Critical Pathway Analysis (CPA); Political Economy Analysis (PEA) at the Provincial and Local levels; a Critical Capacity Analysis (CCA) and a Social and Environmental Impact Assessment (SEIA).

Major Findings

Major findings are organised according to the NHSS outcomes and are summarised below.

S.N.	Outcome	Progress	Gap and Priorities
1	Rebuild and Strengthen Health Systems - Infrastructure - Human Resource for Health - Procurement and Supply Chain Management	- Nepal Health Infrastructure Standard has been developed. - Preparing Human Resource for Health Strategic Roadmap - Drafted Standard Bidding document of the health sector procurement	- Institutional structure and function in federal context to be further clarified. - Level of absenteeism in health care providers to be addressed. - Delays on procurement to be addressed
2	Improved quality of care at point of service delivery	- Prepared Nepal Public Health Act - Prepared Safe Motherhood and Reproductive Health Right Act. - Drafted National action plan for anti-microbial resistance and the drug policy 2074	- Roles between quality governance structures and various autonomous entities to be clarified. - Practice of analyzing routine data to measure quality of care to be institutionalized. - Reporting linkage between different level of government structure to be strengthened.
3	Equitable distribution and utilization of the health services	- Health care utilization among the poorest quintile has been improved. (E.g. Caesarean Section rate) - Access to reach health facility has been improved (E.g to me to reach health facility) - Drafted the Basic Health Care Package - Endorsed the National Strategy on reaching the unreached. - Endorsed remote area	- Service Provision in remote areas to be expanded. - Alignment between health insurance and free health care program to be strengthened. - Neglected health problem (e.g disability, mental health services, adolescent sexual and reproductive health) to be highlighted.
4	Strengthening Decentralized Planning and Budgeting	- Enhanced capacity of budget and budgeting - Developed Planning and Budgeting guideline - Implemented budget planning as per local government operation act. - Practiced planning and budgeting based on federal context.	- Planning and Budgeting as per new institutional structure to be reviewed and updated. - Conditional grants need to cover priority programmatic needs. - Evidence based planning and budgeting should be strengthened in all three sphere government.
5	Sector Management and Governance	Developed different health sector guideline.	Accountability of local level to provinces need

Progress Against NHSS

		Roles of provinces and local level being further defined and clarified through practice and communication.	- to be clarified and strengthened. - Motivation of the health care providers to be maintained. - Enable all health facilities to provide basic health services. - Model legislature/regulatory framework for province and local level to be developed and practiced. - Private sector regulatory framework to be institutionalized. - One health strategy among Ministry of Health and Population (MoHP) and Agriculture and livestock development forest and environment to be formalized.
6	Improved sustainability of health care financing	- Increased government health expenditure. - Increased per-capita health expenditure. - Expanded health insurance program	- Expediting expenditure on health to achieve universal access to primary health care services. - Strategies to reduce out-of-pocket expenditure to be strengthened. - Health financing strategy to be developed. - Health insurance program should focus to poor and improve annual renewal.
7	Improved health life style and environment	- Endorsed and piloted Package of Essential Non-Communicable Disease protocol. - Revised Mental Health Policy - Endorsed National Health Adaptation Plan (H-NAP) on climate change.	- Multilateral coordination and collaboration to be strengthened. - Multi Sectoral action plan for prevention and control of non-communicable disease to be developed and implemented. - Mental Health Issue to be prioritized by all level. - Service provision on non-communicable disease to be expanded. - Social mobilization and behavior change communication activities to improve lifestyle to be improved.
8	Strengthened Management of Public Health Emergencies	- National protocol and guidelines for emergency situation has been developed. - Established partnership with non-governmental and sectoral agencies for emergency management. - Implementation of Nepal National Adaptation Plan of Action(NAPA) for climate	- Guidelines development and allocation of resources for health emergencies to be prioritized. - Institutionalized the progress made on public health emergencies. - Capacity building and mobilization of human

		change induced disaster	resources to address impact of health emergencies.
9	Improved availability of the and use of evidence in decision making process at all level.	- Developed national e-health strategy. - Functionalized and updated the DHIS 2 platform for HMIS reporting. - Established grievance management system. - Conducted multiple analytical studies E.g National Health Accounting (NHA 2018), Nepal Health Facility Survey(NHFS)-2015, Nepal Demographic Health Survey 2016, Nepal National micronutrient survey	- e-health initiatives at the all levels to be developed, standardized and institutionalized. - Central data repository to be operationalized. - Effective implementation and guidelines and tools at all level of governments to be promoted.

Key recommendations of the Mid Term Review

- A legislative/regulatory framework covering accountabilities of all governments need to be strengthened and greater focus put on dissemination and awareness raising of these frameworks; roles and responsibilities across all levels of government.
- Multi-sectoral coordination among line ministries should to be strengthened and multi-sectoral platforms for lower tiers of government need to be established.
- To ensure equitable distribution of funding, resource-based formulas need to be developed.
- Continuous increases in annual government health expenditure are needed to ensure an adequate flow of funds to health services delivered at all levels of government.
- Expansion of services to deliver equitable services, capacity building of providers for quality of care and ensuring proper recording, reporting and use of data for programmatic use should be further strengthened.
- Improved availability and use of health sector data is needed for all levels. Tailored planning tools with process support are needed to promote bottom up approaches and evidence-based planning and budgeting.
- Further training and capacity development is needed to make budgeting and management systems effective.
- MoHP could consider appropriate models to optimise resource use and ensure specialist services reach all levels.
- MoHP should plan next health sector strategy in a federal context and the federal strategy should serve as the umbrella one for provincial strategic plan and the development should be driven from the local to provincial to federal level.

Overview of progress against NHSS results framework

The latest progress against each indicator of the NHSS Results Framework is available on the MoHP website (www.mohip.gov.np). This webbased application allows the compilation and analysis of indicators alongside the key interventions that contribute to achieving the outputs and outcomes.

Table shows the ten goal level indicators with their baseline data and achievements against the defined milestones for 2019 and the targets for 2020.

Code	Indicators	Baseline			Milestone 2016/17			Milestone 2017/18			Milestone 2018/19			2020/21	
		Data	Year	Source	2016/17	Data	Year	Source	Data	Year	Data	Year	Source	Target	Target
G1	Maternal mortality ratio (per 100,000 live births)	190	2013	WHO	148	239	2016	NDHS	186	2019	186	2019	WHO	125	
G2	Under five mortality rate (per 1,000 live births)	38	2014	NMICS	34	39	2016	NDHS	39	2016	39	2016	NDHS	28	
G3	Neonatal mortality rate (per 1,000 live births)	23	2014	NMICS	21	21	2016	NDHS	21	2016	21	2016	NDHS	17.5	
G4	Total fertility rate (births per 1,000 women aged 15–19 years)	2.3	2014	NMICS	2.2	2.3	2016	NDHS	2.3	2016	2.3	2016	NDHS	2.1	
G5	% of children under-5 years who are stunted	37.4	2014	NMICS	34	35	2016	NNMSS	35	2016	35	2016	NNMSS	31	
G6	% of women aged 15-49 years with body mass index less than 18.5	18.2	2011	NMICS	13	14.5	2016	NNMSS	14.5	2016	14.5	2016	NNMSS	12	
G7	Lives lost due to road traffic accidents per 100,000 population	34	2013	Nepal Police	23	7.1	2016	Nepal Police	9.5	2018	9.5	2018	Nepal Police	17	
G8	Suicide rate per 100,000 population	16.5	2014	Nepal Police	15	17.8	2016	Nepal Police	19	2018	19	2018	Nepal Police	14.5	
G9	Disability adjusted life years lost due to communicable, maternal and neonatal, non-communicable diseases, and injuries	8,319,695	2013	BoD, IHME	7,487,726	9,015,320	2016	GBD Study	9,015,320	2016	9,015,320	2016	GBD Study	6,738,953	
G10	Incidence of impoverishment due to out-of-pocket expenditure in health	NA	2011	NLSS	20	NA		NLSS	NA		NA		NLSS	Reduce by 20%	
Refer to full NHSS Results Framework for means of verification of the targets and required data disaggregation															
*Achievement against target- Green: 100%; Yellow: >50%; Red: <50%															

PROGRESS OF OTHER DEPARTMENTS UNDER MoHP

3.1 Department of Drug Administration

3.1.1 BACKGROUND

Government of Nepal has promulgated the Drug Act 1978, to prohibit the misuse or abuse of medicines and allied pharmaceutical materials as well as the false or misleading information relating to efficacy and use of medicines and to regulate and control the production, marketing, distribution, export-import, storage and utilization of those medicines which are not safe for the use of the people, efficacious and of standard quality.

To implement and fulfill the aim of Drug Act 1978 and various regulations under it Government of Nepal established Department of Drug Administration (DDA) in 1979.

In accordance with the objectives of the National Health Policy 1991, the National Drug Policy 1995 has been formulated and implemented. It focuses on establishing co-ordination among government, non-government and private organizations involved in the activities related to medicine production, import, export, storage, supply, sales, distribution, quality assessment, regulatory control, rational use and information flow. Achieving the aims and objectives of National Drug Policy is another important area for DDA.

Under the Drug Act 1978, the following regulations and codes have been implemented as supporting tools for the active enforcement of Drug Act:

1. Drug Consultative Council and Drug Advisory Committee rules, (2037 BS).
2. Drug Registration Rules, (2038 BS).
3. Drug Standard Rules (2043 BS).
4. Enquiry and Inspection rules (2040 BS).
5. Codes on Sale and Distribution of Drugs (2071 BS).
6. Codes on Drug Production (2072 BS).

Drug Donation guidelines have been implemented for the quality assurance of donated medicines.

3.1.2 OBJECTIVES

The main objective of DDA is to regulate all functions relating modern, veterinary and traditional medicines, like misuse and abuse of medicines and its raw materials, to stop false and misleading advertisement and make available safe, efficacious and quality medicine to the general public by controlling the production, marketing, distribution, sale, export-import, storage and use of medicines.

3.1.3 STRATEGIES

- Selection of essential medicine to promote rational use of medicines.
- Establishment of regional offices at all five regions for effective decentralization.

Progress of Other Departments Under MoHP

- Strengthening of National Medicines Laboratory (NML) as National reference Laboratory on medicines.
- Medicine registration based on scientific facts.
- Promotion of rational use of medicines.
- Development of an efficient drug information system to disseminate the relevant information.
- Encouragement to promote and establish pharmaceutical industries to achieve self-reliance in the production of essential medicines.
- Effective inspection to ensure the quality of marketed medicines.
- Prevent misuse of antibiotic to combat antimicrobial resistance.

3.1.4 FUNCTIONS OF DIVISION AND BRANCH OFFICES OF DEPARTMENT OF DRUG ADMINISTRATION

Drug Evaluation and Registration Division

❖ Medicine and Biological Evaluation Section

- Scientific evaluation of new medicine and allied products for manufacturing, import, export and marketing.
- Scientific evaluation of vaccines and biological for manufacturing, export, import and marketing.
- Research and Development of new medicine and Clinical trials.
- To co-ordinate with the related experts for the evaluation of new medicine
- To issue permission for research and development and clinical trials.

❖ Import Section

- To approve foreign manufacturer for importation of medicine.
- To register products for export and import after evaluation.
- To issue the recommendation letter for import/export of medicines
- To renew the recommendation letter for import-export.
- To register vaccines and biological for export and import after evaluation.
- To issue the recommendation letter for import/export of vaccines and biological.

❖ Industry Section

- To issue recommendation letter for the establishment of pharmaceutical industry and issue Product Manufacturing License and renew them.
- To approved layout of pharmaceutical industry.
- Register new products and issue marketing permission for the sale and distribution.
- Issue letter of recommendation for the import of raw materials and renew them.
- To register and issue registration certificates to open retail / wholesale pharmacy outlets and renew them.
- Issue and renew certificates for persons authorized to sale medicines.
- Update the record of pharmacies and approve variation in the licenses.

Planning, Co-ordination and Management Division

❖ Training and Drug Information Section

- Conduct the refresher training to medicine sellers.
- Disseminate information about medicines particularly side effects, contraindication, drug interaction and storage condition and other necessary information regarding medicines.
- Publish Drug Bulletin of Nepal (DBN) and distribute to health institutions, industries, medical doctors, health personnel's, pharmacist and other concerned person and institutions.

- Revise National List of Essential Medicines and Nepalese National Formulary periodically.
- Recommend for import of narcotic, psychotropic, precursors substances and liaise with International Narcotic Control Board.
- Conduct activities related to Pharmacovigilance and Adverse Drug Monitoring Reporting.
- Webpage development, updating and computer networking.

❖ **Planning and Coordination section**

- Organization development, planning, budgeting, foreign aid.
- Central and provincial government coordination and foreign coordination.
- Prepare yearly planning for activities conduct by DDA and regional office.
- Coordinate with Ministry, other department and other government and non-government organization for conducting activities and submit the report to MOH.
- Collect, prepare and forward monthly, quarterly and yearly report.

❖ **Pharmacovigilance section**

- Post marketing surveillance of the Medicine and allied products.
- To act as a National pharmacovigilance center and co-ordinate and collaborate with regional centers and WHO Collaborating Centre for international Drug Monitoring (The Uppsala Monitoring Centre)
- To facilitate the policy development and design on Drug Use Evaluation.

❖ **Financial/Administration section**

- Entry and Dispatch of letters.
- Management of human resources (recruitment, posting, promotion, transfer etc)
- Performance evaluation of employees and maintained harmony.
- Perform Procurement related activities
- Monitoring, evaluation and co-ordination of regional offices activities.
- Management of Premises, building, work places and Library.
- Internal financial management, revenue collection and audit.
- Plan and prepare budget expenditures.
- Procurement and expenditure management.
- Financial irregularities management (Beruju).

Inspection, Evaluation and Law Enforcement Division

- Take legal and administrative action on cases of non-compliance as per the provision of Drug Act and its Regulations.
- Regulate sales and distribution of psychotropic and narcotic drugs.
- Co-ordinate Good Manufacturing Practice Audit within and outside the country.

❖ **Inspection and Evaluation Section**

- Inspection for the effective implementation of Drug act 2035 and other regulations under Drug Act.
- Inspect drug industries, wholesale, retail and hospital pharmacies regularly.
- Prepare indicators for inspection and evaluation.
- Prepare national standards for inspection of Drug Industry and Pharmacies.
- Set an annual target for inspection and evaluation.
- Assist on periodically and annual review.

❖ **Law Enforcement Section**

- Prepare necessary document for registering the case on court against Drug Act.
- Assist on legal aspect to Department.
- Training to Drug Inspectors on Inspection, Investigation and Case filing.
- Surveillance on legal aspects related to pharmacy practice.
- Assist on the amendment of Drug act, Regulation and Guidelines.

❖ **GMP Audit and Certification Section**

- Perform GMP certification and Recertification related activities.
- Inspection of pharmaceutical industry as per plan.
- Coordinate with regional offices for GMP related inspection.
- Prepare work plan for foreign industry Audit inspection
- Take action for noncompliance.

Branch Offices:

DDA has its branch offices at Biratnagar, Birgunj and Nepalgunj. These offices carry out the responsibility of inspection as well as Pharmacy registration and renewal.

3.1.5 National Medicines Laboratory (NML)

National Medicines Laboratory is the principal body of Government of Nepal for testing and analysis of drugs. It has various sections like chemical analysis, microbiology, pharmacology and instrumental analysis. The main functions of NML are to:

- Test and analyze the quality of medicines as empowered according to the Drug Act 1978.
- Issue Lot Release Certificate for vaccines.
- Conduct training on Good Laboratory Practices.
- Audit laboratories of Nepalese pharmaceutical industries.

3.1.6 ANALYSIS OF ACHIEVEMENTS BY MAJOR ACTIVITIES

Activities carried out in FY 2075/76 (2018-2019)

Major activities

1. Awareness on the rational use of medicines by different media.
2. Regular publication of Drug Bulletin of Nepal (DBN).
3. Audit/inspection of domestic drug industries for WHO Good Manufacturing Practice (GMP) compliance.
4. Inspection of retail & wholesale pharmacies for compliance.
5. Post marketing quality analysis of drugs available in market.
6. Inspection of Foreign Manufacturers before registration of products.
7. Conducting examination of veterinary drug sellers' training.
8. Audit of domestic manufacturer laboratory for compliance of Good Laboratory Practice (GLP)
9. Take legal and administrative action for violation of regulatory standards.
10. Recall of medicine from market those failed to quality standard.

Table 1: Target Vs Achievement, FY 2075/76

S.N	Activities	Unit	Target	Achievement	
				Num.	%
1	Drug information to the public by different media	Num.	30	42	140
2	Publication of Drug Bulletin of Nepal		3	3	100
3	Conducting examination of veterinary drug sellers' training		2	2	100
4	Inspection of domestic Pharmaceutical Industries		87	87	100
5	Inspection to drug retailers& wholesalers		2913	3404	117
6	Drug sample Analysis		1000	1018	102
7	Audit of Pharmaceutical Analytical Laboratories		30	30	100
8	Inspection of Foreign Companies	Times	5	5	100

Table 2: Other activities

S. N	Activities	Achievement
1	Registration of new foreign pharmaceutical Industry	39
2	Registration of new medicine (import)	244
3	Renew of import license	3590
4	Issue of marketing license	787
5	Issue of product license	1366
6	Import license for raw material for domestic industry	1321
7	Registration of new pharmacy	893
8	Renew of pharmacy	4571
9	Renew of professional license	575
10	Deregistration of pharmacy	336
11	Recall of medicine from market due to inferior quality	21
12	Training on ISO 17025 certification	1
13	Analytical Method Validation for non-pharmacopoeial products	34
14	Interaction program with stakeholders	5
15	Training on BA/BE & TDM	2
16	Development of SOP for Pharmacovigilance	1
17	Seminar on Rational Use of Medicines in different Provinces	3
18	Training on legal procedure for Drug Inspectors	1

Table 3: Financial allocation and Expenditure
Budget in thousands (000)

S.N	Budget heading	Budget allocation	Budget expenditure	%
1	Capital budget	7,25,00,000.00	4,68,15,221.01	64.57
2	Recurrent budget	9,57,96,839.50	7,28,44,245.25	76.04
3	Total	16,82,96,839.50	11,96,59,466.26	71.10

3.1.7 Revenue generated : NRs

Total revenue collection: 48105599.49

3.1.8 Challenges

- Organizational Structure for federal, provincial and local government.
- Lacking mechanism (legal and organizational for regulation of HTP).
- Information Management , Transparency and lacking of dynamic and Responsive Information system
- Illegal import of medicine due to open border and, SFs regulation and control.
- Lacking of resources (human, Technology)
- Regional harmonization and uniformity, MRH and SRA collaboration.
- Pharmacovigilance , post marketing surveillance
- Good governance and accountability
- Medicine Shortages issues.
- Lack of organization structure for price monitoring.

3.2 Department of Ayurveda and Alternative Medicine

3.2.1 Background

Department of Ayurveda and Alternative Medicine (DoAA) primarily manages the delivery of Ayurveda & Alternative Medicine Services and promotes healthy lifestyles through its network facilities all across the country. The Department of Ayurveda & Alternative Medicine, one of the three departments of the Ministry of Health & Population (MoHP) is responsible for programming, management of information, and supervision, monitoring and evaluation of the Ayurveda Service programs.

Ayurveda is an ancient medical system and indigenous to Nepal with deep roots. The sources of Ayurvedic medicine are medicinal herbs, minerals and animal products. The system works through simple and therapeutic measures along with promotive, preventive, curative and rehabilitative health of people. Ayurveda health services are being delivered through one Central Ayurveda Hospital (Nardevi), one Provincial Hospital (Dang), 14 Zonal Ayurveda Dispensaries, 61 District Ayurveda Health Centers and 305 Ayurveda dispensaries across the country. The Ayurveda and Alternative Medicine unit in the Ministry of Health & population (MoHP) is responsible for formulating policies and guidelines for Ayurveda and other traditional medical system.

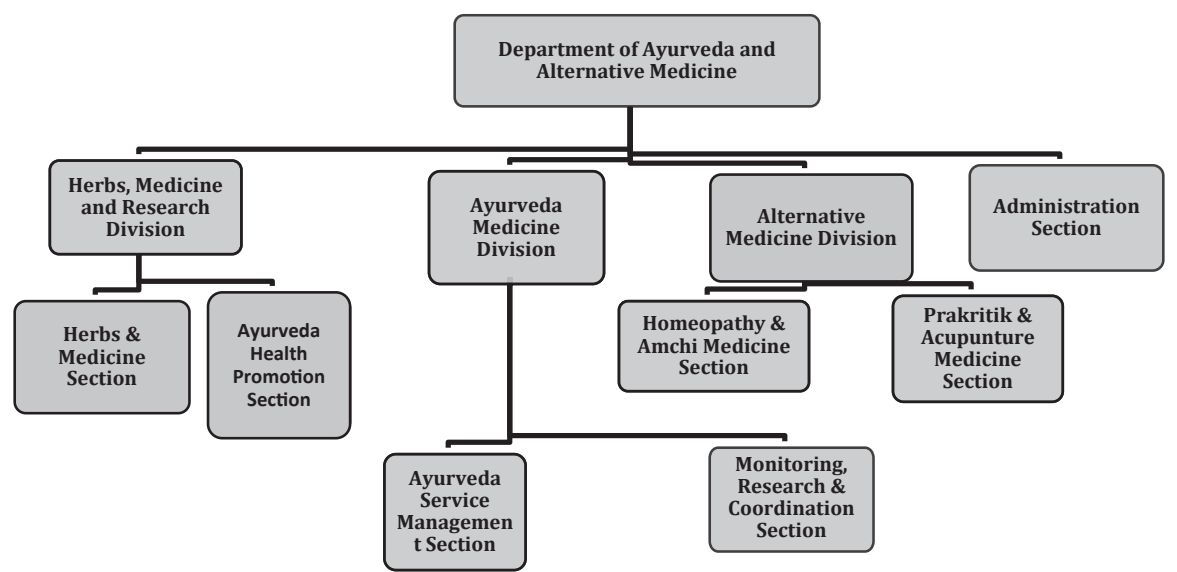
Various national and international policies have highlighted the importance of Ayurveda services in primary health care and for prevention of NCDs. The Constitution of Nepal has called for the protection and promotion of traditional Ayurveda medicines along with naturopathy and homeopathy. The National Health Policy (2014) has called for expansion of Ayurvedic services as have the National Ayurveda Health Policy (1995) and National Urban Health policy (2015).

Fifteen plan of government of Nepal (2019/20-2023/24) has guided planned development & expansion of Ayurveda, Naturopathy, Homeopathy & other alternative medicines. More specifically, it says: 1) Structural development suitable for identification, prevention, collection & promotion of locally available medicinal herbs, minerals & animal origin medicines. 2) Management & regulation of other alternative medicines based on standards & norms. 3) Establishment of Ayurveda, Yoga & Naturopathy Center and utilization of Ayurveda for promotion of health tourism.

Organization structure

Federal Level	Provincial Level	Local Level
•DoAA •Nardevi Hospital •NARTC •Singhadurvar Vaidhyakhana •NAMC •Ayurveda and Alternative Medicine Section (MoHP)	•District Ayurveda Health Centers-61 •Anchal Ayurveda Dispensaries-14	•Ayurveda Dispensaries-305

Organization of Department of Ayurveda & Alternative Medicine:



3.2.2 Objectives

- To expand and develop functional, physical Ayurveda health infrastructure;
- To improve quality control mechanism for Ayurveda health services throughout the country;
- To develop and manage the required human resources;
- To mobilize the adequate resources for medicinal plants;
- To promote community participation in the management of the health facility & utilization of local herbs;
- To promote health status & sustainable development of Ayurveda system using locally available medicinal plants;
- To promote positive attitudes towards health care & awareness of health issues;

3.2.2 Strategies

- Provide preventive, promotive & curative health services in the rural areas;
- Establishment & development of Ayurveda institutions;
- Strengthen & expand the Ayurveda health services;
- Develop skilled manpower required for various health facilities;
- Strengthening of monitoring & supervision activities;
- Development of information, education & communication center in the Department;
- Develop Inter sectoral co-ordination with Education Ministry, Forestry, local development sector & other NGO's & INGO's;
- Establishment of regional Ayurveda Hospitals & Ayurveda Dispensaries;
- Strengthening & expansion of research & training center of international level;
- National & International level training for the capacity enhancement of its human resources

3.2.3 Major Activities

Central level

- Non communicable disease Prevention and Control Program.
- Celebration of National/ International Yoga Day, Dhanvantari and Arogya Diwas.
- Guidelines, Protocol, Manual development.
- TOT on Panchakarma and Yoga .
- Establishment of patient recording reporting networking system software among Ayurveda institutions.
- Establishment of National Ayurveda, Panchakarma and Yoga Center in Budhanilkantha.
- Establishment of Regional Ayurveda Hospital at Dhangadi & Jhapa
- Strengthening program of Naturopathy, Yoga, Homeopathy, Unani, Aamchi etc.
- Purvakarma, Naturopathy & Yoga Health camp.
- Yoga, Physiotherapy and Disability Training to Ayurveda Physician.
- Quality monitoring of different Ayurveda Products available in Nepalese market.
- Monitoring of services provided by private Ayurveda & Alternative Medical Systems
- Annual review meeting in with 7 provinces.
- Revision, evaluation, monitoring and update of Ayurvedic health policy and development of code of ethics.
- Evaluation and monitoring and co-ordination with province and local level .

Local Level

- Yoga and Lifestyle management training program ..
- Strengthening of herbal garden.
- Workshop and discussion with local traditional healers.
- Preparation IEC materials on Ayurveda.
- School Ayurveda health program.
- Construction of compound wall of Ayurvedic institutions.
- Building construction of Ayurveda institutions.
- Promotive Panchakarma/Rasayan/Yoga programme for Senior Citizens
- Awareness program on medicinal plants
- Program for lactating mother (Distribution of galactagogue medicine).
- Procurement of treatment equipment

3.2.4 Analysis of Achievement

Based on the treatment report of different Ayurveda institutions following diseases were classified as top ten diseases:

- Amlapitta (Gastritis)
- Udarrog (Abdominal diseases)
- SwasanBikar (Respiratory diseases)
- VataVyadhi (Osteorthritis, Rheumatoid Arthritis & other neuromuscular Diseases)
- Jwar (Pyrexia)
- BalRoga (Pediatric diseases)
- Karna, Nasa, Mukha, Danta&Kantharog (ENT, Oral, Dental diseases)
- Strirog (Gynecological diseases)
- Brana (Wound, Abscess & Other Skin Diseases)
- Atisar/Grahani (Diarrheal diseases)

3.2.5 Service Statistics for fiscal year 2075/2076

Table 3.1: Table shows the number of people served by province wise in FY 2075/76

Province	Province No. 1	Province No. 2	Province No. 3	Gandaki Province	Province No. 5	Karnali	SudurPaschim Province	Total
OPD	219232	127275	165924	221231	229558	149597	243885	1356702
Stanpayee	3151	2005	2195	3113	3309	2014	3597	19384
JesthaNagarik	5235	3456	4115	5136	5704	3591	6108	33345
Purvakarma	4697	3536	3811	4907	5183	3529	5784	31447
GaunGhar Clinic	14121	10076	11143	14135	14320	9904	16125	89824
SwasthyaSibir	7908	4943	5732	6910	7154	4168	8546	45361
National	254344	151291	192920	255432	265228	172803	284045	1576063

3.2.6 Problems/Constraints

Problems/Constraints	Actions to be taken	Responsibility
Lack of experts and inadequate qualified manpower.	Production of Qualified Ayurvedic manpower(BAMS, MD)	DoAA MoHP MOE
Inadequate financial support for district level Ayurveda institutions to conduct monitoring supervision & publicity program.	Allocate sufficient Budget	MoHP
Poor storage & dispensing Practices of medicines in curative aspects of Ayurveda institutions.	Provide good furniture & dispensing materials Training on storage & Good dispensing Practice.	DoAA MoHP
Lack of inter sectoral co-ordination.	Co-ordination with related ministries, NGO's & INGO's Increase qualified manpower.	DoAA MoHP
Lack of community based program for publicity of Ayurveda.	Increase manpower production.☐ Allocation of adequate budget.	DoAA MoHP
Lack of Workshop, Training & Seminar ,Planning on Ayurveda.	Allocate adequate budget, Develop policy & Long term, Mid term and Short term plan on Ayurveda	DoAA MoHP
Lack of appropriate recording & reporting system.	Upgrading of Ayurveda Information Management System(AIMS) Allocation of adequate budget. Training on AIMS For Ayurveda Personnel	DoAA MoHP
Inadequate Specialized Human Resources under Department of Ayurveda.	Scholarship for higher studies,Recruitment &Placement .	MoGA PSC
Lack of Evidence Generation &	Goal formation.	DoAA
Documentation about the successful treatment of certain incurable disease with Ayurveda therapy claimed by practitioners.	Allocate budget.	MoHP

3.2.7 Programs formulated for the fiscal year 2076/77

Miscellaneous Programs: Ayurveda vibhagh (37003101)

- ✓ Improvement of Administrative building of Department and Budhanilkantha Panchakarma center.
- ✓ Construction of open gym center.
- ✓ Ayurveda Health promotion program.
- ✓ Skill development empowerment / program.
- ✓ Quality Medicinal Herbs & Medicine Management and Research program.
- ✓ Prevention, Reduction and management of NCD.
- ✓ Ayurveda Health Information management program .
- ✓ Study of effects of climate change on medicinal plants.
- ✓ Citizen health program.
- ✓ Grant for effectiveness study of Ayurveda Service Program
- ✓ NCDs Prevention & Management
- ✓ Ayurveda Services Guidelines, Manual, Protocol
- ✓ Traditional treatment related Policy, Standard & Management
- ✓ Yoga/Panchakarma TOT training for Ayurveda Physicians
- ✓ AHIMS upgrading
- ✓ Alternative Medicine Strengthening/Policy, Standards

Provincial Programs

- ✓ Lifestyle Management Program in PHC
- ✓ Training on “Operation & Management of Ayurveda Programs” for Ayurveda personnel
- ✓ Procurement & Transportation of Ayurveda Medicines
- ✓ Free Health Camps
- ✓ National/International Yoga Day; National Arogya Diwas & Dhanwantari Jayanti
- ✓ ICT materials development

FAMILY WELFARE

4.1 Child Health and Immunization Service

BACKGROUND

Child Health and Immunization Service Section is one of the four sections of Family Welfare Division, which plans, executes and monitors several activities of child health and immunization services. Logistics Management Section of Management Division procures stores and distributes vaccines throughout the country as planned by Child Health and Immunization Service Section, Family Welfare Division, while NHEICC develops routine and supplementary child health and immunization IEC and social mobilization materials in close coordination with this section. Capacity building of health staff on routine immunization in close coordination with this section is executed through National Health and Provincial Health Training Centres. Immunization and IMNCI related information is collected through HMIS Section (Integrated Health Information Management Section), Management Division, and is shared quarterly for review and feedback. Child Health and Immunization Service Section of Family Welfare Division coordinate with several stakeholders of immunization and child health to execute activities of the annual work plan.

This section has two programs: 1) National Immunization Program and 2) IMNCI program

4.1 National Immunization Program

National Immunization Program (NIP) of Nepal (Expanded Program on Immunization) was started in 2034 BS and is a priority 1 program. It is one of the successful public health programs of Ministry of Health and Population, and has achieved several milestones contributing to reduction in morbidity and mortality associated with vaccine preventable diseases.

NIP works closely with other divisions of Department of Health Services and national centres of Ministry of Health and Population, and different partners, including WHO and UNICEF, supporting the National Immunization Program. In the Decade of the Vaccines (2011 – 2020), NIP has introduced several new and underutilized vaccines contributing towards achievement of Global Vaccine Action Plan targets of introducing new and underutilized vaccines in routine immunization. Currently, the program provides vaccination against 11 vaccine preventable diseases. Fractional dose of Inactivated Polio Vaccine (fIPV) was introduced in routine immunization of Nepal with formal launch in October 2018. As per comprehensive Multi-year Plan for Immunization (cMYP) 2017 -2021, several other vaccines, including rotavirus vaccine, HPV vaccine and Typhoid vaccine are planned for introduction in Nepal. Immunization services are delivered through 16,500 service delivery points in health facilities (fixed sessions), outreach sessions, and mobile clinics.

NIP has cMYP 2017 - 2021 aligned with global, regional and national guidelines, policies and recommendations to guide the program for five years. All activities outlined in the cMYP are costed and has strategies for implementation. NIP has a very good track record of meeting the targets for control, elimination and eradication of vaccine preventable diseases. Small pox has now become history due to eradication in 2034 BS (1977 AD). Maternal and neonatal tetanus (MNT) was

eliminated in 2005 and the elimination status has been sustained since then. The last case of polio in Nepal was in 2010, and along with other countries of the South East Asia Region, Nepal was certified polio free in 2014. This status has been maintained since then. Nepal is one of the first countries in the world to introduce JE vaccine in routine immunization In 2016 which initially was given only in 31 endemic districts, was scaled up all over the country, thus, further contributing towards control of Japanese encephalitis in Nepal.

In August 2018, Nepal was certified as having achieved control of rubella and congenital rubella syndrome. This certification is two years ahead of the regional target year of 2020 and one year ahead of the national target of 2019. However, even though measles burden has been reduced by > 95% compared to 2003, the national target of achieving measles elimination by 2019 has not been met. In September 2019, member countries of WHO South-East Asia Region, including Nepal, have resolved to eliminate both measles and rubella by 2023 to prevent deaths and disabilities caused by these highly infectious childhood killer diseases. Measles, which is one of the most infectious diseases, will require very high coverages (> 95%) with both first and second routine immunization doses of measles-rubella (MR) vaccine in every community, municipality, district, province, and nationally. To quickly close the immunity gap to measles (and rubella), MoHP has planned nation-wide MR campaign from mid-February to mid-April 2020 (in Falgun and Chaitra 2076) including OPV in 19 selected districts of Terai.

In July 2019, Nepal was certified of having achieved hepatitis B control among children through immunization as the prevalence of the disease (sero-prevalence of HBsAg) dropped to less than < 1% (0.13% only) among 5-6 year old children. With this, Nepal became one of the first four countries (along with Bangladesh, Bhutan, and Thailand) in the WHO South-East Asia Region to control hepatitis B among children. Overall, the NIP is considered as the main contributor towards decline of infant and child mortality (Source: Nepal and the Millennium Development Goals, Final Status Report 2000-2015, National Planning Commission), and has contributed significantly in achieving MDG Goal 4 of reducing child mortality.

Nepal is the first country in the South East Asia Region to have Immunization Act, thus supporting and strengthening the National Immunization Program. Immunization Act 2072 was published in the Official Gazette on 26 January 2016. Based on the Act, Nepal has Immunization Regulation 2074, which was published in the Official Gazette on 6 August 2018. The Immunization Act of Nepal has recognized immunization as a right of all children. For supervision and guidance of the NIP, functional committees for both VPD surveillance and immunization exist in the country. The National Immunization committee (NIC), National Immunization Advisory Committee (NIAC) and AEFI investigation committee are mandated by the Immunization Act. NIP with the support of WHO works with various immunization and vaccine preventable diseases surveillance committees and task-forces which function as quality monitoring bodies of the program. The committees include Inter-Agency Coordination Committee on Immunization, National Certification Committee for Polio Eradication, National Verification Committee for Measles and Rubella/CRS Elimination, National Task Force for Laboratory Containment of Polio, Expert Review Committee for Polio, Polio Legacy Committee, etc.

Since FY 2069/70 (2012/2013), Nepal has initiated and implemented a unique initiative known as 'full immunization program'. This program addresses issues of social inequity in immunization as every child regardless of social or geographical aspect within an administrative boundary are meant to be fully immunized under this program. Over the years, Nepal has witnessed participation of all stakeholders at all levels to achieve full immunization. As of end of FY 2075/76, 80% of total palikas declared FID and 58 out of 77 districts have been declared 'fully immunized'.

Gandaki Province has had declared their province as fully immunized province.

NIP produces evidences on burden of vaccine preventable diseases and impact of vaccine introduction. Nation-wide surveillance of acute flaccid paralysis (for polio), measles and rubella, neonatal tetanus, and acute encephalitis syndrome (for Japanese encephalitis) is conducted through WHO supported surveillance. Further, with support of WHO, sentinel surveillance of selected vaccine preventable diseases (invasive bacterial diseases, rotavirus, and congenital rubella syndrome) is conducted in collaboration with academia and research institutes.

GUIDING DOCUMENTS OF NATIONAL IMMUNIZATION PROGRAM

There are several global, regional and national guiding documents for the National Immunization Program. The main documents which have been taken in account and incorporated in cMYP 2017 - 21 are Global Vaccine Action Plan, South East Asia Regional Vaccine Action Plan, National Immunization Act 2072 and Nepal Health Sector Strategy.

4.1.1 Comprehensive Multi-Year Plan for Immunization (cMYP)

The comprehensive Multi-year Plan for Immunization (cMYP) 2012 - 16 ended in 2016 and new cMYP 2017-21 is in place. The cMYP 2017-2021 provides a plan for five years to achieve immunization related goals of the country. The objectives, strategies and activities set forth in the plan provide the framework required to meet the goal of reducing infant and child mortality and morbidity associated with vaccine-preventable diseases (VPDs). Furthermore, this plan addresses new challenges and expands the previous plan by providing guidelines for introduction of new vaccines, eradication, elimination and control of targeted VPDs and strengthening of routine immunization.

4.1.2 Vision

Nepal: a country free of vaccine-preventable diseases.

4.1.3 Mission

To provide every child and mother high-quality, safe and affordable vaccines and immunization services from the National Immunization Program in an equitable manner.

4.1.4 Goal

Reduction of morbidity, mortality and disability associated with vaccine preventable diseases.

4.1.5 Strategic Objectives

- Objective 1** Reach every child for full immunization;
- Objective 2** Accelerate, achieve and sustain vaccine preventable diseases control, elimination and eradication;
- Objective 3** Strengthen immunization supply chain and vaccine management system for quality immunization services;
- Objective 4** Ensure financial sustainability for immunization program;
- Objective 5** Promote innovation, research and social mobilization activities to enhance best practices

4.1.6 TARGET POPULATION

National Immunization Program currently provides routine vaccination up to 23 months of age. The target population is given as in the table below.

Table 4.1.1: Target population for FY 2075/76

Particulars	Population (source: HMIS)
Under 1 year children (surviving infants)	621,565
12 – 23 months population	611,914
Expected pregnancy	755,647

4.1.7 NATIONAL IMMUNIZATION SCHEDULE

Table 4.1.2: National Immunization Schedule

SN	Type of Vaccine	Number of Doses	Schedule
1	BCG	1	At birth or on first contact with health institution
2	OPV	3	6, 10, and 14 weeks of age
3	DPT-Hep B-Hib	3	6, 10, and 14 weeks of age
4	Rota vaccine	2	6 and 10 weeks of age
5	fIPV	1	6 and 14 weeks of age
6	PCV	3	6,10 weeks and 9 months of age
7	Measles-Rubella	2	First dose at 9 months and second dose at 15 months of age
8	JE	1	12 months of age
9	Td	2	Pregnant women: 2 doses of Td one month apart in first pregnancy, and 1 dose in each subsequent pregnancy

4.1.8 MAJOR ACTIVITIES CONDUCTED IN FY 2075/76

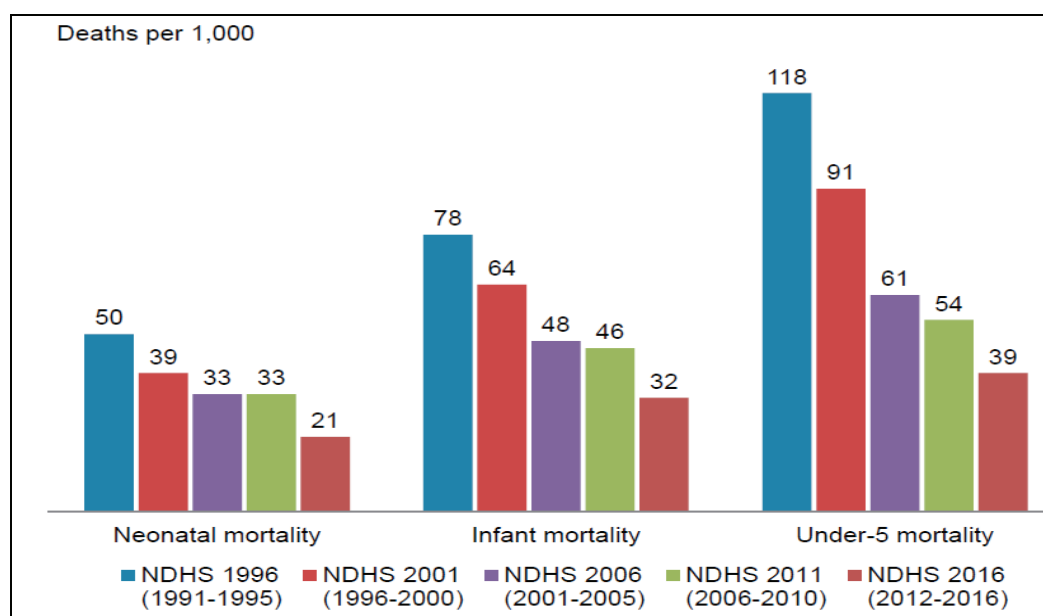
- Provincial level ToT about National immunization program and micro planning for EPI focal person and health worker.
- Declared 5 new full immunization districts in FY 2075/76 among Fifty eight (58) districts
- Advocacy meeting about sustainable financial management of Immunization Programme with the members of the parliament, Policy makers, bankers, industrialist, businessman, private sectors and civil society
- Training about importance of child health card /immunization card and its retention
- Revised and updated all guidelines and like: full Immunization Declaration Guidelines, DQSA guidelines, injection safety policy, multi dose vaccine vial policy, vaccine disposal policy and cold chain policy, micro planning template and health worker training materials.
- Developed the health worker reference book, health worker training facilitator guide and training materials for uniformity of training and related activities related to immunization.
- Training about “khop kit bag” and its guidelines to Immunization focal person of province and palika level.
- Developed ROTA vaccines implementation guidelines and Hygiene promotion guideline and its package.

- Established 15 cold chain centre in palikas and private institute.
- Developed deployment plan, approved procurement and supplier for Cold Chain Equipment deployment planning for 56 districts (all together 291 equipments from GAVI through UNICEF).
- Successful submission application to Gavi, the Vaccine Alliance, for MR SIA support planned in the last quarter of 2019
- Planned and announced for MR-SIA campaign.
- Plan to introduction of new vaccine (Rotavirus) with hygiene promotion program in the routine immunization throughout country.
- Produced and supplied full immunization certificate according to the immunization Act.
- Indorsed vaccination delayed schedule by National Immunization Advisory Committee.
- Conduction of Outbreak Response Immunization in major measles outbreak area.
- Management of logistic with support from partners
- Interaction and orientation meeting with members of social welfare committee and parliament, media person and parliament about immunization act ,immunization fund
- Review and expansion of electronic immunization registration system
- Effective implementation of concurrent immunization supervision and monitoring mechanism through program staff, partners, SMO network, independent monitors, and immunization and VPD committee members at low performing areas
- Even when district health structure was temporarily dissolved to due structural changes in the federal system, with coordination from all levels, the supply of vaccine was maintained through the same/old system to assure proper maintenance of cold chain
- Certification of Rubella and Congenital Rubella syndrome control by WHO SEARO.
- FIPV launching and starting in routine immunization.

4.1.9 VACCINATION TARGET vs. ACHIEVEMENT, FY 2075/76

The cMYP 2017-21 has set the goals to reduce child mortality, morbidity and disability associated with vaccine preventable diseases, and one of the strategic objectives is to reach every child for full immunization. The NDHS survey 2016 shows that in 20 years, there has been significant reduction in infant and child mortality (Fig. 4.1.1). The National Immunization Program has contributed significantly in reduction of child mortality by preventing vaccine preventable diseases.

Figure 4.1.1. Trends in early childhood mortality



Source: NDHS 2016

4.1.10 National vaccination coverage:

The table and maps presented below show the routine immunization vaccination coverages and achievement status in FY 2075/76.

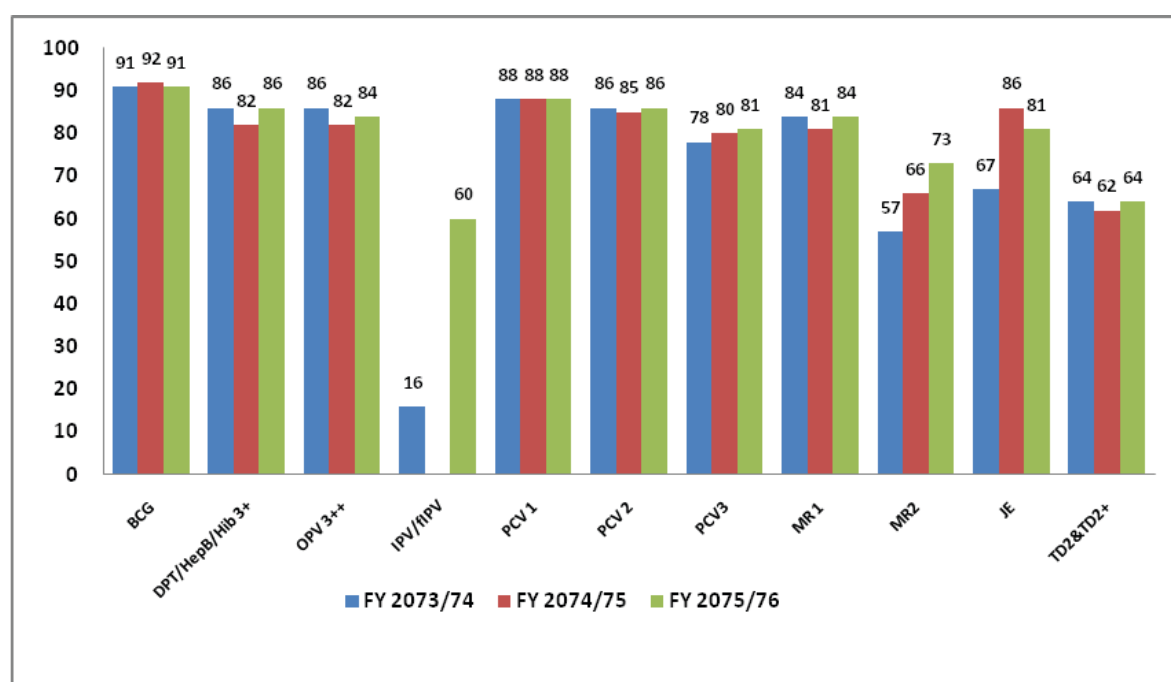
Table 4.1.3: National vaccination coverage by vaccine, FY 2075/76

SN	Antigens	Target population	Targets	Achievement	% Achieved
1	BCG	under 1 Year	621565	565029	91
2	DPT-Hep B-Hib 1	under 1 year	621565	561346	90
3	DPT-Hep B-Hib 2	under 1 year	621565	548438	88
4	DPT-Hep B-Hib 3	under 1 year	621565	537166	86
5	DPT-Hep B-Hib 3 Including delayed dose given after 1 year of age	under 1 year	621565	561675	90
6	OPV 1	under 1 year	621565	545793	88
7	OPV 2	under 1 year	621565	530144	85
8	OPV 3	under 1 year	621565	519247	84
9	OPV 3 Including delayed dose given after 1 year of age	under 1 year	621565	543754	87
10	fIPV 1	under 1 year	621565	403665 (in around 9.5 months)	82*
11	fIPV 2	under 1 year	621565	296066 (in around 9.5	60*

SN	Antigens	Target population	Targets	Achievement	% Achieved
				months)	
10	PCV1	under 1 year	621565	548944	88
11	PCV2	under 1 year	621565	535225	86
12	PCV3	under 1 year	621565	504075	81
13	MR 1	under 1 year	621565	519676	84
14	MR 2	15 Months	611914	445221	73
15	JE	12 months	611914	494212	81
16	Td 2 & Td2 +	Pregnant women	755647	486230	64

Source: HMIS/MD, DoHS; * fIPV coverage for 9.5 months target

Figure 4.1.2. National Routine Immunization Coverage (%), Nepal, FY 2073/74 to 2075/76



Source: HMIS/MD, DoHS

***DPT-HepB-Hib 3 coverage including delayed doses given after 1 year of age is:**

FY 2073/74: 91.6%

FY 2074/75: 86.3%

FY 2075/76: 90.4%

**** OPV3 coverage including delayed doses given after 1 year of age is:**

FY 2073/74: 91.1%

FY 2074/75: 86.8%

FY 2075/76: 87.5%

^IPV in FY 2073/74, during which time global shortage of IPV had already started, and IPV was partially available in Nepal during the first few months only after the start of FY. No vaccine in FY 2074/75. In FY 2075/76, fIPV was started, and the given coverage is against 9.5 months target since fIPV was launched after around 2.5 months into the FY.

Figure 4.1.2. shows national coverage for selected antigens for three years, from FY 2073/74 to FY 2075/76. BCG coverage has decreased by 1% point in FY 2075/76. However, the coverage of DTP-HepB-Hib 3 and OPV 3 has increased compared to previous year. IPV global shortage started from FY 2073/74. Therefore, the coverage of IPV is only 16% in FY 2073/74 due to shortage of the vaccine. Instead of IPV (given one dose intramuscular at 14 weeks), fractional dose of IPV (given intradermal at 6 and 14 weeks) was launched in Nepal in October 2018. For FY 2075/76, fIPV 2 coverage is shown which is 60% (coverage adjusted for 9.5 months target population based on start date of the vaccine in the fiscal year). PCV 1 coverage has been maintained at 88%, whereas coverage of PCV 2 and 3 has increased by 1% point compared to previous year. MR 1 coverage has increased compared to previous year and MR2 coverage has increased significantly by 7% points compared to previous year. For measles elimination, high coverages of both MR 1 and 2 is required (> 95%). Therefore, coverages of both MR 1 and MR 2 is still not satisfactory. The coverage of JE vaccine has also increased slightly by 1% point. The reporting rate for immunization dataset in HMIS was only 80% in FY 2075/76. Therefore, it can be assumed that vaccine coverage in actual is higher than reported. (WHO-UNICEF estimates of national immunization coverage for Nepal are available on https://www.who.int/immunization/monitoring_surveillance/data/npl.pdf)

4.1.11 Vaccination coverage by Districts :

Figure 4.1.3 Percentage of children under one year immunized with BCG
Figure 4.1.4 Percentage of children 12-23 months immunized with measles/rubella 2

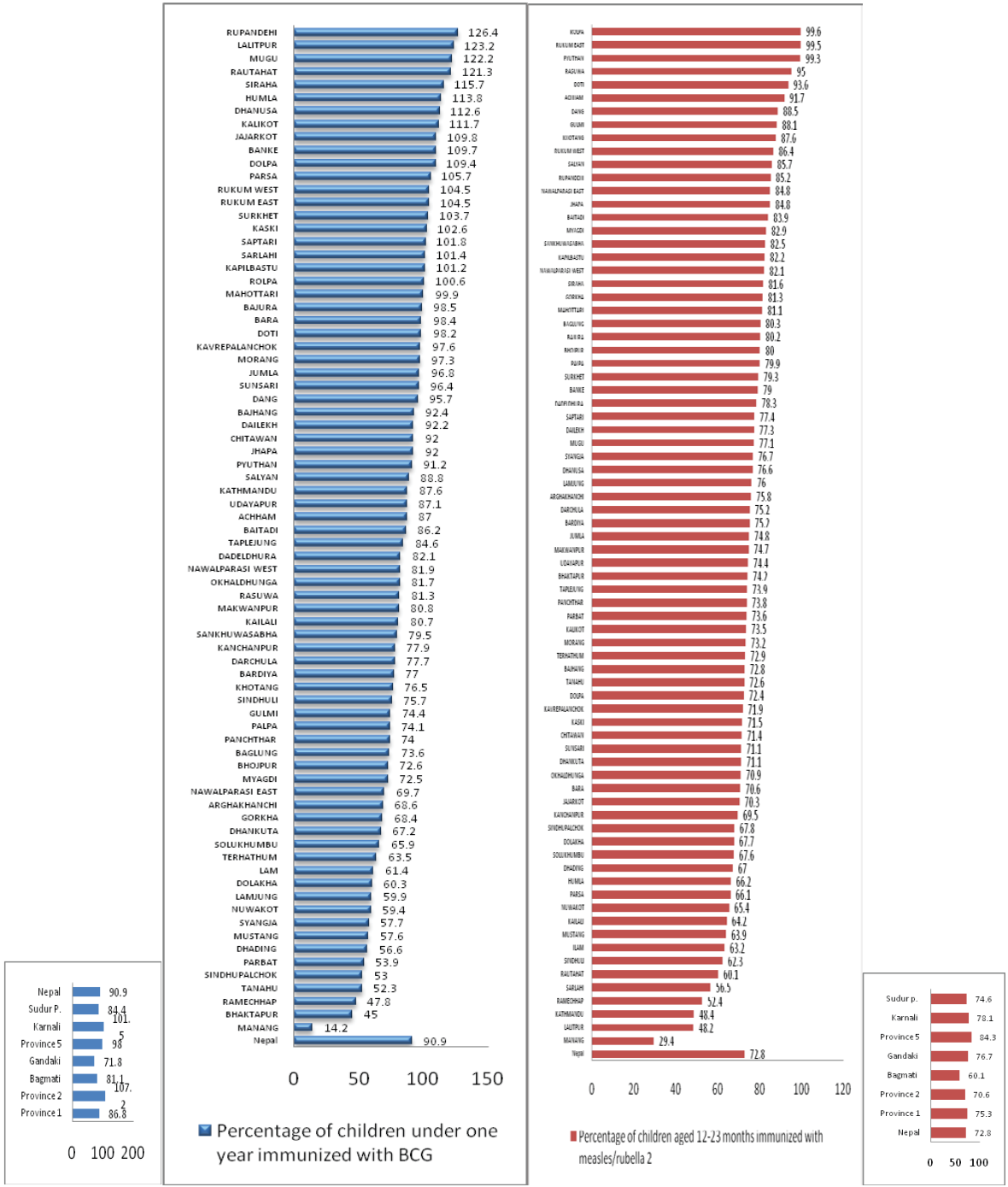


Figure 4.1.3 and 4.1.4 shows the coverage (%) of BCG and MR 2 by district showing the comparison of first visit and last visit. The coverage of BCG is higher than MR 2 like national wise BCG coverage is above 90% but MR 2 coverage is only 72%. Approximately 18 % of children are lost up to complete the immunization. So that health worker counselling should be improved.

4.1.12 Vaccination coverage by province:

Figure 4.1.5. Province wise Three Years Trends of BCG coverage (%), FY 2073/74 to FY 2075/76

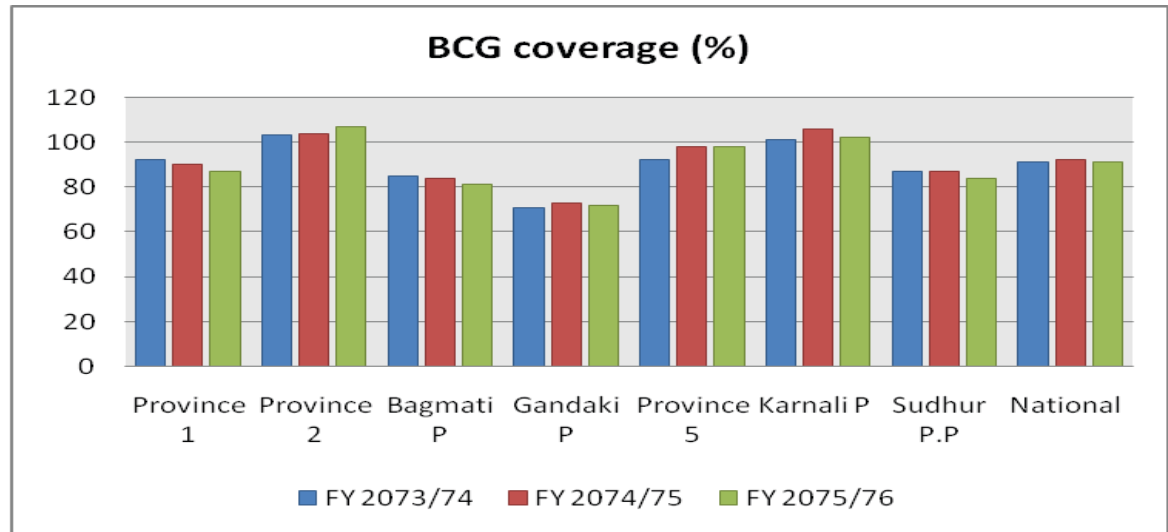
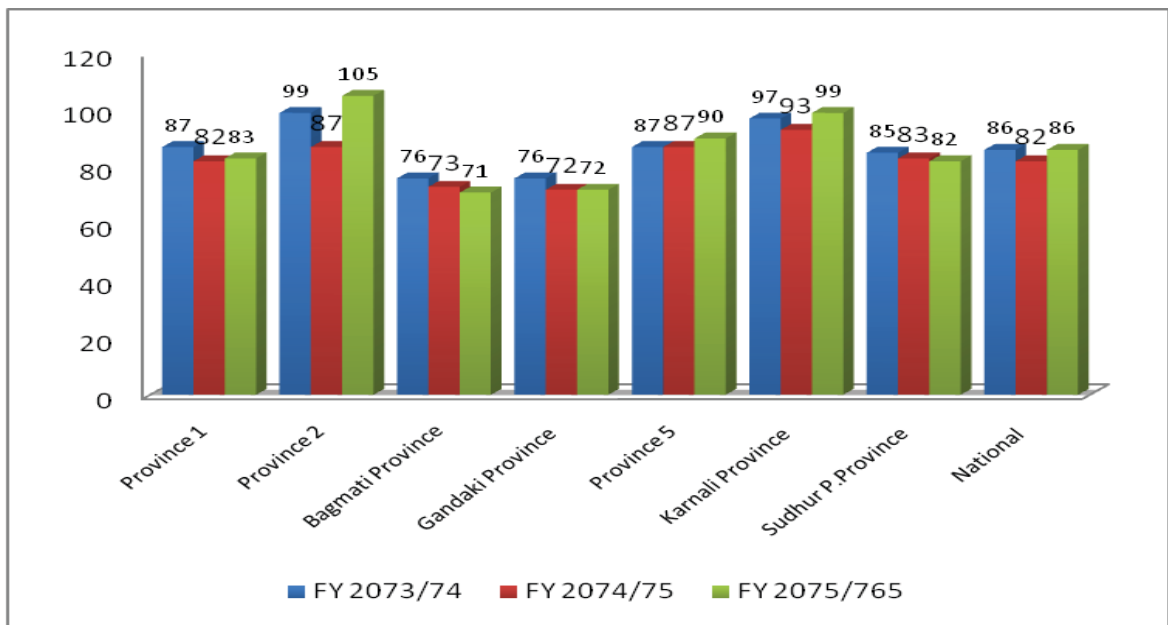
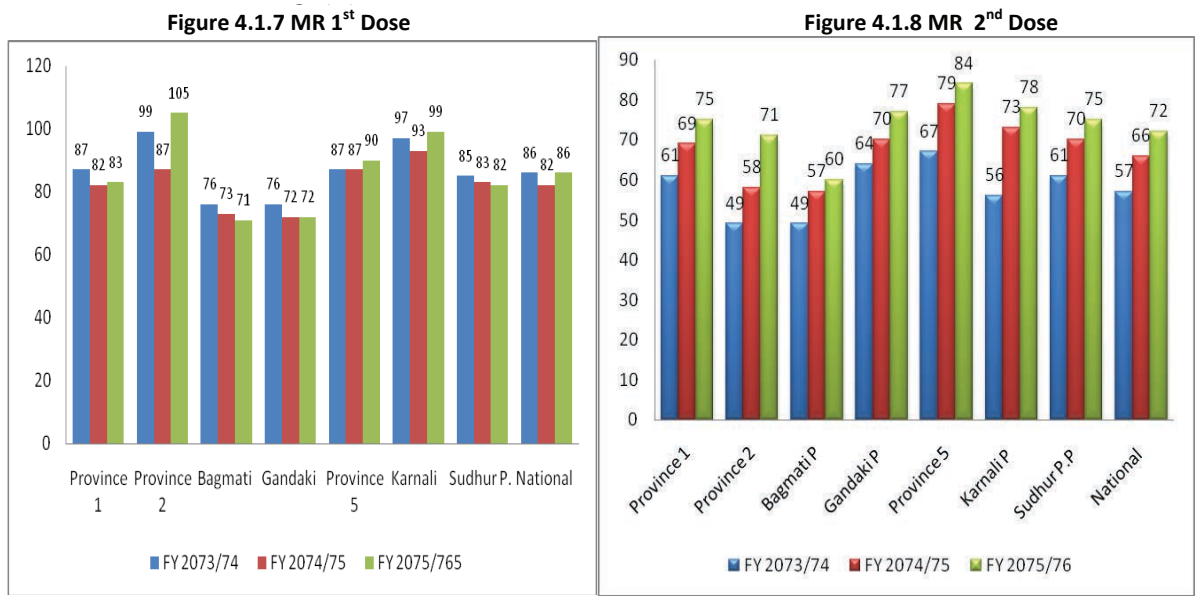


Figure 4.1.6. Province wise coverage (%) of DPT-HepB-Hib 3, FY 2073/74 to FY 2075/76



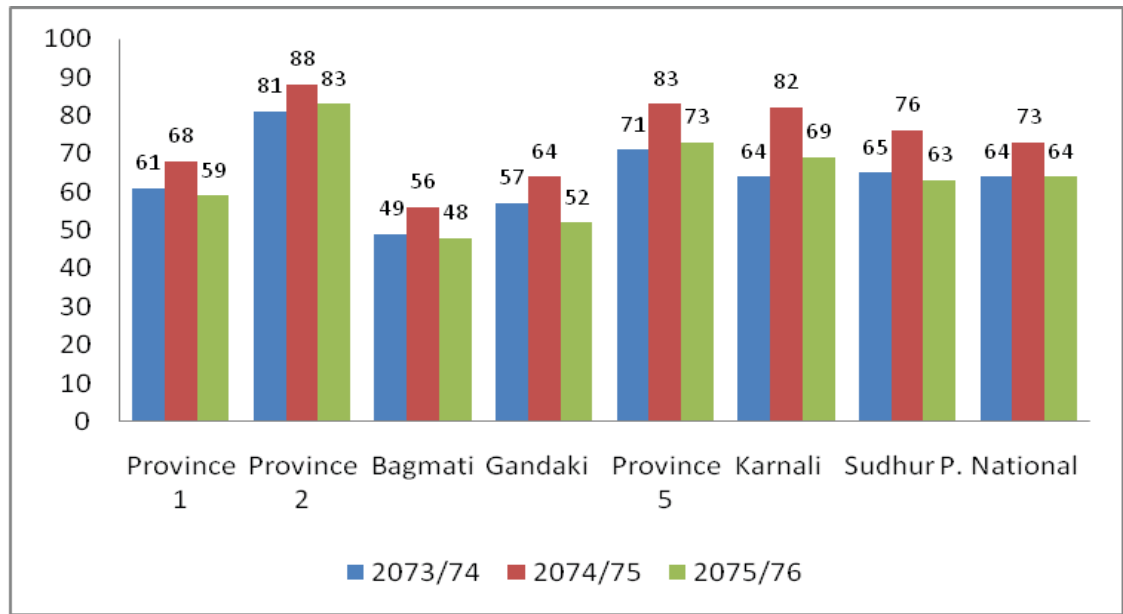
Source: HMIS/MD, DoHS

4.1.13. Province wise coverage (%) of measles-rubella first and second dose FY 2073/74 to FY 2075/76



Source: HMIS/MD, DoHS

Figure 4.1.9. Province wise coverage (%) of Td 2 and Td 2+, FY 2074/75 to FY 2075/76

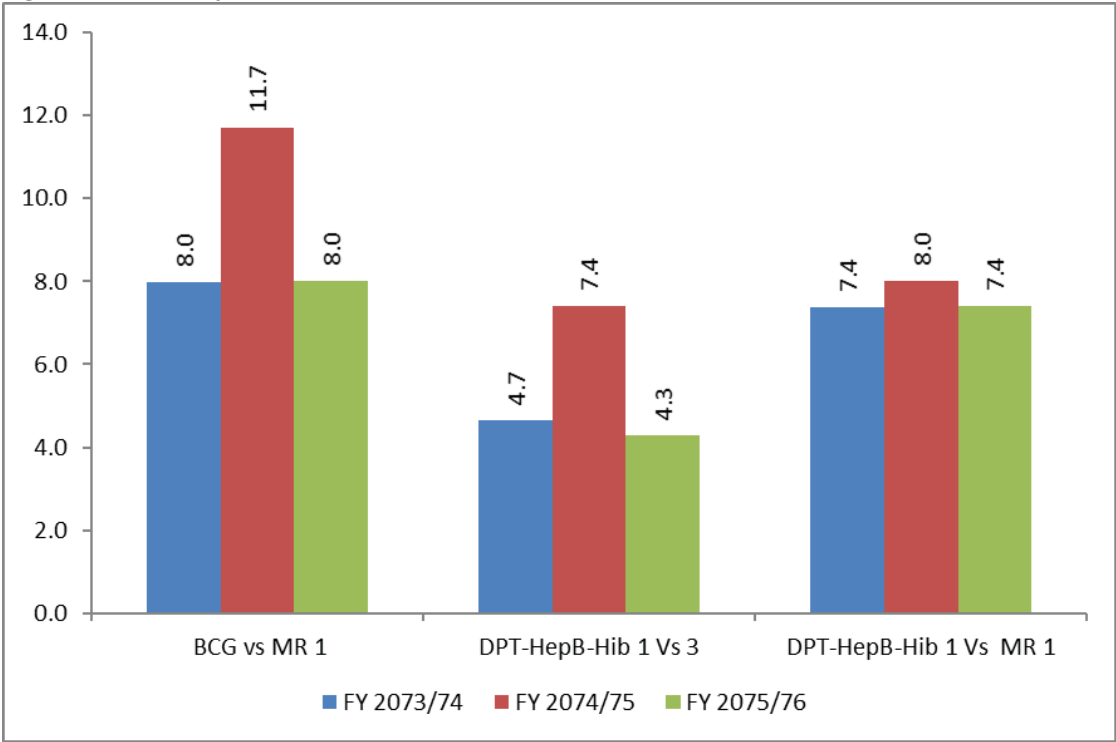


Source: HMIS/MD, DoHS

Figure 4.1.5 to 4.1.9 show province wise coverage for BCG,DPT-HepB-Hib 3, MR 1, MR2, and Td 2/ Td 2+ respectively. In general, vaccination coverage in all provinces have improved compared to previous year. For BCG, DPT-HepB-Hib 3, MR 1 and Td 2/Td 2+, Province 2 has reported the highest coverage, whereas for MR 2, Province 5 has reported the highest coverage. Bagmati Province has reported relatively lower coverages and the reporting rate for immunization dataset in HMIS for Bagmati Province is the lowest (55%), which needs to be improved.

4.1.14 Droput rates of vaccination:

Figure 4.1.10. Dropout rates (%) of different vaccinations, FY 2073/74 to FY 2075/76

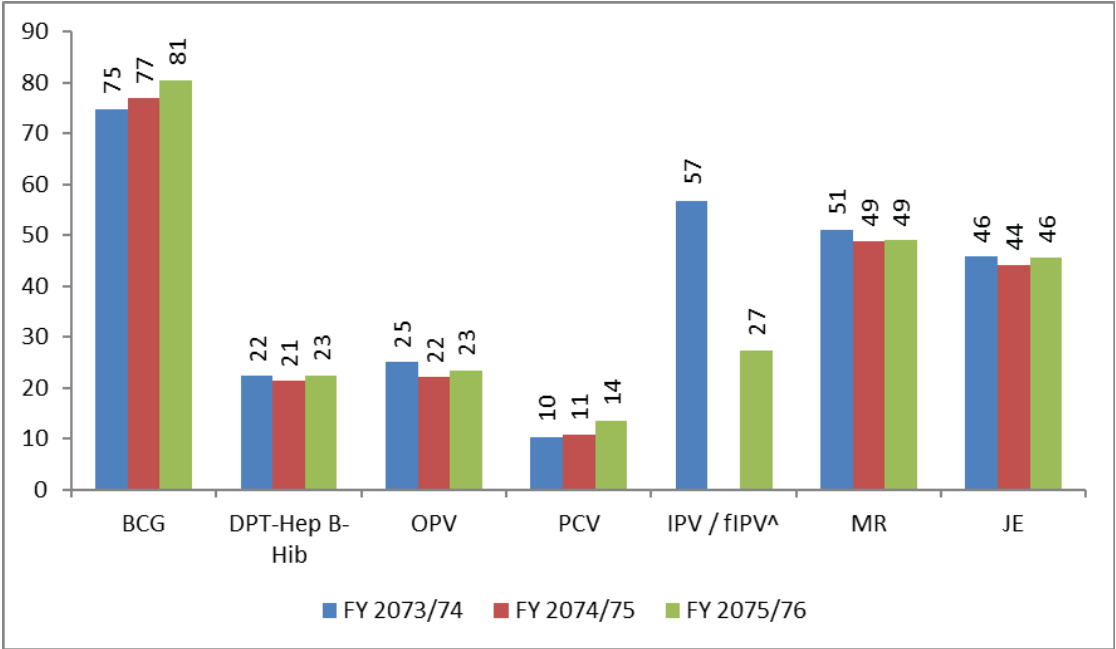


Source: HMIS/MD, DoHS

Figure 4.1.10 shows that national dropout rates for BCG vs MR 1, DPT-HepB-Hib 1 vs 3 and I compared to previous year showing improvement and all drop-out rates are within 10%.

4.1.15 Vaccine wastage rates:

Figure 2.1.11. Vaccine wastage rates (%), FY 2073/74 to FY 2075/76



Source: HMIS/MD, DoHS; ^IPV in FY 2073/74 and fIPV in FY 2075/76

For all re-constituted vaccines (BCG, MR, and JE) that need to be discarded within 6 hours (1 hour only for JE) or at the end of immunization session whichever comes first, wastage rates are expected to be higher. Further, in Nepal, for BCG, MR and JE vaccines, at least 'one vial per session' policy is used, and small session sizes because of sparse population in hilly and mountainous terrain have to be allowed higher wastage rates. Because of these reasons, the wastage rates for BCG and JE are higher than the indicative wastage rates of 50% and 10% respectively. However, the wastage rate of MR has improved and is sustained in FY 2075/76, and is below the indicative wastage rate of 50%. This is probably because after introduction of MR 2, number of children receiving MR vaccine in a session is higher leading to less wastage. For DPT-HepB-Hib and OPV, the national wastage rates are below the indicative wastage rate of 25% for both vaccines, but has increased slightly compared to previous year. For PCV vaccines, the national wastage rate is above the indicative wastage rate of 10%. In FY 2075/76, fIPV was introduced, the wastage rate of which is 27%. This is very low than previous wastage rate of IPV, but should be lower than 20%

4.1.16 Access and utilization of immunization services:

National Immunization Program evaluates status of the districts by accessibility and utilization of immunization services. Districts are categorized in category 1 to 4 on basis of DPT-HepB-Hib 1 coverage and dropout rate of DPT-HepB-Hib1 vs DPT-HepB-Hib 3 to know the accessibility and utilization of immunization services respectively.

Table 4.1.4. District categorization based on access (DPT-HepB-Hib 1 coverage) and utilization (DPT-HepB-Hib 1 vs. DPT-HepB-Hib 3 drop-out), FY 2075/76

Category 1 (less Problem) High Coverage ($\geq 80\%$) Low Drop-Out ($<10\%$)	Category 2 (Problem) High Coverage ($\geq 80\%$) High Drop-out ($\geq 10\%$)	Category 3 (Problem) Low Coverage ($<80\%$) Low Drop-out ($<10\%$)	Category 4 (Problem) Low Coverage ($<80\%$) High Drop-out ($\geq 10\%$)
Taplejung, Sankhuwasabha, Solukhumbu, Khotang, Bhojpur, Jhapa, Morang, Sunsari, Udayapur, Saptari, Siraha, Dhanusa, Mahottari, Bara, Parsa, Rasuwa, Bhaktapur, Kavrepalanchok, Sindhuli, Makwanpur, Nawalparasi East, Baglung, Rukum East, Rolpa, Pyuthan, Gulmi, Arghakhanchi, Nawalparasi West, Rupandehi, Kapilbastu, Dang, Banke, Dolpa, Mugu, Humla, Jumla, Kalikot, Dailekh, Jajarkot, Rukum West, Salyan, Surkhet, Bajura, Bajhang, Darchula, Baitadi, Dadeldhura, Doti, Achham and Kailali 50 districts	Siraha and Rautahat 2 districts	Okhaldhunga, Dhankuta, Terhathum, Panchthar, Ilam, Dolakha, Sindhupalchok, Dhading, Nuwakot, Kathmandu, Lalitpur, Ramechhap, Chitawan, Gorkha, Manang, Mustang, Myagdi, Kaski, Lamjung, Tanahu, Syangja, Parbat, Palpa, Bardiya and Kanchanpur 25 districts	No district

Source: HMIS/MD, DoHS

Note: the given DPT-HepB-Hib 3 coverages used in the table above does not included delayed vaccines given after 1 year of age

Table 4.1.4 shows that 50 districts are in category 1 (good access, good utilization). This is an increase from 37 districts in this category in the previous fiscal year, showing improvement in immunization access and utilization at sub-national level. Only 2 districts are in category 2 (good access, poor utilization), whereas 25 districts are in category 3 (poor access, good utilization), and no district is in category 4 (poor access, poor utilization).

4.1.17 VACCINE PREVENTABLE DISEASES SURVEILLANCE

One of the strategic objectives of cMYP 2017-21 is to accelerate, achieve and sustain vaccine preventable diseases control, elimination and eradication. Strategic approaches within this objective is to sustain polio-free status for the global eradication of the disease, achieve measles elimination and rubella/CRS control by 2019, accelerate JE control, sustain MNT elimination status, accelerate hepatitis B vaccination, and expand surveillance of other vaccine preventable diseases. While high coverages with vaccines included in routine immunization is important to achieve this objective, high quality surveillance is important to know the status of these diseases to progress towards achievement of this objective.

To support polio eradication activities, surveillance of acute flaccid paralysis for polio was started in Nepal in 1998. In 2003, measles (and rubella) and neonatal tetanus surveillance was integrated in the AFP/polio surveillance network. In 2004, surveillance of acute encephalitis syndrome for Japanese encephalitis was integrated in the AFP/polio surveillance network. Supported by WHO-IPD, surveillance for these diseases are conducted throughout the country through 689 routine weekly zero reporting sites, 560 case-based measles surveillance sites and 745 informers. Further, sentinel surveillance of invasive bacterial diseases, rotavirus, and congenital rubella syndrome are also conducted in Nepal.

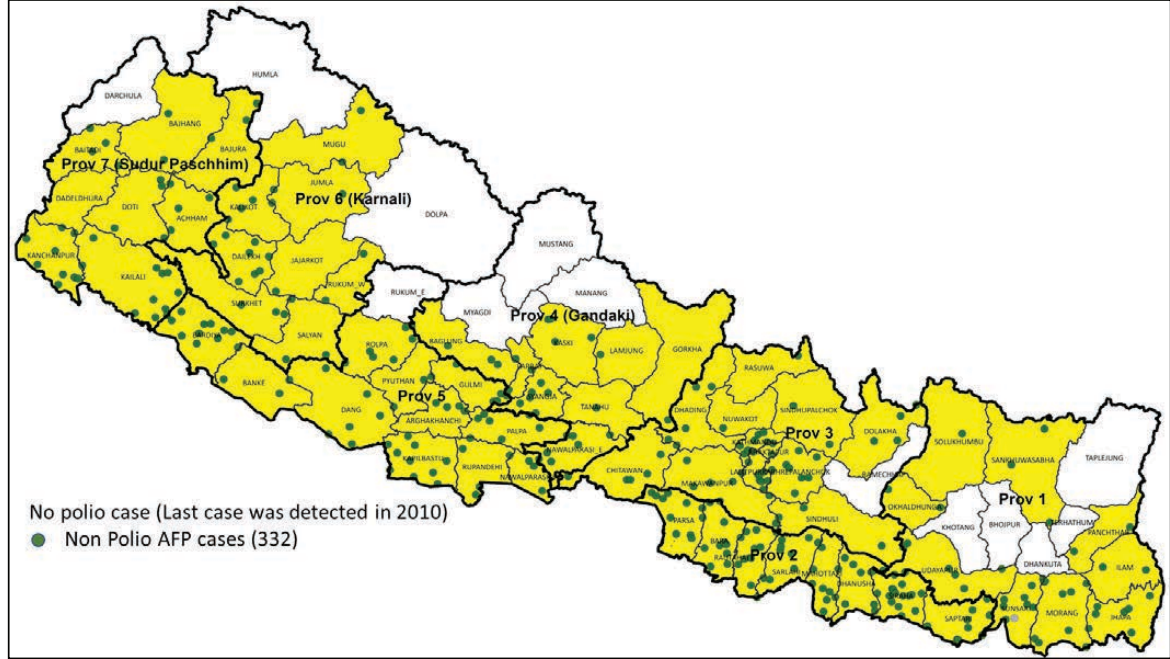
Sentinel surveillance for invasive bacterial diseases (pneumococcus, Hib, and meningococcus) has been conducted at Patan Hospital with WHO support since 2009. Similarly, sentinel surveillance for rotavirus disease has been conducted at Kanti Children's Hospital (clinical site) with WHO support since 2009. Surveillance data from IBD sentinel surveillance site was crucial for informed introduction of Haemophilus influenzae type b vaccine (introduced in 2009), and pneumococcal conjugate vaccine (introduced in 2015) in routine immunization of Nepal. Similarly, data from rotavirus sentinel surveillance site was crucial for informed recommendation for rotavirus vaccine introduction in Nepal. In February 2018, rotavirus sentinel surveillance sites have been expanded to two more sites with geographical representation – B.P. Koirala Institute of Health Sciences and Nepalgunj Medical College. Further, sentinel surveillance of CRS (congenital rubella syndrome) is conducted through four sentinel sites in Kathmandu Valley- Kanti children Hospital, Tribhuvan University Teaching Hospital- Pediatric department, Patan Academy of Health Sciences and Tilganga Eye Hospital.

(Surveillance data given below have been calculated from mid-July to mid-July to align with the government fiscal year)

4.1.18 Acute flaccid paralysis surveillance, FY 2075/2076

The last case of polio in Nepal was reported in August 2010. Along with the other countries in the South East Asia Region, Nepal was certified polio free in 2014. Since then, Nepal has maintained this status. For sensitive surveillance of polio, there are two main cardinal indicators: 1) non-polio AFP rate which should be at least 2 per 100,000 (SEAR standard) under 15 years population, and 2) adequate stool collection rate which should be 80% or more.

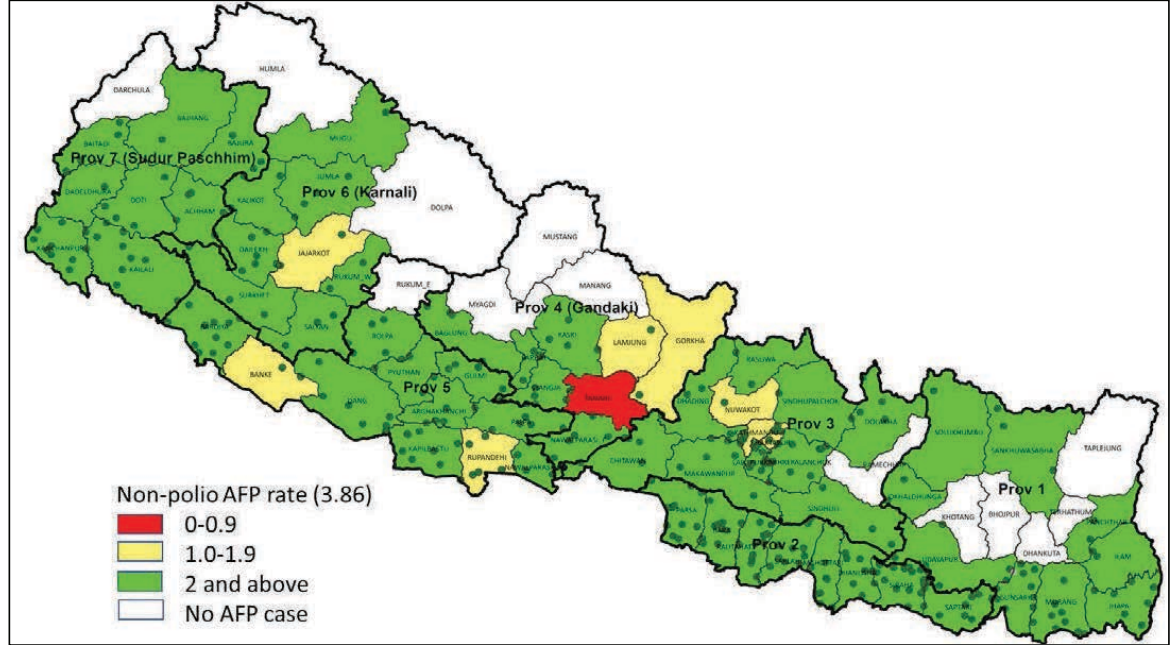
Figure 4.1.12. Reported acute flaccid paralysis (AFP) cases by district, FY 2075/2076



Source: FWD and WHO-IPD, Nepal

Figure 4.1.12 shows total reported AFP cases by district for FY 2075/2076. The total number of AFP cases reported were 332 cases from 64 districts. The remaining 13 districts (Darchula, Humla, Dolpa, Rukum-E, Myagdi, Mustang, Manang, Ramechap, Khotang, Bhojpur, Dhankuta, Terathum, Taplejung) did not report any AFP case. Most of these districts are sparsely populated with relatively less number of under 15 years age population. At least one AFP case per year from any district with 50,000 under 15 years population is expected for quality surveillance of AFP.

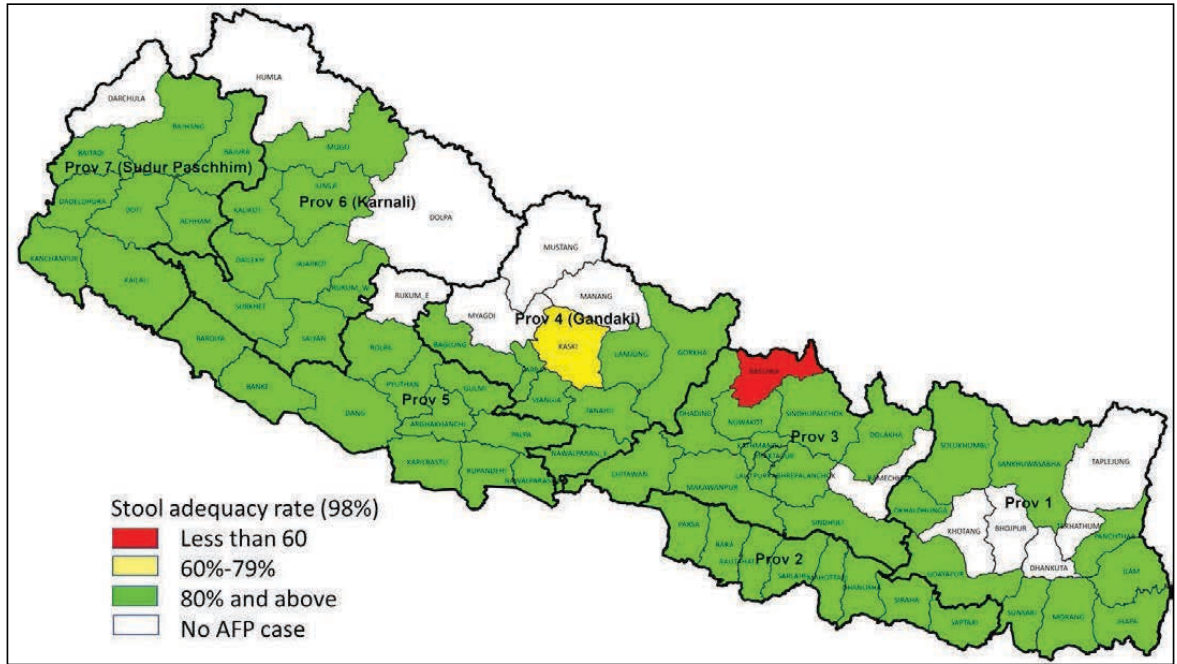
Figure 4.1.13. Non-polio Acute Flaccid Paralysis (NP AFP) rate by district, FY 2075/2076



Source: FWD and WHO-IPD, Nepal

Figure 4.1.13 shows non-polio AFP rate by district. National non-polio AFP rate is 3.86 per 100,000 under 15 years population, which is above the required rate of at least 2. There are 64 districts which have reported AFP cases, out of which 56 districts have met the non-polio AFP target rate of 2 or more, whereas 7 districts have non-polio AFP rate between 1 – 1.9, and 1 district has non-polio AFP rate below 1 per 100,000 under 15 years population.

Figure 4.1.14 Adequate stool collection rate of AFP cases by district, FY 2075/2076



Source: FWD and WHO-IPD, Nepal

Figure 4.1.14 shows adequate stool collection rate from reported AFP cases. The national AFP stool collection rate is 98%, which is above the target of 80% or more for this indicator. Out of the 64 districts which have reported AFP cases, the majority have achieved adequate stool collection rate of at or above 80% except one district with the rate between 60%-79%, and one district with adequate stool collection rate less than 60%.

Table 4.1.5. Non-polio AFP rate and stool collection adequacy rate by province, FY 2075/2076

Province	NP AFP Cases	NP AFP Rate	Stool Adequacy
Province 1	41	2.77	98
Province 2	85	4.72	100
Bagmati	54	2.92	92
Gandaki	27	3.64	95
Province 5	62	4.22	98
Karnali	26	4.98	100
Sudur Paschim	37	4.39	98
Total	332	3.86	98

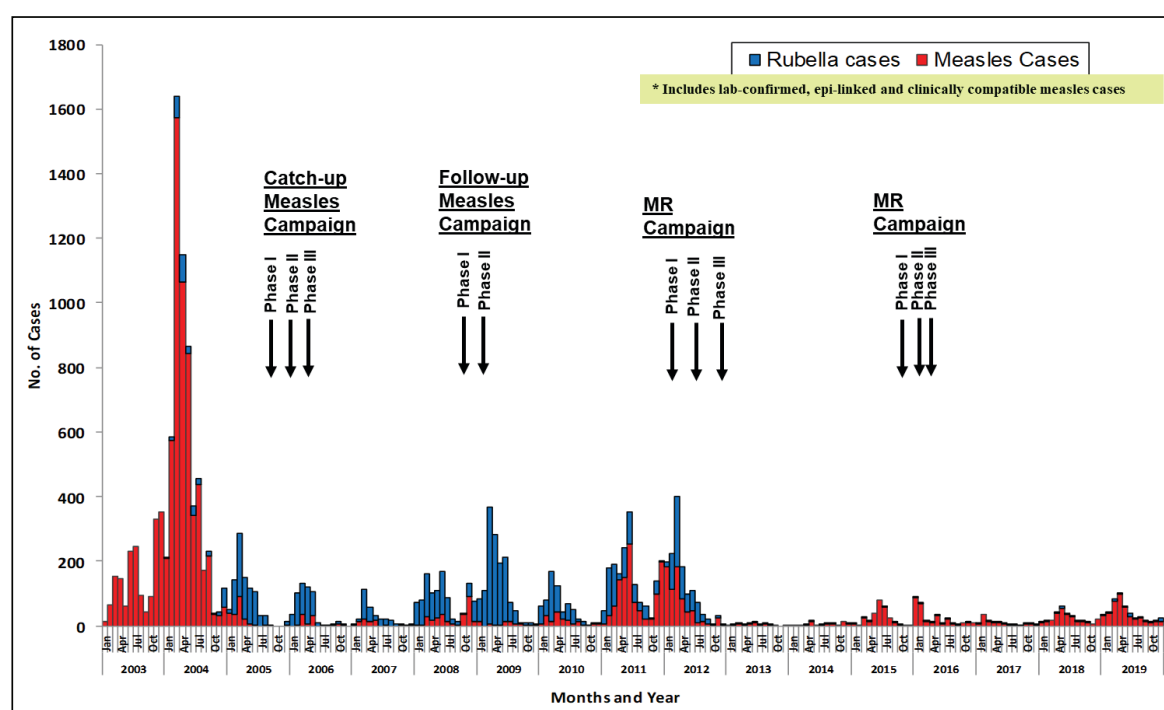
Source: FWD and WHO-IPD, Nepal

The Table 4.1.5 shows non-polio AFP cases and rate, and adequate stool collection rate by province. Each province has achieved non-polio AFP rate above 2 per 100,000 under 15 years population, and adequate stool collection rate above 80%. Province 2, 5, Karnali and Sudur Paschim have reported non-polio AFP rate above 4. Province 2 and Karnali have achieved 100% adequate stool collection rate.

4.1.19 Measles-rubella surveillance, FY 2075/2076

In August 2018, Nepal was certified as having achieved control of rubella and congenital rubella syndrome. This certification is two years ahead of the regional target year of 2020 and one year ahead of the national target of 2019. Control of rubella and CRS is achieved if there is 95% or more reduction in number of rubella cases from 2008 levels. Nepal achieved 97% reduction in rubella cases in 2017 (22) as compared to 2008 (786). However, even though reduction in number of measles cases has been 98% in 2017 (99) compared to 2003 (5419), measles cases have not been reduced to zero which is required for measles elimination. Figure 2.1.14 shows that there has been drastic reduction in measles and rubella cases in Nepal. Supplementary immunization activities (campaigns), introduction of rubella vaccine, and achievement of high coverage of measles-rubella first dose in routine immunization have been the main factors for this achievement. For elimination of measles, high coverage of both doses of measles-rubella vaccination is required ($\geq 95\%$) at all levels. The coverage of measles-rubella second dose is still not satisfactory. It is only 73% in FY 2075/2076. To progress towards measles and rubella elimination by 2023 as per the resolution, nation-wide measles vaccination campaign is being conducted in FY 2076/2077 including strengthening of routine immunization..

Figure 4.1.15 Confirmed measles and rubella cases, Nepal, 2003- 2019



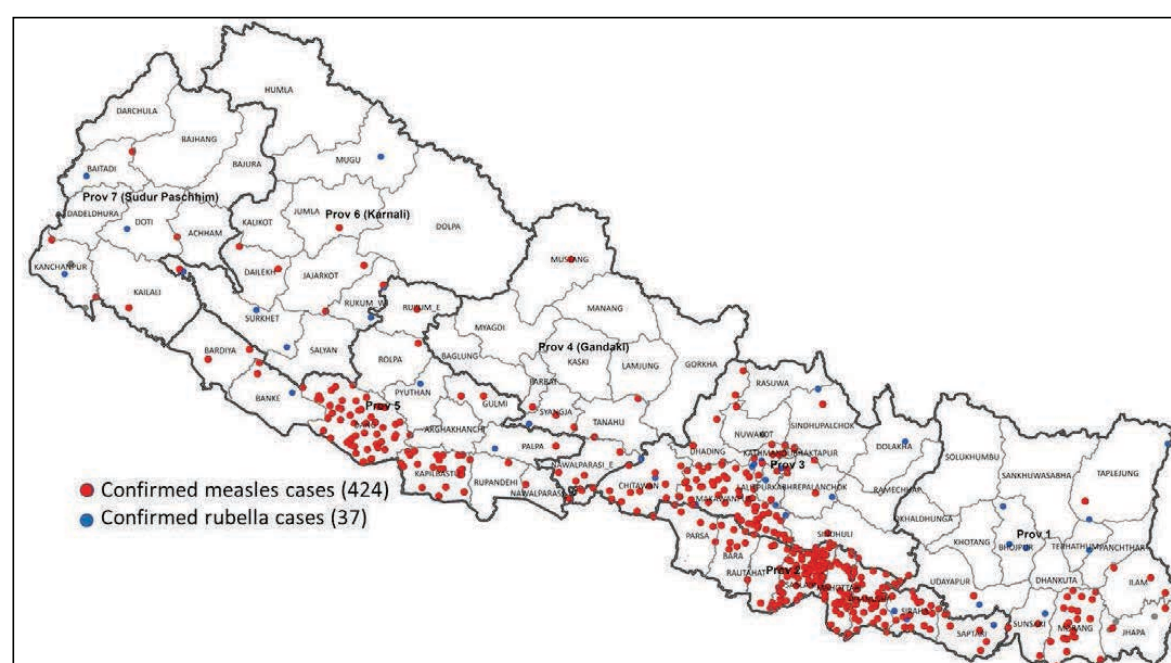
Source: FWD and WHO-IPD, Nepal

Measles vaccination given in Nepal since the start of EPI in all districts (covered 75 districts by 1988)
MR first dose started in 2013; MR second dose started in September 2015

Figure 4.1.15 and Table 2.1.6 shows laboratory confirmed measles and rubella cases by district and province respectively in FY 2075/2076. There was a total of 424 confirmed measles and 37 confirmed rubella cases identified through suspected measles surveillance. Among total confirmed measles cases in FY 2075/2076, the majority is from Province 2 (43.6%), followed by Bagmati (23.6%) and Province 5 (20%).

One of the cardinal indicators for measles-rubella surveillance is non-measles non-rubella rate (NMNR rate) which should be at least 2 per 100,000 population. That is, at least 2 suspected measles/rubella cases (which after laboratory test is non-measles and non-rubella) per 100,000 population should be reported for quality measles-rubella surveillance. All provinces except Sudur Paschim Province have achieved NMNR rate above 2. The national NMNR rate is 3.73 per 100,000 population.

Figure 4.1.16. Confirmed measles and rubella cases by district, FY 2075/2076



Source: FWD and WHO-IPD, Nepal

Table 4.1.6. NMNR rate, and confirmed measles and rubella cases by province, FY 2075/2076

Province	NMNR cases	NMNR rate	Confirmed Measles	Confirmed Rubella
Province 1	274	5.62	31	8
Province 2	228	3.73	185 (43.6%)	3
Bagmati	431	6.86	100 (23.6%)	13 (35%)
Gandaki	118	4.72	11	1
Province 5	269	5.38	85 (20%)	3
Karnali	148	8.36	7	6
Sudur Paschim	54	1.88	5	3
Total	1522	3.73	424	37

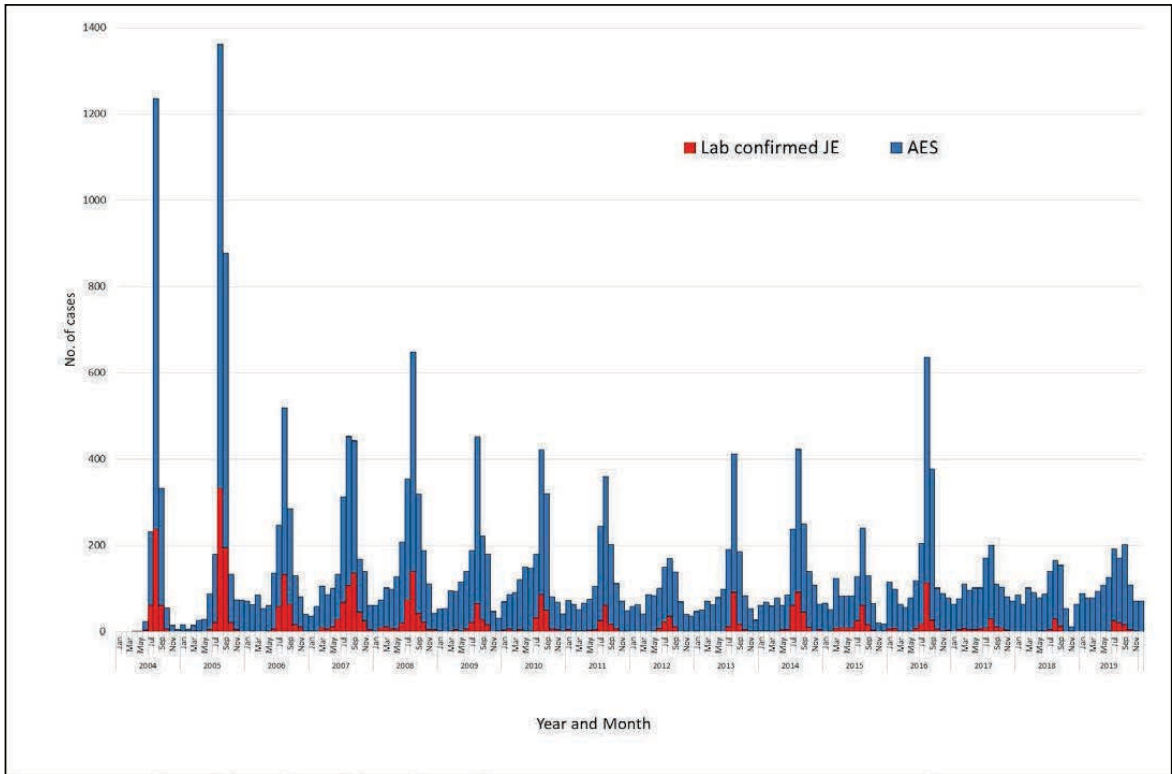
Source: FWD and WHO-IPD, Nepal

NMNR: non-measles non-rubella

4.1.20 Acute encephalitis syndrome (AES) surveillance, FY 2075/2076

As a concentrated Japanese encephalitis (JE) control measure, phase-wise mass vaccination campaigns were started in 2006 and were completed in 31 high-risk districts by 2011. JE vaccine was introduced in phase-wise manner in the routine immunization of these 31 districts by 2012. After these measures were taken, JE burden reduced significantly in Nepal. However, over the years, as identified by surveillance, JE was reported from other districts of Nepal as well. Following mass-vaccination campaign in the remaining districts in 2016, JE vaccine was introduced in the routine immunization of all remaining 44 districts in July 2016. As shown in Figure 2.1.16, JE burden in Nepal has reduced significantly in 2019 compared to the initial years when surveillance was started.

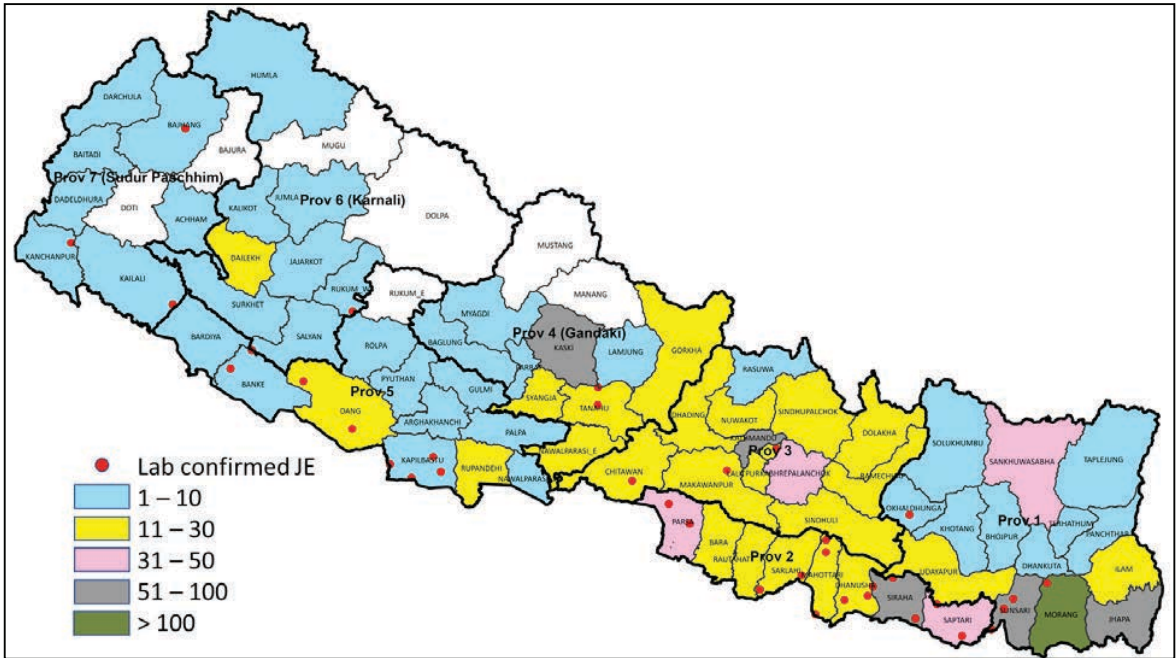
Figure 4.1.17. Reported AES and lab confirmed Japanese encephalitis cases, Nepal, 2004 – 2019



Source: FWD and WHO-IPD, Nepal

Figure 4.1.17 shows that 70 districts have reported AES cases in FY 2075/2076. Out of these 70 districts, five districts (Jhapa, Sunsari, Siraha, Kathmandu, Kaski) have reported higher number of AES cases (between 51-100), and Morang has reported the highest (> 100). In total, 1241 cases of AES were reported (Table 2.1.7). Among the total reported AES cases, only 36 (2.9%) were laboratory confirmed for JE. This is a major reduction compared to the years before JE vaccination was started when around 50% of the AES cases were positive for JE. The majority of laboratory confirmed JE cases (13 out of 36; 36.1%) were reported from Province 2.

Figure 2.1.18. Reported AES and laboratory confirmed Japanese encephalitis cases by district, FY 2075/2076



Source: FWD and WHO-IPD, Nepal

Table 4.1.7. Reported AES cases and confirmed JE cases by province, FY 2075/2076

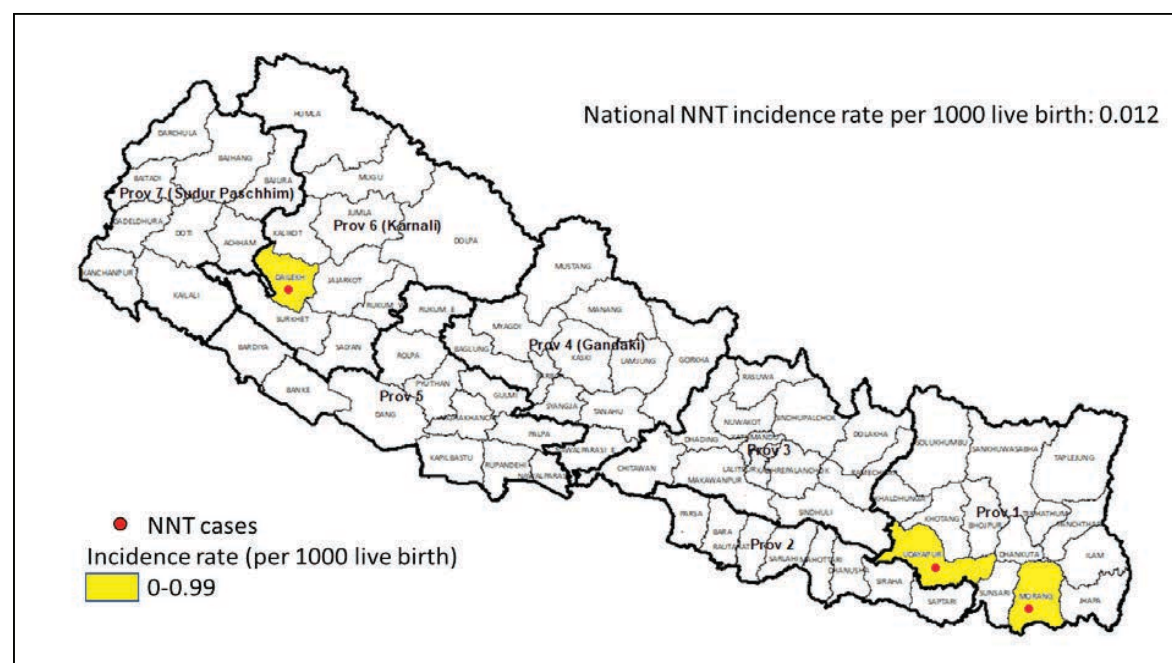
Province	AES cases	JE cases
Province 1	433	6
Province 2	203	13 (36.1%)
Bagmati	329	3
Gandaki	138	2
Province 5	75	8
Karnali	39	1
Sudur Paschim	24	3
Total	1241	36

Source: FWD and WHO-IPD, Nepal

4.1.21 Neonatal tetanus surveillance, FY 2075/2076

In Nepal, neonatal tetanus (NNT) elimination was achieved in 2005. This status has been maintained since then. In FY 2075/76, 3 NNT cases were reported (one each from three districts Fig 2.1.18). The national incidence rate of NNT is 0.012 per 1000 live births.

Figure 4.1.19. Neonatal tetanus cases, FY 2075/2076



Source: FWD and WHO-IPD, Nepal

4.1.22 PROBLEMS/CONSTRAINTS AND ACTIONS TO BE TAKEN

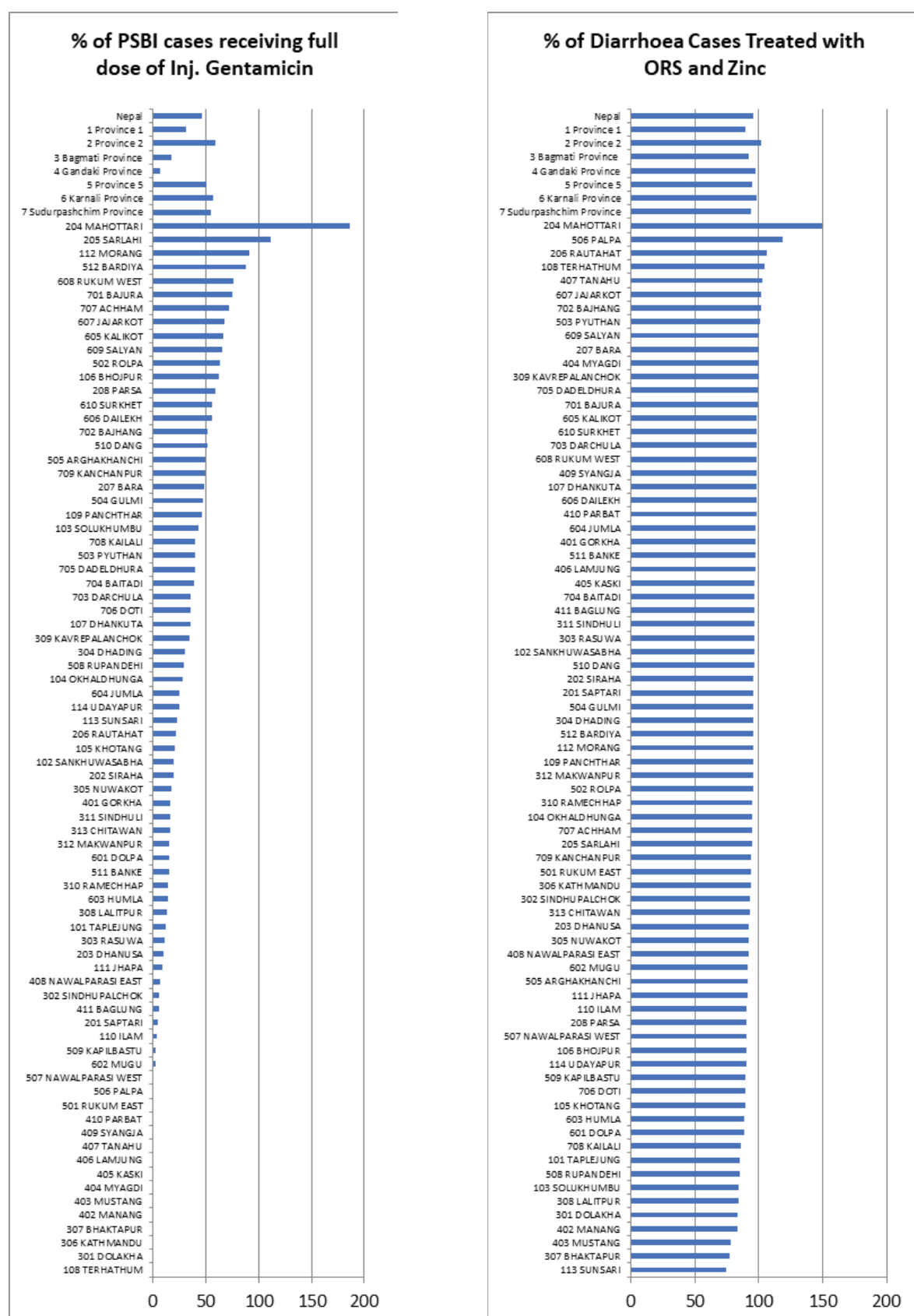
National annual Review and Provincial Annual Review meeting identified the following problems and constraints and recommended action to be taken at different levels of immunization delivery system.

Table 4.1.8: Issues and Recommendations from Provincial and National Review Meetings

Problems/Constraints	Action to be taken	Responsibility
Late budget release and lengthy process for fukuwa,	Budget to be release at timely	MOF/MOHP/DOHS
Unclear and too much time consuming process for tax clearance and procurement	Tax clearance and procurement process should be fast, easy and transparent	MOHP/DOHS/MD
Lack of trained and skilful human recourses in newly formed structure and reducing in sectional post even on program section during the restructuring process.	All newly appointed and fresh should be trained about NIP and EVM.	DOHS/NHTC
Inadequate HRH especially in Metro/Sub - Metropolitan, MCH / Institutional clinics and ill-defined JD of AHW & ANM (for vaccinations)	Provision for sufficient vaccinators for the Metro / Sub - Metropolitan, MCH / Institutional Clinics Incorporate responsibility of delivering immunization service in Job Description of all HA, SAHW, AHW/ANM to conduct immunization sessions	MoH/DoHS/DHO, Local Government
Inadequate coordination, collaboration and cooperation in all level		
Poor quality immunization data: Under and over reporting	Joint supportive supervision of Immunization as per HMIS. Strengthen supportive supervision at all levels Quarterly review of performance of data at HF/DHO level as –HMIS 9.2, 9.3 and 2.5 Provision of DQSA to the RHDS and districts	HF/HO/Province/ FWD/HMIS

Family Welfare

Problems/Constraints	Action to be taken	Responsibility
Late budget release and lengthy process for fukuwa,	Budget to be release at timely	MOF/MOHP/DOHS
Unclear and too much time consuming process for tax clearance and procurement	Tax clearance and procurement process should be fast, easy and transparent	MOHP/DOHS/MD
Lack of trained and skilful human recourses in newly formed structure and reducing in sectional post even on program section during the restructuring process.	All newly appointed and fresh should be trained about NIP and EVM.	DOHS/NHTC
Low achievement of FID according to national target	Orientation, Capacity building and empowerment of local government Accelerate of Full Immunization declaration at all levels Coordination with intersectoral stakeholders	MoHP, MoFALD, DoHS/FWD, Province, municipal
No provincial vaccine store at Karnali Province and province No.2	Establishment of new vaccine store at karnali Province and province No.2	MOHP/DOHS/Province
Inadequate CC Equipment repair, maintenance and replacement, lack of technician	Provision of engineer and refrigerator technician at provincial level Supply of cold chain spare parts Replacement of ageing equipment regular repair of cold chain equipment	DoHS/ MD/FWD
Inadequate Vaccine Store Capacity specially central level	Strengthen the vaccine stores with new buildings in central store .	MoHP, DoHS, MD, FWD



4.2 Integrated Management of Neonatal and Childhood Illnesses (IMNCI)

4.2.1 Background

Chronological development: Community Based-Integrated Management of Childhood Illness (CB-IMCI)

In Nepal, child survival intervention began when Control of Diarrhoeal Disease (CDD) Program was initiated in 1983. Further, Acute Respiratory Infection (ARI) Control Program was initiated in 1987. To maximize the ARI related services at the household level, referral model and treatment model at the community level were piloted. An evaluation of this intervention in 1997 revealed that treatment model was more effective and popular in the community than referral model. In 1997/98, ARI intervention was combined with CDD and named as CB-AC program. One year later two more components, nutrition and immunization, were also incorporated in the CBAC program. IMCI program was piloted in Mahottari district and was extended to the community level as well. Finally, the government decided to merge the CBAC into IMCI in 1999 and named it as Community-Based Integrated Management of Childhood Illness (CB-IMCI) as it targeted same population and involved same health personnel. CB-IMCI included the major childhood killer diseases like pneumonia, diarrhoea, malaria, measles, and malnutrition. The strategies adopted in IMCI were improving knowledge and case management skills of health service providers, overall health systems strengthening and improving community and household level care practices. After piloting of low osmolar ORS and Zinc supplementation, it was incorporated in CB-IMCI program in 2005. Nationwide implementation of CB-IMCI was completed in 2009 and revised in 2012 incorporating important new interventions.

Community-Based New Born Care Program (CBNCP)

Up to 2005, Nepal had made a huge progress in reduction of under-five and infant mortality, however, the reduction of neonatal mortality was observed to be very sluggish because the country had no targeted interventions for new-borns especially at community level. State of world report, WHO showed that major causes of mortality in neonates were infection, asphyxia, low birth weight and hypothermia. The Government of Nepal formulated the National Neonatal Health Strategy 2004. Based on this 'Community-Based Newborn Care Program (CB-NCP)' was designed in 2007, and piloted in 2009. CB-NCP incorporated seven strategic interventions: behaviour change communication, promotion of institutional delivery, postnatal care, management of neonatal sepsis, care of low birth weight newborns, prevention and management of hypothermia and recognition and resuscitation of birth asphyxia. Furthermore, in September 2011, Ministry of Health and Population decided to implement the Chlorhexidine (CHX) Digluconate (7.1% w/v) aiming to prevent umbilical infection of the newborn. The government decided to scale up CB-NCP and simultaneously, the program was evaluated in 10 piloted districts. Upto 2014, CB-NCP was implemented in 41 districts covering 70 percent population.

As a result of CB-IMCI program strategy, the prevalence of pneumonia and diarrhoea has reduced significantly over the last decade. The care-seeking practices and household level practices have been improved. CB-IMCI program has become one of the role models for a community-based program of Nepal. Other interventions which have a high contribution to the reduction of post-neonatal child mortality are bi-annual supplementation of Vitamin A program and expanded program on immunization. On the other hand, essential newborn care practices were improved in CB-NCP implemented districts.

In both the programs (CB-IMCI and CB-NCP), FCHVs were considered as frontline health service providers but quality and coverage of service were very low. CB-NCP and CB-IMCI have similarities in interventions, program management, service delivery and target beneficiaries. Additionally, both programs have duplicated interventions like management of neonatal sepsis, promotion of essential newborn care practices, infection prevention, and management of low birth weight. Though FCHVs are doing very good in promotion of healthy behaviours, they have poor performance in service delivery. Moreover, they are overburdened with workload and massive resources were used in a fragmented manner for the same purpose. Also, inequity in quality service delivery and utilization were the major challenges in newborn and child health programs. Health governance issue was also affecting better functioning of the health system. Considering these issues, MoHP decided to integrate CB-NCP and IMCI into a new package that is named as CB-IMNCI.

Community-Based Integrated Management of New-born and Childhood Illnesses (CB-IMNCI)

CB-IMNCI is an integration of CB-IMCI and CB-NCP Program as per the decision of MoHP on 2071/6/28 (October 14, 2015). This integrated package of child-survival intervention addresses the major problems of sick newborn such as birth asphyxia, bacterial infection, jaundice, hypothermia, low birthweight and counseling for breastfeeding. It also maintains its aim to address major childhood illnesses like Pneumonia, Diarrhoea, Malaria, Measles and Malnutrition among under 5 year's children in a holistic way.

In CB-IMNCI program, FCHVs carry out health promotional activities for maternal, new-born and child health and dispensing of essential commodities like distribution of iron, zinc, ORS, chlorhexidine which do not require assessment and diagnostic skills, and immediate referral in case of any danger signs that appear among sick new-borns and children. Health workers will counsel and provide health services like management of non-breathing cases, low birth weight babies, common childhood illnesses, and management of neonatal sepsis. Also, the program has provisioned for the post-natal visits by trained health workers through primary health care outreach clinic.

The program has envisioned for CHD to act as the quality assurance and monitoring entity for the CB-IMNCI program. Clinical training sites and PHTC are the lead agency for training in the near future. IMNCI section has been focusing on the phase-wise implementation of the program with continuous monitoring and supportive supervision to strengthen the program and onsite coaching to enhance the clinical skill among health workers. CB-IMNCI program has been implemented in all 77 districts.

Facility-Based Integrated Management of Childhood and Neonatal Illnesses (FBIMNCI)

The Facility-Based Integrated Management of Neonatal and Childhood Illnesses (FB-IMNCI) package has been designed specially to address childhood cases referred from peripheral level health institutions to higher institutions. The package is linked strongly with the on-going Community Based Integrated Management of Neonatal and Childhood Illness (CB-IMNCI). The package is expected to bridge the existing gap in the management of complicated neonatal and childhood illnesses and conditions. With the gradual implementation of this package, further improvement in neonatal and child health can be expected. This package addresses the major causes of childhood illnesses including Emergency Triage and Treatment (ETAT) and thematic approach to common childhood illnesses towards diagnosis and treatment especially new-born care, cough, diarrhoea, fever, malnutrition and anemia. It aims to capacitate team of health workers at district hospital with required knowledge and skills to manage complicated under-five and neonatal cases and to ensure timely and effective management of referral cases. This training package is delivered to paramedics

and nursing staffs (3 days) and doctors (6 days) at district, zonal, sub-regional and regional hospitals.

Comprehensive New-Born Care Training package

As indicated by various evidences, extra efforts are necessary for overcoming barriers to accelerate the reduction in neonatal mortality. As a result of the step towards reducing these new-born deaths, “Comprehensive Newborn Care Training Package (For Level II Hospital Care)” was developed in order to provide training to paediatricians, senior medical officers and medical officers working in the hospitals providing level II care services. This will help strengthen health system supported by fully trained and skilled health workers in all tiers of health facilities. This is a 6 days training package focused to help the health workers to develop basic skills and knowledge necessary for management of normal as well as sick new-born. This package covers counselling, infection prevention, care of normal new-born, feeding, neonatal resuscitation, thermal protection, fluid management, identification and management of sick neonates, disorder of weight and gestation, neonatal sepsis and common neonatal procedures. The training was started from 19th December, 2016 and has covered all development regions.

National Health Training Centre has developed Comprehensive New-born Care Training (Level II) package in 2017 and has been conducting training for Nurses in coordination with Family Welfare Division.

Free New-Born Care Services

The Government of Nepal (GoN) has made provisions on treating sick newborn free of cost through all tiers of its health care delivery outlets. Aim of this program is to prevent any sort of deprivation to health care services of the newborn due to poverty. Based on the treatment services offered to the sick-newborn, the services are classified into 3 packages: A, B and C. The new born corners in health posts and PHCs offer Package ‘A’, district hospitals with Special Newborn Care Unit (SNCU) offer Package ‘B’ and zonal hospitals and other tertiary hospitals offer Neonatal Intensive Care Unit (NICU) services for Package ‘C’. The government has made provisions of required budget and issued directives to implement the free newborn care packages throughout Nepal. The goal of the Free Newborn Care Service Package is to achieve the sustainable development goal to reduce newborn mortality through increasing access of the newborn care services. The program makes the provision of disbursing Cost of Care to respective health institutions required for providing free care to inpatient sick newborns.

Nepal Every Newborn Action Plan (NENAP)

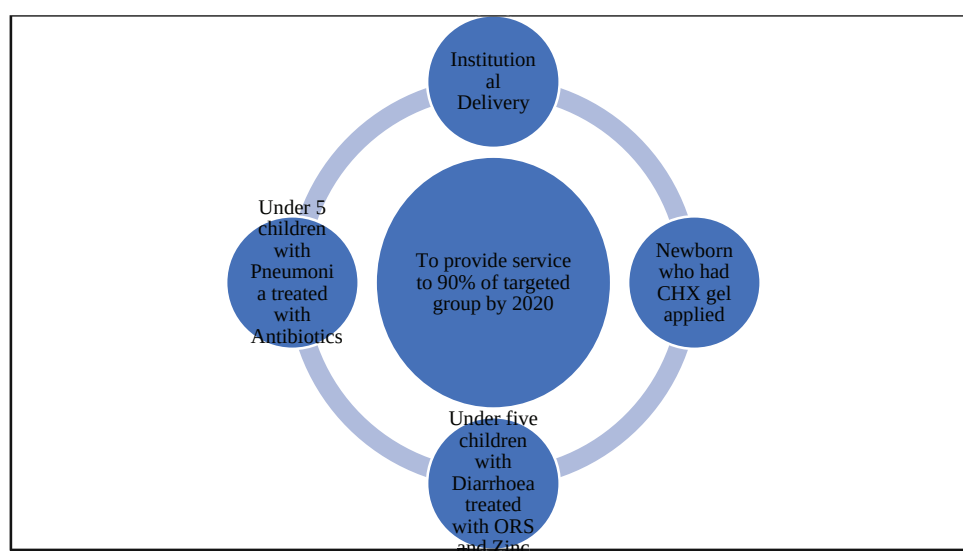
With the vision of a country where ‘there is no preventable deaths of newborns or stillbirths, where every pregnancy is wanted, every birth celebrated and women, babies and children survive, thrive and reach their full potential MoHP has initiated NENAP through four strategic directions which are equitable utilization of health services, quality for all, multi-sectoral approach and reform, particularly for poor and vulnerable populations. NENAP aims to achieve NMR of less than 11 deaths per 1000 live births and a stillbirth rate of less than 13 stillbirths per 1000 total births by the year 2035.

4.2.2 Goals, targets, objectives, strategies, interventions and activities of IMNCI program

- **Goal**
 - o Improve newborn and child survival and ensure healthy growth and development.
- **Targets of Nepal Health Sector Strategy (2015-2020)**
 - o Reduction of Under-five mortality rate (per 1,000 live births) to 28 by 2020
 - o Reduction of Neonatal mortality rate (per 1,000 live births) to 17.5 by 2020
- **Targets of NENAP**
 - o Reduction of Neonatal mortality rate (per 1000 live births) to 11 by 2035
 - o Reduction of stillbirths (per 1000 total births) to 13 by 2035
- **Objectives**
 - o To reduce neonatal morbidity and mortality by promoting essential newborn care services
 - o To reduce neonatal morbidity and mortality by managing major causes of illness
 - o To reduce morbidity and mortality by managing major causes of illness among under 5 years children
- **Strategies**
 - o Quality of care through system strengthening and referral services for specialized care
 - o Ensure universal access to health care services for newborn and young infant
 - o Capacity building of frontline health workers and volunteers
 - o Increase service utilization through demand generation activities
 - o Promote decentralized and evidence-based planning and programming

4.2.3 Major interventions

- **Newborn Specific Interventions**
 - o Promotion of birth preparedness plan
 - o Promotion of essential newborn care practices and postnatal care to mothers and new borns
 - o Identification and management of non-breathing babies at birth
 - o Identification and management of preterm and low birth weight babies
 - o Management of sepsis among young infants (0-59days) including diarrhoea
- **Child Specific Interventions**
 - o Case management of children aged between 2-59 months for 5 major childhood killer diseases (Pneumonia, Diarrhoea, Malnutrition, Measles and Malaria)
- **Cross-Cutting Interventions**
 - o Behavioural change communications for healthy pregnancy, safe delivery and promotion of personal hygiene and sanitation
 - o Improved knowledge related to Immunization and Nutrition and care of sick children
 - o Improved interpersonal communication skills of HWs and FCHV

Vision 90 by 20**Figure 4.2.1 CB IMNCI Program Vision**

CB-IMNCI program has a vision to provide targeted services to 90% of the estimated population by 2020 as shown in the diagram below.

4.2.4 Major activities

Major activities carried out under the IMNCI programme in FY 2075/76 were as shown in table below:

Capacity Building		
Comprehensive Newborn care (Level II) Training to Medical Officer	5 batches of training done	95 Medical officers trained
FB IMNCI training for Medical Officer	3 batches of training done	57 Medical officers trained
FB IMNCI training for nursing staffs and paramedics	6 batches of training done	145 paramedics trained
Equipment and supplies		
Procurement of equipment for SNCU/NICU	40 sets of phototherapy procured	
Procurement of equipment and medicines for IMNCI program	Various equipment and Medicines for IMNCI programs (ORS, Zinc, Amoxicillin, Gentamycin, Chlorohexidine gel) were purchased	
Revision of Guidelines		
Revision of Comprehensive Newborn Care (Level II) Training Package		

Revision of FB-IMNCI Training Package
Revision of Equity and Access Guideline
Revision of Free newborn Care Guideline
Establishing/strengthening SNCU
Total NICU established till date : 8 hospitals
Total SNCU established till date: 21 hospitals
Printing of training materials
Printing of CB-IMNCI, Comprehensive New born Care (Level II) Training Materials (Guidelines, Handbook, Chart, Flex, etc.)
Implementation of newborn services and other programs
- Provision of budget for Free Newborn Care Services in 68 hospitals in FY 2075/76. - Implementation of Remote area guideline for CB-IMNCI

4.2.5 CB-IMNCI Program Monitoring Key Indicators

Regular monitoring is important for better management of program. Therefore, CB-IMNCI program has identified 6 major indicators to monitor the programs that are listed below:

- % of institutional delivery
- % of newborn who had applied Chlorhexidine gel immediately after birth (within one hour)
- % of infants (0-2 months) with PSBI receiving complete dose of Injection Gentamicin
- % of under 5 children with pneumonia treated with antibiotics
- % of under 5 children with diarrhoea treated with ORS and Zinc
- Stock out of the 5 key CB-IMNCI commodities at health facility (ORS, Zinc, Gentamicin, Amoxicillin/Cotrim, CHX)

All indicators except the last one are obtained from HMIS. It is expected that if there is high institutional delivery, there would be good essential newborn care and immediate management of complications like birth asphyxia that will ultimately contribute in reducing the neonatal mortality. Status of CB-IMNCI programme monitoring indicators are summarized below in as follows (Table 4.2.2).

Table 4.2.2: CB-IMNCI Programme Monitoring Indicators by Province (FY 2075/76)

Province	% of institutional deliveries	% of newborns applied chlorhexidine (CHX) gel	% of PSBI cases received complete dose of inj. Gentamicin	% of pneumonia cases treated with antibiotics	% diarrhoeal cases treated with ORS and zinc
Province 1	62.0	53.2	30.9	128.0	89.5
Province 2	52..7	73.0	58.8	203.0	102.3
Bagmati	61.5	39.5	17.3	111.0	92.6
Gandaki	47.8	45.1	6.5	145.3	97.3
Province 5	78.8	64.1	50.8	127.3	94.4
Karnali	73.2	87.5	56.8	120.2	98.4
Sudur Pachhim	71.0	74.5	55.1	113.6	93.9
National	63.2	59.6	46.3	136.1	95.5

Source: HMIS, 2075/76

The national average for Institutional deliveries in 2075/76 was 63.2 percent, with lowest in Gandaki province (47.8%) and highest in province 5 (78.8%).

Chlorhexidine was applied in 59.6 percent of newborn's umbilical cord (HF+ FCHV) among total expected live births. Province wise wide variation was observed in CHX use with highest use in Karnali (87.5%) and lowest in Bagmati (39.5%) Province. Similarly, the use of inj. Gentamicin at national level for PSBI cases among under two months child was only 46.3 percent. Four provinces have used complete dose of Gentamicin in more than 50 percent of PSBI cases and three provinces have used it in less than 30 percent of cases with lowest 6.5 percent use in Gandaki province.

Use of antibiotics for pneumonia treatment (excluding FCHVs) was more than 100 percent in all seven provinces, with national average of 136.1 percent, highest being observed in province 2 (203%) and lowest in Bagmati (111%). Pneumonia cases reported by FCHV were used to be included till 2073/74. But, from the 2074/75, the indicator was revised that excluded the pneumonia cases reported by FCHVs. The figure exceeded 100 percent due to reporting error. The treatment of other diseases such as skin infection, ear infection etc. by antibiotics were also reported additionally.

As per CB-IMNCI treatment protocol, all diarrhoeal cases should be treated with ORS and Zinc. Based on HMIS data, U5 children suffering from diarrhoea treated with ORS and Zinc at National level was 95.5 percent, which was highest in Province 2 (102.3%) and lowest in Province 1 (89.5 %).

4.2.6 Key Achievements for Management of 0-28 day newborn

Since FY 2064/65, CB-IMCI services data (as received from Health Facilities, VHWS/MCHWs and FCHVs) has been incorporated into HMIS. Therefore, from FY 2064/65 onwards, service provided at community level (PHC/ORCs and FCHVs) is considered as community level data whereas total service provided from Health Facility level in addition with community level constitutes the national aggregate data for this program. CB-IMNCI program has been initiated from FY 2071/72 and from FY

2071/72 Health Facility Level and Primary Health Care/Out Reach Clinics (PHC/ORC) data has been incorporated into HMIS. Consequently, the role of FCHV at community level has been redefined and limited to counselling service for newborn care. Obviously, the treatment protocol has also been changed and role of FCHVs at the community level has been assigned as health promoters/counsellors rather than health service providers. As per the new reporting and recording system, the achievements of management of under 5 children are given in the table below.

Table 4.2.3: Classification and Treatment of 0-28 Day Newborn Cases by Province (FY 2075/76)

Indicators	Year	Province 1	Province 2	Bagmati	Gandaki	Province 5	Karnali	Sudur Pachim	National	
									No.	% among total cases
Total cases (HF+ORC)	2073/74	4,573	2,370	2,989	1,888	5,694	3,967	4,261	25,742	NA
	2074/75	3,902	3,055	2,839	2,156	6,425	3,608	3,693	2,5678	NA
	2075/76	5,233	3,935	3,270	2,479	6,536	3,133	4,520	29,106	NA
Possible severe bacterial infections (PSBI) (HF+ORC)	2073/74	578	217	246	124	1035	752	761	3,713	14.4
	2074/75	414	270	265	142	1,096	727	666	3,580	13.9
	2075/76	487	278	258	125	1,024	595	635	3,402	11.7
Local bacterial infections (HF+ORC)	2073/74	2,549	1,660	1,296	904	1,887	1,745	2,255	12,296	47.8
	2074/75	2,206	1,820	1,239	786	1,942	1,220	1,954	11,167	43.5
	2075/76	2595	2249	1400	821	2075	1235	2351	12,726	43.72
Jaundice (HF+ORC)	2073/74	298	122	320	296	339	181	184	1,740	6.8
	2074/75	255	149	252	324	280	144	121	1,525	5.9
	2075/76	301	136	267	314	297	106	114	1535	5.3
% of Low weight or feeding problem (HF only)	2073/74	3.98	5.23	5.16	7.40	6.06	8.55	10.55	1,605	6.8
	2074/75	5.9	3.8	6.9	6.0	6.1	14.4	6.8	1838	7.2
	2075/76	4.7	4.9	6.7	4.5	4.2	9.5	6.9	1656	5.7
Referred (HF+ORC)	2073/74	357	183	214	88	252	131	185	1,410	5.5
	2074/75	215	258	214	98	259	288	186	1518	5.9
	2075/76	268	207	195	88	282	167	202	1409	4.8
Deaths (HF+ORC)	2073/74	7	2	13	2	45	12	23	104	0.4
	2074/75	14	1	16	5	35	19	16	106	0.4
	2075/76	27	2	12	6	20	9	26	102	0.4

FCHV										
Sick baby	2073/74	2,607	2,105	1,794	783	1,982	1,391	2,357	13,019	NA
	2074/75	2,671	2,285	1,862	653	2,469	1,535	1,782	13,257	NA
	2075/76	2576	2982	1567	2649	1965	1087	1495	14321	NA
Treated with cotrim and referred	2073/74	1656	1121	534	193	1118	865	855	6342	48.7
	2074/75	1266	1007	314	95	1005	672	527	4886	36.9
	2075/76	1077	1002	228	119	687	459	436	4008	28
Death	2073/74	168	70	155	52	204	145	249	1043	NA
	2074/75	310	163	177	73	324	117	219	1383	NA
	2075/76	524	93	139	63	151	68	216	1254	NA

Source: HMIS

A total of 29,106 new-born cases were registered and treated both in health facility and PHC/ORC clinic in FY 2075/76. The trend shows that the treatment of new-borns in HF and PHC/ORC clinic has increased by 3428 compared to last year. The highest of 6536 new-born cases in Province 5 and lowest of 2479 in Gandaki Province were treated. In total 3402 (11.7%) cases were classified as Possible Severe Bacterial Infection (PSBI) at national level which is 2% less than that of previous year (13.9 %). The proportion of PSBI was highest in Province 5 (30%) and lowest in Gandaki Province (3.6 %).

Likewise, 43.7% of total cases were classified as LBI, 5.3% as Jaundice, 5.7% as Low Birth Weight or Breast-Feeding Problem. Data shows there is not any significant change in classification and treatment of LBI and Jaundice however, there is slightly decreased in treatment of Low Birth Weight or Breast-Feeding Problem from 7.2 to 5.6 compared to last year. The proportion of LBI is highest in Province 1 (20.39%) and lowest in Gandaki province (6.4%). Similarly, in total 28% of the cases were treated by Paediatric Amoxicillin and 4.8% of total cases were referred from both HF and PHC/ORC clinic, highest by Province 5 (20%) followed by Province 1 (19%). Among all treated cases, 0.35% died which indicates very slight reduction from previous year (0.4%).

The percent of the sick babies treated with cotrim and referred by FCHV has shown the decreasing trend. In FY 2073/74, it was almost half (48.7%) whereas it has been declined to 37% and 28% respectively. Likewise, the death reported by FCHV showed the fluctuating trend.

4.2.7 Key achievement for Management of 2-59 months children

Diarrhoea

Classification of diarrhoeal cases by province 2075/76

CB-IMNCI program has created enabling environment to health workers for better identification, classification and treatment of diarrhoeal diseases. As per CB-IMNCI national protocol, diarrhoea has been classified into three categories: 'No Dehydration', 'Some Dehydration', and 'Severe Dehydration'. The reported number and classification of total new diarrhoeal cases has been presented in table 4.2.3 below.

Table 4.2.4: Classification of Diarrheal Cases by Province (FY 2075/76) (2-59 Months Children)

Indicator	Year		Province 1	Province 2	Bagmati	Gandaki	Province 5	Karnali	Sudur Pachim	National
Total diarrhoeal cases (HF+ORC+FCHV)	2073/74		186,090	205,477	181,071	76,889	206,359	128,064	200,170	1,184,120
			15.72%	17.35%	15.29%	6.49%	17.43%	10.82%	16.90%	100.0%
	2074/75		180,260	208,779	166,644	73,526	203,879	127,271	187,879	1,148,238
			15.70%	18.18%	14.51%	6.40%	17.76%	11.08%	16.36%	100%
	2075/76		174,099	216,837	154,300	67,857	205,759	123,696	182,325	1,1240,873
			15.48%	19.28%	13.72%	6.03%	18.29%	11.00%	16.21%	100%
HF + ORC diarrhoeal cases	Total	2073/74	55,474	88,821	47,379	22,220	65,641	45,216	58,433	383,184
		2074/75	51,792	94,447	43,143	22,088	67,989	42,918	54,183	376,560
		2075/76	49,678	97,157	41,446	20,249	71,262	45,227	56,183	381,206
	No dehydration	2073/74	42,643	69,566	40,920	19,288	56,679	35,058	49,793	313,947
			76.9%	78.3%	86.4%	86.8%	86.3%	77.5%	85.2%	81.9%
		2074/75	41201	74,202	37,366	19,570	58,791	33,716	47,160	31,2006
			79.6%	78.6%	86.6%	88.6%	86.5%	78.6%	87.0%	82.9%
		Some dehydration	2075/76	41,225	77,587	36,937	18,438	62,322	36,578	49,288
82.98%				79.86%	89.12%	91.06%	87.45%	80.88%	87.72%	84.57%
2073/74			12,589	18,937	6,285	2,909	8,585	9,796	8,449	67,550
			22.7%	21.3%	13.3%	13.1%	13.1%	21.7%	14.5%	17.6%
2074/75			10,397	19,858	5,690	2,475	8,696	8,801	6,891	62,808
			20.1%	21.0%	13.2%	11.2%	12.8%	20.5%	12.7%	16.7%
2075/76		8,257	19,209	4,409	1,744	8,579	8,423	6,746	57,367	
		16.62%	19.77%	10.64%	8.61%	12.04%	18.62%	12.01%	15.05%	
Severe dehydration		2073/74	242	318	174	23	377	362	191	1,687
			0.4%	0.4%	0.4%	0.1%	0.6%	0.8%	0.3%	0.4%
		2074/75	194	387	87	43	502	401	132	1,746
			0.37%	0.41%	0.20%	0.19%	0.74%	0.93%	0.24%	0.46%
		2075/76	196	361	100	67	361	226	153	1,464
			0.39%	0.37%	0.24%	0.33%	0.51%	0.50%	0.27%	0.38%

Family Welfare

FCHV (diarrhoeal cases)	2073/75	130,616	116,656	133,692	54,669	140,718	82,848	141,737	800,936
		11.03%	9.85%	11.29%	4.62%	11.88%	7.00%	11.97%	67.64%
	2074/75	128,468	114,332	123,501	51,438	135,890	84,353	133,696	771,678
		11.19%	9.96%	10.76%	4.48%	11.83%	7.35%	11.64%	67.21%
	2075/76	124,421	119,680	112,854	47,608	134,497	78,469	126,138	743,667
		11.06%	10.64%	10.03%	4.23%	11.96%	6.98%	11.21%	66.11%

Source: HMIS

In FY 2075/76, a total of 1,124,873 (population proportion of that age group is 38%) diarrhoeal cases were reported out of which more than one third (34%) were reported from health facilities and PHC/ORC and rest two third (66%) by FCHVs which showed similar trend like that of previous year. While there were decreasing trend in diarrhoeal cases among five provinces, those of Province 2 and 5 increased in comparison to FY 2074/75. Among registered cases in Health Facilities and PHC/ORC, more than three fourth (85%) were classified as having no dehydration, about one fifth (15.1%) some dehydration. Severe dehydration remained below 1 percent across all provinces and at national level as well.

Classification of diarrhoea disease incidence

Table 4.2.5: Incidence and Case Fatality of Diarrhea Among Children Under 5 Years of Age by Province (FY 2075/76)

Indicators	Year	Province 1	Province 2	Bagmati	Gandaki	Province 5	Karnali	Sudur Pashchim	National
Estimated <5 years population that are prone to diarrhoea	2073/74	494,301	613,361	629,577	254,998	502,216	177,389	287,244	2,959,086
	2074/75	495,671	619,384	636,059	253,948	505,950	179,486	289,739	2,980,237
	2075/76	492,953	620,489	637,580	251,331	505,366	179,694	289,841	2,977,254
Incidence of diarrhoea/1,000 <5 years population	2073/74	376	335	288	302	411	722	697	400
	2074/75	364	337	262	290	403	709	648	385
	2075/76	351	347	240	268	404	683	624	375
Diarrhoeal deaths (HF+ORC)	2073/74	7	16	4	1	1	2	2	33
	2074/75	8	14	6	0	12	3	4	47
	2075/76	8	11	18	14	1	4	7	63
Diarrhoea Case fatality rate per 1000 (HF+ORC)	2073/74	0.13	0.18	0.08	0.05	0.02	0.04	0.03	0.09
	2074/75	0.16	0.15	0.14	0.00	0.18	0.07	0.07	0.13
	2075/76	0.16	0.11	0.43	0.69	0.01	0.09	0.12	0.17

Source: HMIS/MD, DoHS

As shown in table 4.2.5, incidence of diarrhoea per thousand under 5 years children was 375 in FY 2075/76, being highest at Karnali (683) followed by Sudur Pashchim (624). Similar trend was seen in the previous fiscal year. Moreover, the lowest incidence was in Bagmati Province (240). Total diarrhoeal death in health facility and PHC/ORC was 63 cases which increased by 34 percent than the last fiscal year. Case fatality rate across all the provinces was below 1 per thousand in this age group.

Treatment of diarrhoea**Table 4.2.6: Treatment of diarrhoea cases by province (FY 2075/76)**

Indicators	Year	Province 1	Province 2	Bagmati	Gandaki	Province 5	Karnali	Sudur Pashchim	National
Total cases (HF+ORC+FCHV)	2073/74	186,090	205,477	181,071	76,889	206,359	128,064	200,170	1,184,120
	2074/75	180,260	208,779	166,644	73,526	203,879	127,271	187,879	1,148,238
	2075/76	174,099	216,837	154,300	67,857	205,759	123,696	182,325	1,124,873
Diarrhoeal cases treated with ORS and zinc(HF+ORC+FCHV)	2073/74	160,798	194,706	166,946	74,298	183,273	123,139	187,923	1,091,083
		86.41%	94.76%	92.20%	96.63%	88.81%	96.15%	93.88%	92.14%
	2074/75	161,794	202,520	155,749	72,597	193,976	122,678	183,792	1,093,106
		89.76%	97.00%	93.46%	98.74%	95.74%	96.39%	98.82%	95.20%
	2075/76	155,819	221,745	142,884	66,056	194,330	121,983	171,281	1,074,098
		89.5%	102.26%	92.60%	97.35%	94.45%	98.62%	93.94%	95.49%
Intravenous (IV) fluid (HF)	2073/74	1,113	2,282	1,026	285	937	975	1,117	7,735
		0.60%	1.11%	0.57%	0.37%	0.45%	0.76%	0.56%	0.65%
	2074/75	633	1,458	351	148	1,369	727	1,029	5,715
		0.35%	0.70%	0.21%	0.20%	0.67%	0.57%	0.55%	0.50%
	2075/76	368	715	233	177	747	380	259	2,879
		0.21%	0.33%	0.15%	0.26%	0.36%	0.31%	0.14%	0.26%

Source: HMIS

In FY 2075/76, the proportion of diarrhoeal cases treated with ORS and Zinc as per IMNCI national protocol at national level was 95 percent which was almost similar to the previous year. There was slight difference among provinces treating with ORS & Zinc but maintaining almost 90 percent in all provinces. Likewise, less than 1 percent severe diarrhoeal cases were treated with intravenous (IV) fluid at health facilities level in all provinces.

Acute Respiratory Infections

As per CB-IMNCI protocol, every ARI cases should be correctly assessed and classified as no pneumonia, pneumonia or severe pneumonia; and given home therapy, treated with appropriate antibiotics or referred to higher centre as per the indications. (See Table 4.2.7)

Table 4.2.7: Acute Respiratory Infection (ARI) and Pneumonia Cases by Provinces (FY 2075/76)

Indicators	Year	Province 1	Province 2	Bagmati	Gandaki	Province 5	Karnali	Sudur Pashchim	National
Target population (<5 years that are prone to ARI)	2073/74	494301	613361	629577	254998	502216	177389	287244	2959086
	2074/75	495671	619384	636059	253948	505950	179486	289739	2980237
	2075/76	492953	620489	637580	251331	505366	179694	289841	2977254
Total ARI cases (HF+ORC)	2073/74	155205	131029	109550	60044	117430	72254	105376	750888
	2074/75	144819	130874	98396	57014	117675	74970	101678	725426
	2075/76	156682	153700	105247	62907	129872	79432	101937	789777
ARI incidence per 1,000<5 year child	2073/74	717	472	439	597	576	927	992	612
	2074/75	666	448	427	571	564	960	971	592
	2075/76	693	498	431	610	579	941	930	608
Total Pneumonia cases (HF+ORC)	2073/74	43913	32333	32032	13247	27707	20811	24619	194662
	2074/75	33938	25259	25149	10430	25379	18985	20673	159813
	2075/76	33009	23990	23899	9194	23634	17503	19658	150887
Incidence of pneumonia per 1,000 <5 children	2073/74	89	53	51	52	55	117	86	66
	2074/75	118	66	60	52	80	171	130	87
	2075/76	116	65	55	58	76	159	110	83
% of pneumonia among ARI cases (HF+ORC)	2073/74	28.3	24.7	29.2	22.1	23.6	28.8	23.4	25.9
	2074/75	22.0	23.4	19.3	25.6	18.3	21.6	25.3	20.3
	2075/76	21.1	15.6	22.7	14.6	18.2	22.0	19.3	19.1
% of severe pneumonia among new cases	2073/74	0.25	0.30	0.30	0.11	0.22	0.51	0.33	0.29
	2074/75	0.24	0.27	0.16	0.20	0.19	0.58	0.23	0.25
	2075/76	0.27	0.34	0.20	0.19	0.19	0.52	0.24	0.27
% of Pneumonia Treated with antibiotic (HF&ORC)	2073/74	179.7	264.4	162.6	270.7	244.2	167.3	210.3	208.9
	2074/75	172.7	296.5	147.8	218.6	193.0	173.8	160.2	193.1
	2075/76	170.4	285.5	141.7	198.2	162.4	131.8	147.7	177.2
Deaths due to ARI at HF+ORC	2073/74	11	58	7	62	13	5	20	176
	2074/75	46	6	23	12	22	19	11	139
	2075/76	60	41	31	18	15	2	11	178
ARI Case fatality rate per 1000 at HF	2073/74	0.09	0.63	0.07	1.16	0.12	0.08	0.22	0.28
	2074/75	0.09	0.01	0.04	0.05	0.04	0.11	0.04	0.05
	2075/76	0.12	0.07	0.05	0.07	0.03	0.01	0.04	0.06
FCHV									
Total ARI	2073/74	199118	158249	166767	92120	171864	92219	179497	1059834
	2074/75	184329	143759	170454	88645	165463	95301	177291	1025242
	2075/76	187145	157630	171395	91537	164822	91001	169529	1033059

Source: HMIS/MD, DoHS

Family Welfare

In FY 2075/76, a total of 7,89,777 ARI cases were registered in HF and ORC, out of which 19.1 percent were categorized as pneumonia cases and 0.27 percent were severe pneumonia cases. The incidence of pneumonia (both pneumonia and severe pneumonia at HF and PHC/ORC) at national level was 83 per 1000 under five children. The incidence of pneumonia among under five children has decreased slightly compared to that of last FY. Likewise, highest ARI incidence was seen at Karnali Province (941/1000 U5 children) followed by Sudur Pashchim (930/1000 U5 children) and least at Bagmati Province (431/1000 U5 children). Similarly, Bagmati and Karnali Province had the highest percentage of pneumonia cases among ARI cases (22.7% and 22.0%) and Gandaki Province has the lowest (14.6%). (Table 4.2.7)

The total ARI-related deaths at health facilities were reported to be 178 which is slightly lower compared to previous FY (139). The ARI case fatality rate per thousand at health facility was increased to 0.06 in FY 2075/76 compared to last fiscal year FY 2074/75 (0.05). ARI case fatality rate shows a wide variation in between the provinces ranging from the lowest 0.01 per 1000 in Karnali Province to the highest 0.12 per 1000 in Province 1.

Other common childhood illnesses

CB-IMNCI Program also focuses on identifying and treating Malaria, Malnutrition, Measles, and other common illnesses among children under five. The interventions to address malnutrition among children are being led by Nutrition Program, interventions to address measles and other vaccine preventable diseases are being led by National Immunization Program, and Malaria by disease control program. IMNCI program actively collaborated with respective programs to address these problems in an integrated approach.

Table 4.2.8: Classification of Cases as Per CB-IMNCI Protocol by rovince (FY 2075/76)

	Malaria		Very severe febrile disease	Measles	Ear infection	Severe malnutrition	Anaemia
	Falciparum	Non-falciparum					
Province 1	14	11	0	197	15053	590	473
Province 2	49	332	0	312	29,942	2,411	1,943
Bagmati	2	31	0	409	9,731	420	582
Gandaki	10	38	0	62	5,661	468	353
Province 5	26	234	0	150	17,869	2,288	1,328
Karnali	23	61	0	57	9205	1,185	514
Sudur Pashchim	16	67	0	75	10,321	1,754	888
National	140	774	0	1,262	97,782	9,116	6,081

Source: HMIS/MD, DoHS

Under the CB-IMNCI programme, health workers identified 140 falciparum malaria cases, 774 non-falciparum malaria cases; 1,262 measles cases; 97,782 ear infection cases; 9,116 severe malnutrition cases and 6,081 anaemia cases in children under five years of age in 2075/76. There were no reported cases of very severe febrile disease in this fiscal year.

4.2.8 Problem, constraints and actions to be taken and responsibility

Table 4.2.9: Problem, constraints and actions to be taken

Problem/Constrains	Action to be taken	Responsibility
No sanctioned position for CB-IMNCI focal persons at municipal and provincial levels Unclearity in roles of staffs in the new federal context	Policy level decision needed to allocate sanctioned position, and make necessary arrangements so that there is no void in implementation of the program and in service delivery during the transition period	MoHP, DoHS, FWD
Unable to implement free newborn care guideline since last FY as expected.	Better coordination and collaboration between related hospitals, Palikas, D/PHOs and CHD. Better orientation about the program and clarity in its implementation modality	Hospitals, Palikas, HO, FWD
Insufficient Human Resource in Hospital to implement SNCU/NICU Limited IEC/BCC interventions as compared to the approved program implementation guideline, so as to improve the demand of CH services	- HR to be deployed by Contract - training to MO and nursing staff about NICU - More priority be given to the IEC/BCC interventions so as to improve the demand for CH services by all concerned stakeholders	MOHP, FWD, Province, NHTC NHEICC, FWD, HO, Palikas, HF
Frequent stockouts of essential commodities in districts and communities	Timely supply of commodities	FWD, MD
Lack of equipment to deliver newborn & child health services at service delivery points	Timely procurement and supply of equipment	MD, FWD
Poor service data quality	- Carry out routine data quality assessments - Strengthen regular feedback mechanisms	MD, FWD
Poor quality of care	- Strengthen quality improvement system - Enhance the use of health facility quality improvement tools - Onsite coaching - Supportive supervision	MD, FWD, Province, HO
Increase in percentage of severe pneumonia cases	Targeted interventions (BCC activities, and for early detection, treatment and referral) needs to be focused	Province, HO

Family Welfare

Limited engagement of private sectors	• Ensure better involvement of private sector to ensure quality services are provided with proper follow up of childhood treatment protocols.	DoHS, FWD
Poor referral mechanism	• Strengthen the referral mechanism	FWD, HO

4.3 Nutrition

4.3.1 Background

Nutrition Section of Family Welfare Division (FWD), Department of Health Services (DoHS), Ministry of Health and Population (MoHP) is responsible for national nutrition specific interventions to improve the nutritional status of children, pregnant and lactating women and adolescents. The goal of national nutrition programme “to achieve well-being of all people to maintain a healthy life to contribute in the socio-economic development of the country, through improved nutrition program implementation in collaboration with relevant sectors”. Nutrition interventions are cost effective high quality and essential investments for attaining many of the Sustainable Development Goals. Without adequate and sustained investments in nutrition, the SDGs will not be realised. The ambition to “End hunger, achieve food security and improved nutrition and promote sustainable agriculture” is captured in SDG 2, however, at least 12 of the 17 SDGs contained indicators are highly relevant to nutrition. In alignment with internationally and nationally declared SDG roadmap (2015-2030), the approach paper of Fifteenth Periodic Plan (2019/20-2023/24), National Multi-sector Nutrition Plan (MSNP)-II, National Health Policies and Nepal Health Sector Strategy Plan (NHSSP) – III and National Agriculture Development Strategy (ADS), the Government of Nepal (GoN) is committed and ensures that its citizens have access to the adequate nutritious food, health and other social services those impact nutrition outcomes. The Constitution (2015) ensures the right to food, health and nutrition to all citizens. Hunger and under-nutrition often result in the vicious cycle of malnutrition and infections that leads to poor physical, cognitive and intellectual development, less productivity and compromised socioeconomic development.

Focus on nutrition — Nutrition is a globally recognized development agenda. Since the year 2000, several global movements have advocated nutrition for development. In 2012 the World Health Assembly Resolution 65.6 endorsed a Comprehensive implementation plan on maternal, infant and young child nutrition (1), which specified a set of six global nutrition targets (2) that by 2025 aim to:

1. achieve a 40% reduction in the number of children under-5 who are stunted;
2. achieve a 40% reduction in the number of children under-5 who are stunted;
3. achieve a 50% reduction of anaemia in women of reproductive age;
4. achieve a 30% reduction in low birth weight; ensure that there is no increase in childhood overweight;
5. increase the rate of exclusive breastfeeding in the first 6 months up to at least 50%;
6. reduce and maintain childhood wasting to less than 5%.

The Scaling-Up-Nutrition (SUN) initiative calls for multi-sectoral actions for improved nutrition during the first 1,000 days of life where the Road Map for Scaling-Up-Nutrition (SUN) was released in September 2010. “Nepal was the fifth country to join the SUN Movement on 5 May 2011 as an early riser, adopted the Multi-sector Nutrition Plan (MSNP) in 2012 with 10 years vision (2013-2022) and five-year plan (2013-2018) to reduce chronic under nutrition focusing to first 1000 days age groups. Similarly, The United Nations General Assembly on April 2016 agreed on a resolution proclaiming the UN Decade of Action on Nutrition from 2016 to 2025 with the aim “to provide a clearly-defined time-bound operational framework that works within existing structures and available resources to implement the commitments made at Second International Conference on Nutrition (ICN2) and the 2030 Agenda for Sustainable Development”.

Policy initiatives — The National Nutrition Policy and Strategy was officially endorsed in 2004 to address all forms of malnutrition by implementing nutrition specific and sensitive interventions

through the health sector that provides the strategic and programmatic directions for nutrition interventions in Nepal through health sector. Similarly, Multi-sector Nutrition Plan (MSNP) –II (2018-2022) which is a broader national policy framework for nutrition within and beyond the health sector coordinated by the National Planning Commission (NPC) provides national policy guidance for nutrition specific and nutrition sensitive interventions as well as creating enabling environment for nutrition specific and sensitive interventions throughout the country. The National Health Policy, 2071 highlights to fight against malnutrition and improve nutrition through effective promotion of quality nutritious foods generated locally. A Multisectoral Nutrition Technical Committee (NUTEC) lead by the Director of Family Welfare Division (formally Child Health Division) was established in 2011 with the composition of technical experts from relevant government's Ministries and Departments, UN agencies and Development Partners that provides technical guidance for nutrition specific and sensitive interventions through multisector coordination and decision-making process.

Aligning with the SDG road map, MSNP-II, National Health Policy, National Health Sector Strategy Plan and current global initiatives, Nutrition Section of Family Welfare Division (FWD) has developed national nutrition strategies and plans for improving the maternal, infant and young child nutrition assisted by expert's agencies and persons of Nutrition Technical Committee. Moreover, as recommended by the Nepal Nutrition Assessment and Gap Analysis (NAGA) 2009/010 and guided by MSNP, in 2012–2013 MoHP conducted an Organization and Management Survey towards establishing a National Nutrition Centre as an expert Nutrition Center under Ministry of Health and Population for nutrition specific interventions

4.3.2 Malnutrition in Nepal

Nepal has made significant progress in reducing stunting in under five years' children. Stunting decreased from 57 per cent in 2001 to 35.8 per cent in 2016. Similarly, the level of wasting is unchanged since decades which were 11 per cent in 2001 and 10 per cent in 2016. Anaemia among under five children still is 51 per cent (NDHS 2016). Due to the Nepal's strong effort in micronutrient interventions, National Vitamin A Programme has been globally recognized as a successful programme. However, anaemia among women, adolescents and children remains high-level public health concern. In Nepal, forty-one percent of women of reproductive age and 46 percent of pregnant women are anaemic. Similarly, 68 percent (NDHS 2016) of children aged 6-23 months are anaemic while the prevalence of anaemia among adolescent women (15-19) has been increased from 38.5 percent in 2011 to 43.6 percent in 2016 (NDHS). Likewise, 17 per-cent of mothers suffering from chronic energy deficiency alongside the increasing trend of overweight (22 %, NDHS, 2016).

4.3.3 Efforts to address under-nutrition

Ministry of Health and Population has been implementing several activities within nutrition specific interventions to address maternal, adolescent and child malnutrition in Nepal. This began with growth monitoring of young children with promotion, protection and support for early initiation, exclusive and extension of breastfeeding and appropriate complementary feeding followed by community-based micronutrient supplementation. Most recent years, Family Welfare Division of DoHS/MoHP has been implementing following programme interventions as mentioned in Box 4.3.1.1.

Box 4.3.3.1: Nutrition programmes implemented by FWD Nutrition Section (1993–2018)	
Nationwide programmes: • Growth monitoring and promotion as well as IYCF counselling • Prevention and control of iron deficiency anaemia (IDA) • Prevention, control and treatment of vitamin A deficiency (VAD) disorders • Prevention of iodine deficiency disorders (IDD) • Control of parasitic infestation by deworming • Mandatory flour fortification in large roller mills. • Promotion and support for Maternal, Infant, and Young Children Nutrition (MIYCN)	Scale-up programmes: • Integrated Management of Acute Malnutrition (IMAM) • Micronutrient Powder (MNP) distribution integrating with infant and young child feeding (IYCF) and care • School Health and Nutrition Programme • Vitamin A supplementation to address the low coverage in 6–11month olds
Small scale interventions: Maternal and Child Health and Nutrition (MCHN) Program–6 districts	

4.3.4 Objectives of National Nutrition Programme for health sector:

The overall objective of the national nutrition programme from the health sector is “to enhance nutritional well-being, contribute to reduce child and maternal mortality and equitable human development”.

According to the national Nutrition policy and Strategy 2004, the specific objectives of national nutrition programme are as follows:

- To reduce protein-energy malnutrition in children under 5 years of age and reproductive aged women
- To reduce the prevalence IDA of anaemia among women and children
- To eliminate iodine deficiency disorders and sustain the elimination
- To eliminate vitamin A deficiency and sustain the elimination
- To reduce the infestation of intestinal worms among children and pregnant women
- To reduce the prevalence of low birth weight
- To improve household food security to ensure that all people can have adequate access, availability and utilization of food needed for healthy life
- To promote the practice of good dietary habits to improve the nutritional status of all people
- To prevent and control infectious diseases to improve nutritional status and reduce child mortality
- To control the incidence of life-style related diseases (coronary artery disease, hypertension, tobacco and smoke related diseases, cancer, diabetes, dyslipidaemia, etc)
- To improve health and nutritional status of school children
- To reduce the critical risk of malnutrition and life during exceptionally difficult circumstances
- To strengthen the system for analysing, monitoring and evaluating the nutrition situation

4.3.5 Targets

4.3.5.1 Current Global Nutrition Targets and Nepal's Status

a. Sustainable Development Goal

Nepal has developed Sustainable Goal Road Map and set the targets. Without adequate and sustained investments in good nutrition, the SDGs will not be realised. The ambition to 'End hunger, achieve food security and improved nutrition and promote sustainable agriculture' is captured in SDG 2, however, at least 12 of the 17 Goals contain indicators that are highly relevant to nutrition. Similarly, in 2012, the World Health Assembly Resolution 65.6 endorsed a Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition, which specified six global nutrition targets for 2025. Based on the SDG and nutrition targets set from Global Health Assembly for nutrition, Nepal has developed its nutrition targets to achieve by 2030 as follows:

Table 4.3.5.1.1: Nepal's Nutrition Targets and Status Against WHA and SDG Targets

SN	Indicators	Situation in Nepal		SDGs Target (2030) for Nepal
		2011	2016	
1	Reduction in the number of children under - 5 who are stunted	40.5%	35.8%	15.0%
2	(a) Reduction of anemia among WRA	35.0%	40.8%	10.0%
	(b) Reduction of anemia among Children >5	46.2%	52.7%	10.0%
3	Reduction in low birth weight	12.1%	12.3%	<5%
4	Ensure that there is no increase in childhood overweight	1.4%	1.2%	<1%
5	Increase rate of exclusive breastfeeding in the first 6 months	69.6%	66.1%	>90%
6	Reduce and maintain childhood wasting	10.9%	9.7%	<5.0%

4.3.5.2 National Nutritional Status and Targets

National Planning as the lead and coordinating agency for both nutrition specific and sensitive interventions of Nepal, collects, compiles and interprets the progress of the interventions against nutrition specific, sensitive interventions and enabling environment. MSNP-II has set the targets from 2018 to 2022 and making its links with WHA targets 2025 and SDG targets 2030. Therefore, the current nutrition status as per the set targets for MSNP II, the status of nutrition in Nepal is as follows:

Table 4.3.5.2.1: Nepal's Progress Against the MSNP 2 Targets (2001–2016)

Indicators	Status (%)				Target (%)		
	NDHS 2001	NDHS 2006	NDHS 2011	NDHS 2016	MSNP 2022	WHA 2025	SDG 2030
Stunting among U5 children	57	49	41	36	28	24	15
Wasting among U5 children	11	13	11	10	7	<5	4
Underweight among U5 children	43	39	29	27	20	15	10
Percentage of LBW	-	14	12	12	10	≤1.4	≤1.4
Exclusive breastfed	-	53	70	66	80	85	90
Fed according to recommended IYCF practices	-	-	24	36	60	70	80
Over-weight and obesity among U5 children	-	-	-	2.1	1.4	1	<1
Anaemia among U5 children	-	48	46	53	28	20	<15
Anaemia among children under 6-23 months	-	78	69	68	-	60	<50
Anaemia among women (15-49)	-	36	35	41	24	20	<15
Anaemia among pregnant women	-	42	48	46	-	35	<25
Anaemia in adolescent women (15-19)	-	39	38.5	43.6	25*	35	<25
Body mass index (<18.5kg/m ²) among women	26	24	18.2	17	12	8	<5
overweight or obese among women	-	9	14	22	18	15	<12
Anaemia in adolescent women for 10-19 years aged			38.5	43.6	-	-	<15

4.3.6 Programme strategies

The overall strategies for improving nutrition in Nepal are i) the promotion of a food based-approach, ii) food fortification, iii) the supplementation of foods and iv) the promotion of public health measures. The specific nutrition strategies are listed in Box 4.3.6.1

Box 4.3.6.1: Specific strategies to improve nutrition in Nepal	
Control of protein energy malnutrition (PEM) - Promote breastfeeding within one hour of birth and avoid pre-lacteal feeding. - Promote exclusive breastfeeding for first six months and the timely introduction of complementary food. - Ensure continuation of breastfeeding for at least 2 years and the	Household food security - Promote kitchen garden and agricultural skills. - Promote raising of poultry, fish and livestock for household consumption. - Inform community people how to store and preserve family food. - Improve technical knowledge of food processing and preservation.

introduction of appropriate complementary feeding after 6 months. • Strengthen the capacity of health workers and medical professionals for nutrition and breastfeeding management and counselling. • Improve knowledge and skills of health workers on growth monitoring and promotion and nutrition counselling • Strengthen the system of growth monitoring and its supervision and monitoring. • Promote to use of appropriate locally available complementary foods. • Increase awareness on the importance of appropriate and adequate nutrition for children and pregnant and lactating mothers. • Strengthen the knowledge of health personnel on the dietary and clinical management of severely malnourished children. • Distribute fortified foods to pregnant and lactating women and children aged 6 to 23 months in food deficient areas. • Improve maternal and adolescent nutrition and low birth weight through improved maternal nutrition. • Create awareness of the importance of additional dietary intake during pregnancy and lactation. • Strengthen nutrition education and counselling mechanism. Control of iron deficiency anaemia (IDA) • Advocate to policy makers to promote dietary diversity. • Iron folic acid supplementation for pregnant and post-partum mothers. • Iron fortification of wheat flour at roller mills. • Intermittent iron folic acid	• Promote women's group for income generating activities. Improved dietary practices • Conduct a study to clarify the problems of culturally-related dietary habits • Promote nutrition education and advocate for good diets and dietary habits. • Develop and strengthen programmes for behaviour change to improve dietary habits. • Strengthen nutritional education and advocacy activities to eliminate food taboos that affect nutritional status. • Promote the household food security programme. Infectious disease prevention and control • Promote knowledge, attitudes and practices that will prevent infectious diseases. • Ensure access to appropriate health services. • Improve nutritional status to increase resistance against infectious disease • Improve safe water supplies, sanitation and housing conditions. • Improve food hygiene. School Health and Nutrition Programme • Build capacity of policy and working level stakeholders. • The biannual distribution of deworming tablets to grade 1 to 10 school children. • Celebrate School Health and Nutrition (SHN) week in June every year to raise awareness on importance nutrition at the community level through school children and health workers. • Distribute first aid kits to public schools. • Introduce child-to-child and child-to-parent approaches. Integrated management of acute malnutrition • Build capacity of health workers for the management of acute malnutrition and FCHVs on screening of under five years children, refer the children with severe

supplementation for adolescent girls. • Multiple micronutrient supplementation for children aged 6-23 months. • Create awareness of importance of iron in nutrition, promote consumption of iron rich foods and promote diverse daily diets. • Control parasitic infestation among nutritionally vulnerable groups through deworming pregnant women and children aged 12-23 months. Control of iodine deficiency disorders • The universal iodization of salt. • Strengthen implementation of the Iodized Salt Act, 2055 to ensure that all edible salt is iodized. • The social marketing of certified two-child logo iodized salt. • Ensure the systematic monitoring of iodized salt. • Increase the accessibility and market share of iodized packet salt with the two-child logo. • Create awareness about the importance of using iodized salt to control iodine deficiency disorder (IDD) through social marketing campaign. Control of vitamin A deficiency • The biannual supplementation of high dose vitamin A capsules to 6-59-month olds. • Post-partum vitamin A supplementation for mothers within 42 days of delivery. • Strengthen implementation of vitamin A treatment protocol for severe malnutrition, persistent diarrhoea, measles and xerophthalmia. • Nutrition education to promote dietary diversification and consumption of vitamin A rich foods.	acute malnutrition to appropriate facility for therapeutic treatment and care and counselling services for the prevention of acute malnutrition. • Establish and implement the key parts of the IMAM programme: community mobilization, inpatient therapeutic care, outpatient therapeutic care, management of complications of severe acute malnutrition and management of MAM. • Implement the IMAM programme following four key principles such as; maximum coverage & access, timeliness of service provision, appropriate medical and therapeutic care and care as long as it is needed. • Integrate the management of acute malnutrition across sectors to ensure that treatment is linked to support for rehabilitating cases and to wider malnutrition prevention programme and services. • Support and promote IYCF, water, sanitation and hygiene (WASH), early childhood development, social protection and child health and care along with the management of acute malnutrition. • Promote the IMAM programme as the bridge between emergency and development programmes. • The supportive supervision and monitoring of IMAM programme activities. • Harmonize the community and facility-based management of acute malnutrition. • Strengthen the coordination and capacity of nutrition rehabilitation homes. Nutrition in emergencies • Establish and strengthen effective leadership for nutrition cluster interagency coordination, with links to other clusters coordination mechanisms on critical inter-sectoral issues. • Initiate nutritional assessment and surveillance systems and/or reinforced for humanitarian assessment and information

• Ensure the systematic monitoring of iodized salt. • Increase the accessibility and market share of iodized packet salt with the two-child logo. • Create awareness about the importance of using iodized salt to control iodine deficiency disorder (IDD) through social marketing campaign. Control of vitamin A deficiency • The biannual supplementation of high dose vitamin A capsules to 6-59-month olds. • Post-partum vitamin A supplementation for mothers within 42 days of delivery. • Strengthen implementation of vitamin A treatment protocol for severe malnutrition, persistent diarrhoea, measles and xerophthalmia. • Nutrition education to promote dietary diversification and consumption of vitamin A rich foods. • Ensuring the availability of vitamin, A capsules at health facilities. • Increase awareness of importance of vitamin A supplementation. • The biannual distribution of vitamin A capsules to 6 to 59-month olds through FCHVs. • Advocate for increased home production, consumption and preservation of vitamin A rich foods. • Strengthen the use of the vitamin A Treatment protocol. • Promote the consumption of vitamin A rich foods and a balanced diet through nutrition education. • Provide vitamin A capsules (200,000 IU) to postpartum mothers through healthcare facilities and community volunteers.	services. • Support and promote IYCF, water, sanitation and hygiene (WASH), early childhood development, social protection and child health and care along with the management of acute malnutrition. • Promote the IMAM programme as the bridge between emergency and development programmes. • The supportive supervision and monitoring of IMAM programme activities. • Harmonize the community and facility-based management of acute malnutrition. • Strengthen the coordination and capacity of nutrition rehabilitation homes. Nutrition in emergencies • Establish and strengthen effective leadership for nutrition cluster interagency coordination, with links to other clusters coordination mechanisms on critical inter-sectoral issues. • Initiate nutritional assessment and surveillance systems and/or reinforced for humanitarian assessment and information management. • Build adequate capacity of nutrition cluster members, partners, health workers, FCHVs and relevant stakeholders for nutrition in emergency preparedness and response and recovery actions • Support for appropriate maternal, infant and young child feeding (IYCF) and care to be accessed by affected women and children. • Ensure access to appropriate management and care services for the children and women with acute malnutrition. • Ensure access to micronutrients from fortified foods, supplements or multiple-micronutrient for children and women. • Ensure access to relevant information about nutrition programme activities for Children and women.

Low birth weight • Reduce maternal malnutrition by preventing PEM, VAD, IDD and IDA. • Reduce the workloads of pregnant women. • Increase awareness of the risks of smoking and alcohol to pregnant women. • Increase awareness of risks of early pregnancy to infant and maternal health. • Promote activities for nutrition monitoring and counselling at antenatal clinics.	Lifestyle related diseases • Create awareness among adults about the importance of maintaining good dietary habits. • Develop the capacity for nutritional counselling at health facilities. • Create awareness among adolescents and adults about the importance of controlling smoking and body weight. • Create awareness to increase physical activity and improve stress management.

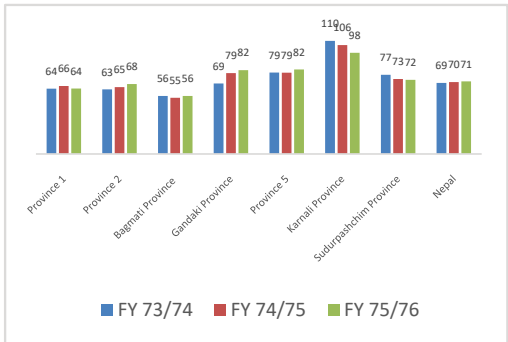
4.3.7 Major achievements

4.3.7.1 Growth monitoring and promotion

Monitoring the growth of children less than two years of age helps prevent and control protein-energy malnutrition and provides the opportunity for taking preventive and curative actions. Health workers at all public health facilities monitor the growth of children once a month using the growth monitoring card that is based on WHO’s new growth standards.

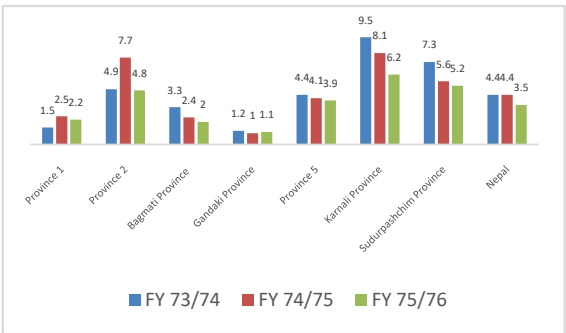
Growth Monitoring Status, FY 2075/76 (2018/19)

Figure 4.3.7.1.1: Percentage of children aged 0-23 months registered for growth monitoring



Source: HMIS/MD/DoHS

Fig 4.3.7.1.2: Percentage of children 0-23 months registered for growth monitoring who were underweight



Source: HMIS/MD/DoHS

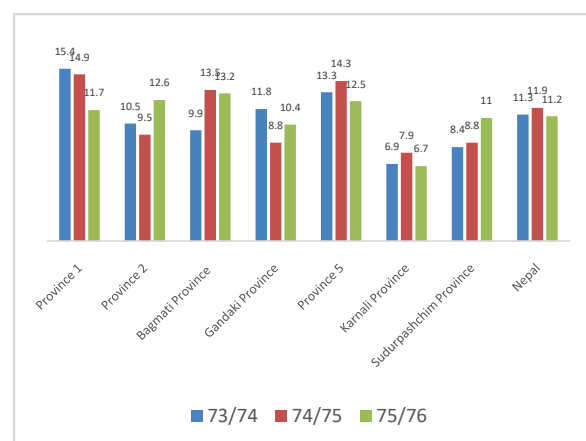
In FY 2075/76, the percentage of children age 0-23 months registered for growth monitoring is 71 percent with increased in 1 percent from last fiscal year. In FY 75/76, the highest coverage on growth monitoring is in Karnali province i.e. 98 percent and lowest coverage is in Bagmati Province i.e. 56 percent. In these FY 75/76, out of total children who attended for growth monitoring session, 3.5 percent were suffering from underweight.

In FY 2075/76, among 71 percent, 3.5 percent of 0-23 months children were reported as

underweight at national level. According to the information, the highest proportion (6.2%) of underweight children are in Karnali province followed by Sudur Paschim Province 7 (6.2%) while the least is in Gandaki Province (1.1%)

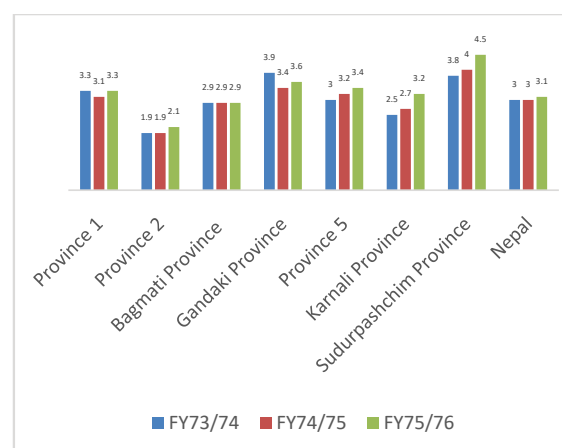
(Figure 4.3.7.1.1 and 4.3.7.1.2).

Figure 4.3.7.1.3: Percentage of new-borns with low birth weight (<2.5 kg) among total delivery by health workers



Source: HMIS

Figure 4.3.7.1.4: Average no. of growth monitoring visits per child (0–23 months)



Source: HMIS

Nationally the percentage of new-born with low birth weight (< 2.5 kg) is 11.2 in these FY 2075/2076 while in last fiscal year also it was FY 74/75 is 11.9. As far as provinces was concerned in these fiscal year Bagmati province has the highest percentage of new-born with low birth weight i.e.13.2 percent and Karnali Province has the lowest i.e.6.7 percent of new-born with low birth weight.

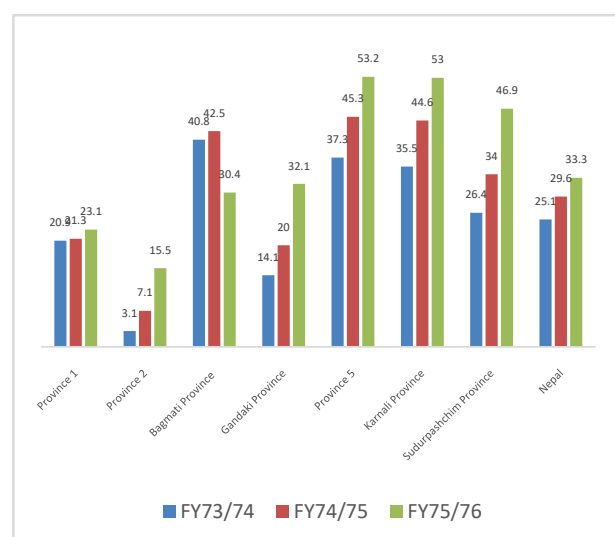
Nationally, there was an average of 3 visits per child in FY 2073/74, FY 2074/75 but in FY 2075/76, the average visit 3.1. As far as provinces are concerned in these FY2075/76, the Province number 2 has the lowest average growth monitoring visits which is 2.1 and highest in Sudurpaschim province which is 4.2. (Figure 4.3.7.1.3 and 4.3.7.1.4).

4.3.7.2 Infant and young child feeding

Appropriate feeding and care practices for infant and young children are essential to enhance child survival, growth and development. The infant and young child feeding (IYCF) and practices include early initiation of breast feeding within an hour of child birth, exclusive breastfeeding for six months and providing nutritionally adequate and appropriate complementary feeding starting from six months with continued breastfeeding up to two years of age or beyond. Improving care practices related to IYCF is a priority strategy of MoHP. The IYCF programme has been ongoing to all 77 districts from FY 2072/73.

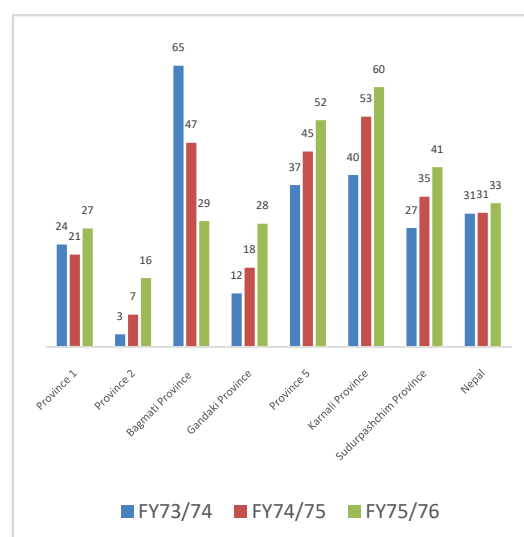
IYCF is also linked with the distribution of micro-nutrient powder (Baal Vita) to 6-23 months children in 46 districts and child cash grants (CCG) in 14 districts. However, more effective IYCF counselling and monitoring mechanisms are needed for these programmes.

Figure 4.3.7.2.1: Percentage of children aged 0–6-months olds registered for growth monitoring who were exclusively breastfed for their first six months



Source HMIS

Figure 4.3.7.2.2: Percentage of children aged 6–months old registered for growth monitoring who had received solid, semi-solid or soft foods



Source HMIS

There is a large provincial difference in the children aged 0–6 months who registered for growth monitoring and were exclusively breastfed in their first six months age. In FY 2075/76, 33.3 percent of these children nationwide were exclusively breastfed which had increased in comparison to last two years. 53 percent of 0–6-month old children were registered for growth monitoring were exclusively breastfed for their first six month of province 5 whereas only 15 percent the similar age groupware exclusive breastfed in province 2 (Figure 4.3.7.2.1). The national average is 33.3 percent, which is much lesser than the 2016 Nepal Demographic and Health Survey (NDHS) figure i.e. 66 percent.

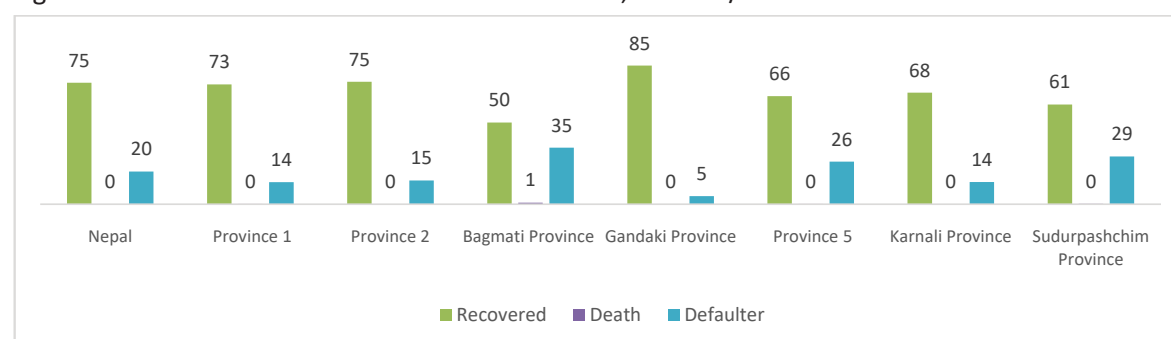
The proportion of 6–8 months old children registered for growth monitoring who received complementary foods varied in FY 2075/76. About 16 percent of these children in the province 2 were registered for growth monitoring who received complementary feeding whereas 60 percent of same age group in the Bagmati province (Figure 4.3.7.2.2). Nationally, only 33 percent of these children received complementary food which is much lower than the NDHS 2016 figure of 84 percent. This may be assumed as less recording and reporting from primary reporting centres. Timely introduction of complementary feeding and the consequent need to provide appropriate counselling to mothers and caregivers improve the feeding practices.

4.3.7.3 Integrated management of acute malnutrition

The Integrated Management of Acute Malnutrition (IMAM) Programme (previously known as Community based Management of Acute Malnutrition [CMAM] programme) provides the treatment of the children with Severe Acute Malnutrition (SAM) aged 0–59 months through inpatient and outpatient treatment services at facility and community levels. This programme was piloted in 2009/010 in five districts namely Achham, Kanchanpur, Mugu, Bardiya and Jajarkot. After pilot evaluation in 2011/012, this programme was shifted from CMAM to IMAM programme and gradually scaled up throughout the country covering many more districts. In the first phase, IMAM was scaled up to 11 districts in 2013 from 6 districts namely Achham, Kanchanpur, Bardiya, Jajarkot, Jumla, Mugu, Kapilbastu, Sarlahi, Dhanusha, Saptari and Okhaldhunga and in 2015, it was further scaled up to 14 earthquake affected districts such as; Bhaktapur, Dhading, Dolakha, Gorkha,

Kathmandu, Kavre, Lalitpur, Makwanpur, Nuwakot, okhaldunga, Ramechhap, Rasuwa, Sindhuli, Sindhupalanchowk). In 2016, to address the nutrition impacts of droughts emergencies, the programme was further scaled up to 7 additional districts namely; Kalikot, Humla, Dolpa, Bajhang, Bajura, Baitadi, Dadeldhura, Parsa. Likewise, in 2017, the programme was scaled up to Doti, Rukum east and West, Nawalparasi east and west, Mahottari, Khotang and Panchthar districts. Due to massive flood in Terai in 2017, it was again scaled up to Jhapa, Morang, Sunsari, Siraha, Rautahat, Bara, Kailali, Dang and Banke districts. In the meantime, the program was also implemented in Myagdi, Sankhuwasabha, Rupandehi, Khotang, Udaypur, Chitwan etc. In Chitwan, the program was implemented in only few places to address the issues of SAM children in the Chepang communities. In running fiscal years the program has been scaled up in Darchula district. Along with MIYCN promotion and support, IMAM aims to integrate nutrition support across health, early childhood development, WASH and social protection sectors for the continued rehabilitation of cases and to widen malnutrition prevention programme and services. The programme also acts as a bridge between emergency and development nutrition interventions.

Figure 4.3.7.3.1: Province Wise IMAM Performance, FY 2075/76



Source: HMIS/MD, DoHS

In FY 2075/76, total 12,139 children of 0 months to 5 years with SAM admitted in outpatient and inpatient therapeutic centres. Among them, 14,240 were discharged. Among all discharged SAM cases, 75 percent were recovered, less than 1 percent died and 20 percent were defaulter. The sphere standard for IMAM program is (recovery rate >75 percent, defaulter rate <15 percent and death rate <10 percent). Figure 4.3.7 explains about overall performance of IMAM programme of Nepal.

4.3.7.4 Nutrition rehabilitation homes

Nutrition Rehabilitation Homes (NRH) are the facility based managed of severe acute malnutrition integrating with the integrating with hospital services. In Nepal, these NRH are associated with primary, secondary and tertiary level hospitals. The first Nutrition Rehabilitation Home (NRH) was established in 1998 in Kathmandu aiming for the reduction of child mortality caused by malnutrition through inpatient rehabilitation of severe acute malnutrition among the children under five years of age. Since then, NRH has been scaled-up in different places across Nepal. The NRH not only treat and manage severe acute malnutrition with inpatient service, but also provide nutrition education and counselling to the guardians/parents for the management of moderate acute malnutrition as well as good nutrition and health care of their children. In FY 2075/76, total 2,277 children under five years with severe acute malnutrition (SAM) were admitted in the 19 NRH and among them 2,244 children were recovered discharged. Those not recovered were referred to the tertiary health facilities for advance treatment. Along with the treatment of children, 30,776 mothers who came to the NRH were counseled in the NRH and in the hospital OPD. In the NRH, mothers are educated and counselled on the dietary management for young children and maintain the enhanced nutrition

status of SAM children at home. In FY 2075/76, following table shows the performance of Nutrition Rehabilitation Homes in Nepal:

Table 4.3.2: Admission and Discharge Status of Nutrition Rehabilitation Homes, 2075/76 Province Wise

Province	Total admission	Male	Female	Less than five years	More than or equal to five years	Total Discharge	Counseling to mother (inhouse and Hosp. OPD)
Province 1	210	100	110	207	3	209	1001
Province 2	589	286	303	571	19	572	9951
Bagmati Province	490	246	244	418	72	488	15516
Province 4	305	141	164	301	4	299	887
Gandaki Province	178	94	84	177	1	178	365
Karnali Province	164	94	70	157	62	157	470
Sudurpaschim Province	290	141	149	60	230	290	2436
Nepal	2226	1102	1124	1891	391	2193	30626

Source: Nepal Youth Foundation (NYF)/Respective NRH

Table 4.3.2: Admission and Discharge Status of Nutrition Rehabilitation Homes, 2075/76 District Wise

S.N	NRH	Total admission	Male	Female	Less than five years	More than or equal to five years	Total Discharge	Counseling to mother (inhouse and Hosp. OPD)
1	Surkhet	103	63	40	99	4	103	270
2	Kanchanpur	143	66	77	35	108	142	1798
3	Rajbiraj	171	76	95	168	3	171	8851
4	Pokhara	139	65	74	139	0	139	327
5	Nepalgunj	178	94	84	177	1	178	365
6	Dailekh	61	31	30	58	58	54	200
7	Kathmandu	281	140	141	209	72	275	1101
8	Bharatpur	153	80	73	153	0	157	14145
9	Bhadrapur	119	54	64	119	0	118	831
10	Dhangadi	147	75	72	25	122	149	638
11	Birgunj	215	109	106	204	11	207	890
12	Janakpur	203	101	102	199	5	194	210
13	Butwal	115	53	62	115	0	88	510
14	Baglung	100	46	54	96	4	94	255
15	Biratnagar	91	46	45	88	3	91	170
16	Dadeldhura	81	42	39	70	11	72	148
17	Parbat	66	30	36	66	0	66	305
18	Sindhupalanchowk	56	26	30	56	0	56	270

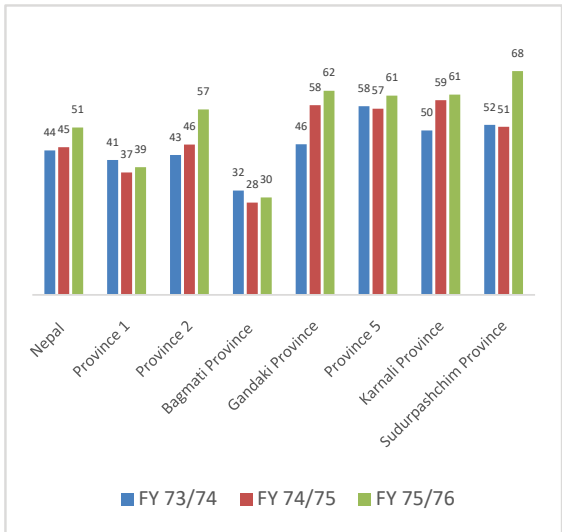
Source: Nepal Youth Foundation (NYF)/Respective NRH

4.3.7.5 Prevention and control of iron deficiency anaemia

MoHP has been providing iron folic acid (IFA) supplement to pregnant and post-partum women since 1998 to reduce maternal anaemia. The protocol is to provide 60 mg elemental iron and 400

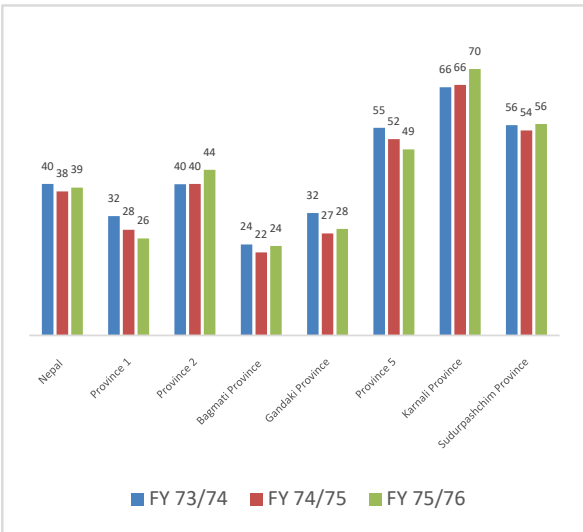
microgram folic acid to pregnant women for 225 days from their second trimester. To improve access and utilization of IFA supplements, the Intensification of Maternal and Neonatal Micronutrient Programme (IMNMP) started IFA supplementation through Female Community Health Volunteers (FCHVs) in 2003. This programme covered all 75 districts since 2014 and now 77 districts. The intensification programme improved coverage, although compliance with taking 180 tablets during pregnancy and 45 tablets post-partum remains an issue.

Figure 4.3.7.5.1: Percentage of Pregnant and Lactating Women receiving 180 IFA tablets



Source HMIS

Figure 4.3.7.5.2: Percentage of Post-Partum Women Receiving 45 IFA tablets



Source HMIS

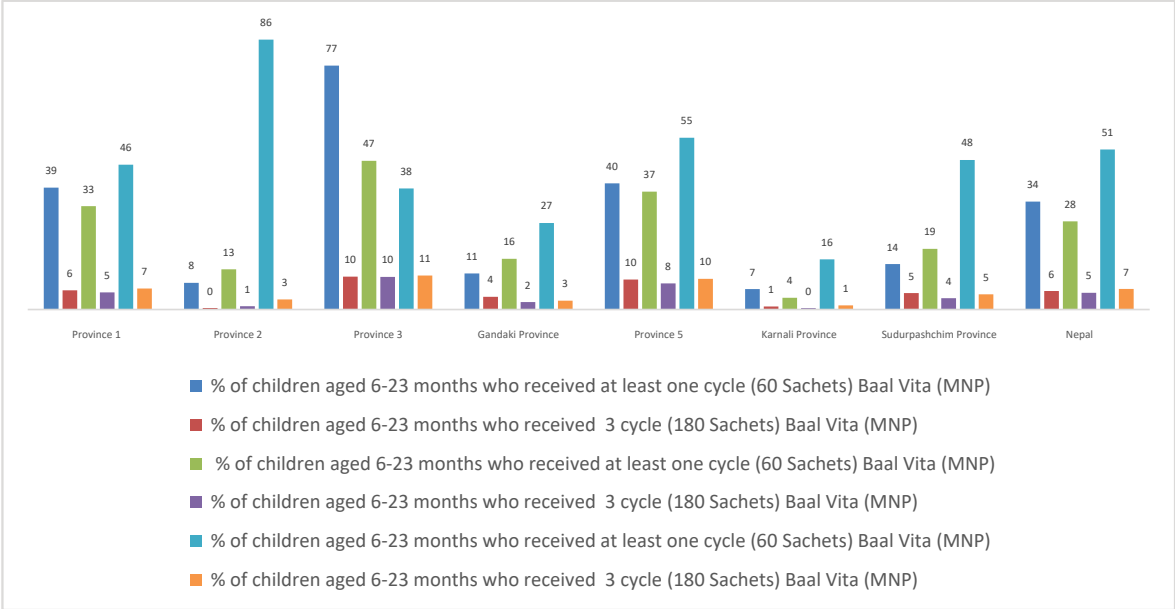
In FY 2075/2076, Percentage of pregnant and lactating women receiving 180 IFA tablets is 51 percent which seems to decrease in comparison to other Fiscal years. In terms of province the highest coverage is in Sudurpaschim Province which is 68 percent whereas the lowest is in Bagmati Province which is 30 Percent. Whereas in the Fiscal years 75/76, percentage of post-partum women receiving 45 IFA tablets is 40 percent only which also seem high difference between the pregnant women receiving 180 iron folic acid tablets and post-partum women receiving IFA tablets. In terms of province also there is huge differences regarding pregnant women and post-partum women receiving iron folic acid tablets.

4.3.7.6 Integrated Infant and Young Child Feeding and Micro-Nutrient Powder Community Promotion Programme

The NDHS 2006 found that 78 percent of 6-23 months old children were anaemic, it is assumed that most of them are due to poor IYCF practices. MoHP subsequently endorsed a Plan of Action of micro-nutrient sprinkles as the key interventions to address anaemia in young children integrating with IYCF practices. In 2007, the National Nutrition Priority Workshop endorsed a strategy to pilot multiple micro-nutrient sprinkles supplementation as a preventive measure against different micro-nutrient deficiency disorders among the children aged 6-23 months old. In June 2009, MoHP piloted the home fortification of complementary food with MNPs for 6-23 months olds in six districts namely Gorkha, Rasuwa, Makwanpur, Parsa, Sunsari and Morang integrating with the Community IYCF Programme. The successful pilot programme led to MoHP expanding it to an additional nine districts in 2012.

The promotion and supplementation of MNPs is linked with improving complementary feeding practices. Mothers and caregivers are counselled to introduce complementary foods at six months of age focusing on age-appropriate feeding frequency, improving dietary quality of complementary foods by making them nutrient and calorie dense, as well as hand washing with soap before handling the food and feeding the child. Mothers and caregivers are trained to prepare “poshilo jaulo” (pulses, rice and green vegetables cooked in oil) and ‘lito’ (mixture of blended and roasted cereal and legume flours). A feasibility study of the programme in 2009 found strong community acceptance with a very high coverage and compliance on the use of MNP in the pilot districts. Integrating of IYCF with MNPs has contributed to significant improvement in IYCF practices. The prevalence of anemia among children age 6-23 months has decreased to 68% (NDHS, 2016) from 78 percent (NDHS 2011). However, it still need for continuous effort as the coverage of the program is not very promising.

Table 4.3.7.6.1: Micronutrient Powder (Baal Vita) Distribution Status, 2073/74, 2074/75 and 2075/2076



Source: HMIS/DoHS

In FY 2075/76, 51percent of children aged 6 to 23 months had taken their first dose of multiple micronutrient power (MNP-Baal Vita) and only 7 percent of the children aged 6 to 23 months had received three cycles of baalvita in 46 programme districts. Compared to the first cycle of MNP intake, the third cycle of intake indicating the compliance is drastically low at 7 percent. Therefore, it is important to mention that the coverage of first cycle intake is calculated based on the target population of 6-23 months, while that of thirdcycle is calculated among the children aged 6-23 months who have ever taken MNP. Overall, effective nutrition education, counselling and follow up to the mothers/caretakers is essential to improve coverage as well as compliance with the recommended doses of MNPs

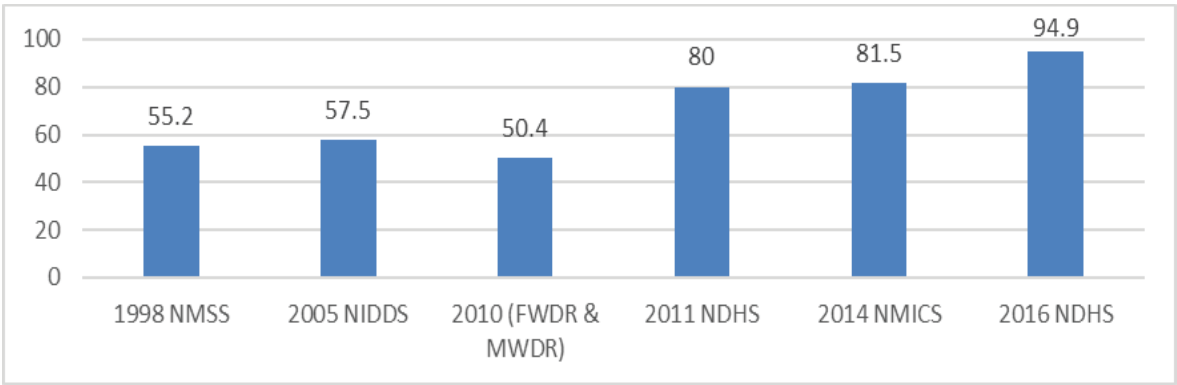
4.3.7.7 Prevention and control of iodine deficiency disorder

MoHP adopted a policy to fortify all edible salt in 1973 to address iodine deficiency disorders (IDD) through universal salt iodization. The Salt Trading Corporation is responsible for the iodine fortification of all edible salt and its distribution, while Ministry of Health and Population (MoHP) isresponsible for policy drive and promoting iodized salt to increase



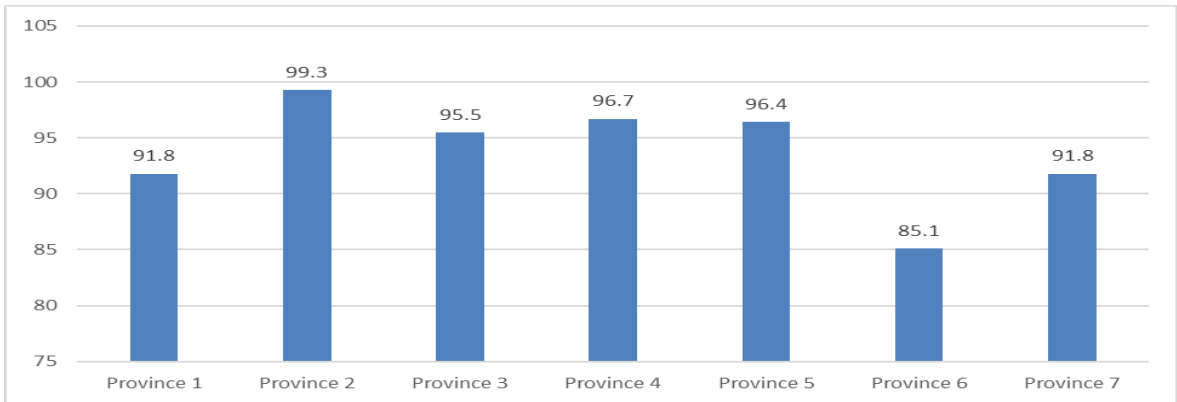
consumption. As per the policy, Government of Nepal uses the Two-Child-Logo packed salt to certify adequately iodized salt and DoHS has been mobilizing the system for social marketing to improve awareness of its use at the household level. National survey reports at different times show an increase in the number of households using adequately iodized salt from 55 percent in 1998 to 95 percent in 2016 (Figure 1.2.6.7.1).

Figure 4.3.7.7.1: Percentage of Households Using Iodized Salt



There are, disparities in the use of iodized salt. The NDHS 2016 found that the Province number 2 have the highest coverage (99.3 percent), while the Province 6 had the lowest (85.1 percent). It seems, there is a need to cover all houses in the low coverage provinces to make it <90 per cent household utilization of adequately iodised salt. To promote utilization of adequately iodised salt at household level, MOHP celebrated iodine month in February 2019 in all 77 districts. The celebration of iodine months raised awareness on the use of two-child-logo salt for optimum iodine intake to combat iodine deficiency disorders. (Figure 4.3.7.7.2).

Figure 4.3.7.7.2: Percentage of Households Using Adequately Iodized Salt

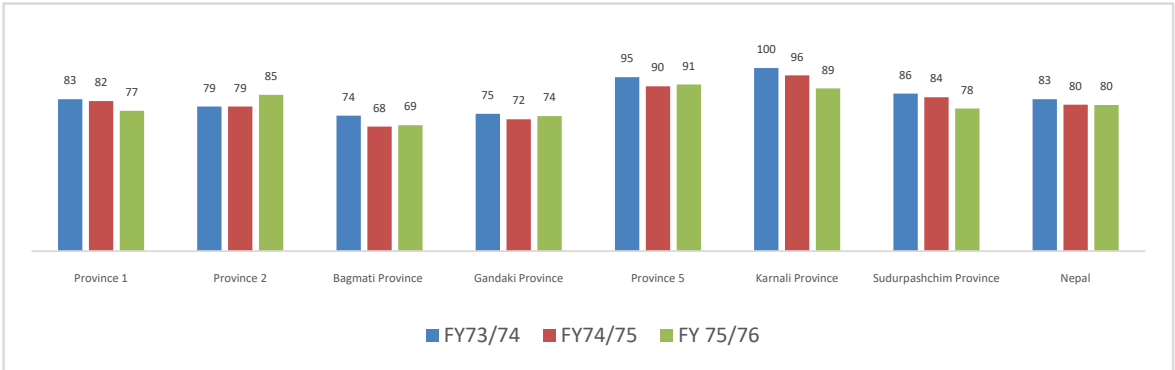


4.3.7.8 Control of vitamin A deficiency disorders

The government initiated the National Vitamin A Programme in 1993 to prevent and control of vitamin A deficiency disorders of the children aged 6-59 months and reduce child mortality associated with vitamin A deficiency disorders. Vitamin A supplementation in Nepal has been ongoing as bi-annual supplementation targeting to all 6-59 months children and coverage of supplementation is more than 80 per cent every time for last five plus years. Therefore, this

programme is recognized as a global public health success story. The programme initially covered 8 districts and was scaled up to cover nationwide to all 77 districts since 2002. FCHVs distribute the capsules of vitamin A to the targeted children twice a year through a campaign-as vitamin A campaign in Kartik (October) and Baisakh (April) every year.

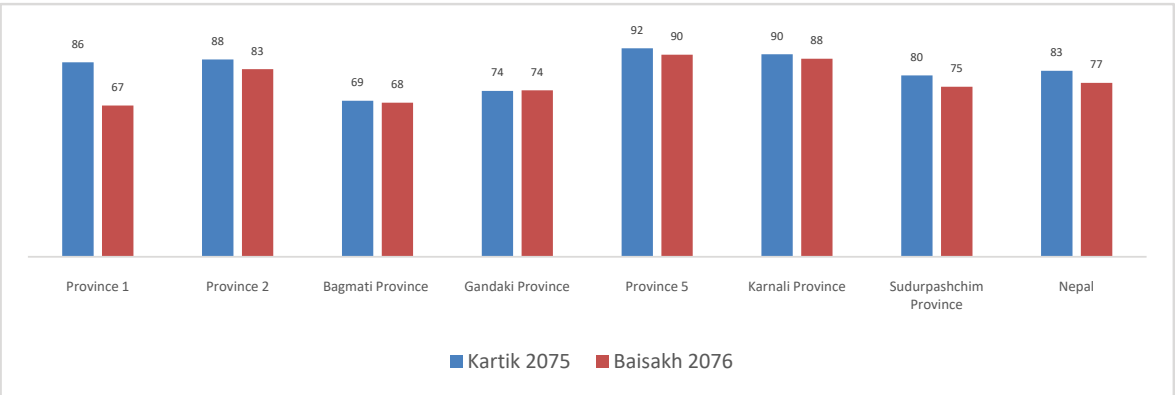
Figure 4.3.7.8.1: Trend & Coverage of Vitamin A Supplementation to Children Aged 6-59 Months



Source: HMIS

The overall national coverage of vitamin A supplementation is around 80 percent every year among the children aged 6-59 months. While in FY 2075/2076 coverage by provinces varies with province number five with higher proportion of children receiving vitamin A supplementation while Bagmati Province has the lowest coverage of 69 percentage.

Figure 4.3.7.8.2: Coverage of Vitamin A Supplementation to Children Aged 6-59 Months by Distribution Round



Source: HMIS

From last fiscal year, the progress on biannual Vitamin A supplementation is presented in Kartik (October) the first Round and in Baishakh (April) the second round. The overall national achievement is about 80 percent among the children aged 6-59 months with 83 percent in Kartik and 77 percent in Baisakh. This is however higher than that of last year for Kartik round. Furthermore, the coverage by provinces varies with Province 5 has higher proportion of children receiving vitamin A supplementation and lower proportions of children receiving it in Bagmati Province.

Figure 4.3.7.8.3: Coverage of Vitamin A Supplementation by Age Groups for Kartik 2075

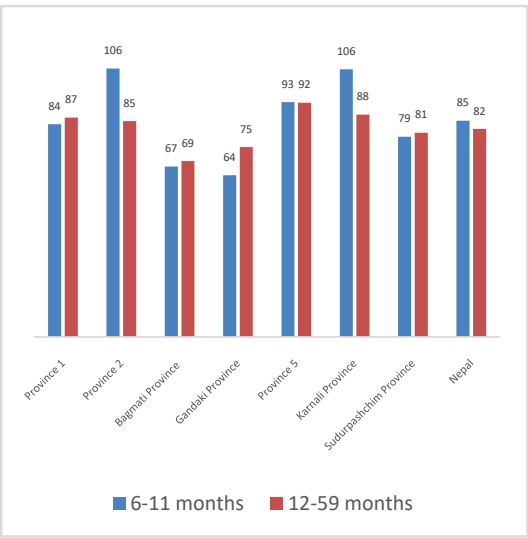
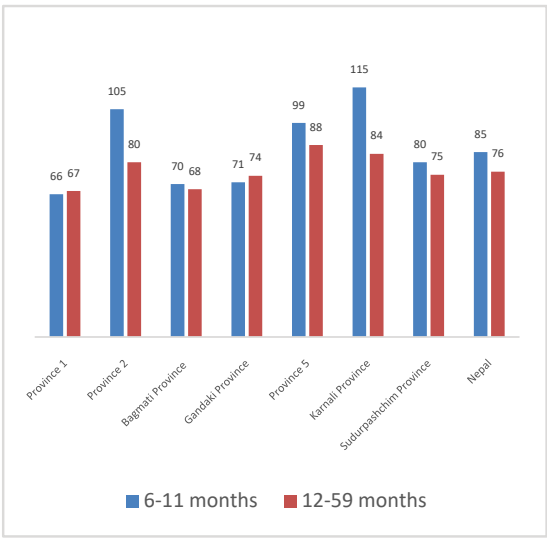


Figure 4.3.7.8.4: Coverage of Vitamin A Supplementation by Age Groups for Baisakh 2076

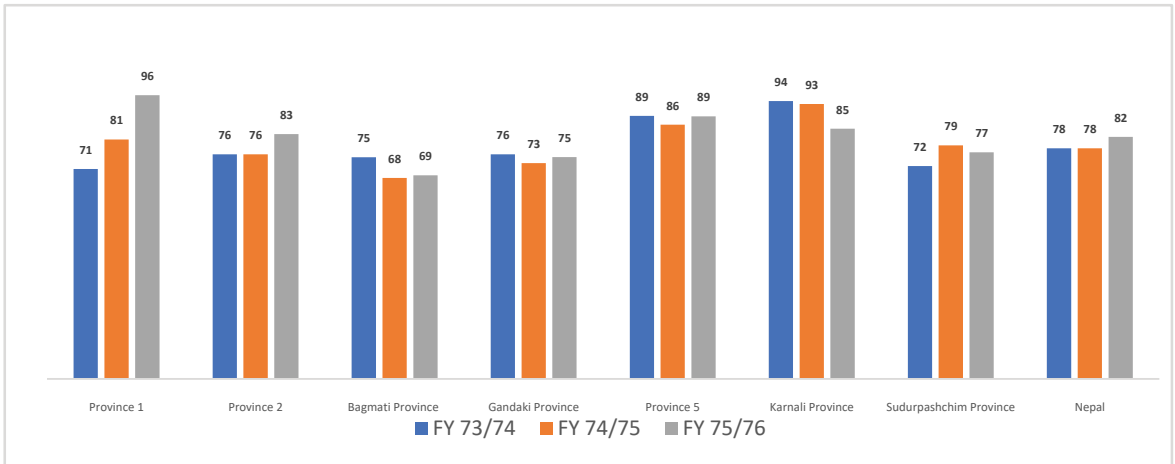


Source: HMIS

4.3.7.9 Biannual Deworming Tablet Distribution to the Children aged 12-59 months

Family Welfare Division is implementing biannual deworming tablets distribution to the children aged 12-59 months aiming to reduce childhood anaemia with control of parasitic infestation through public health measures. This activity is integrated with biannual Vitamin A supplementation to the children aged 6-59 months, which takes place nationally in every ward on first week of Baisakh and Kartik each year. Deworming to the target children was initiated in few districts during the year 2000 integrating with biannual Vitamin A supplementation and with gradual scaling-up, the program was successfully implemented nationwide by the year 2010 integrating with Vitamin -A as Vitamin -A campaign.

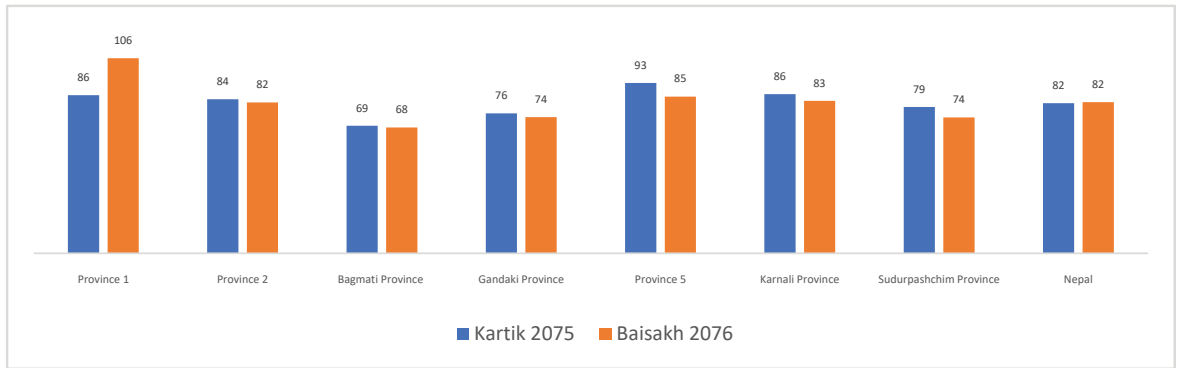
Figure 4.3.7.9.1: Coverage of Deworming Tablets Distribution to the Children Aged 12-59 Months



Source: HMIS/MD, DoHS

As shown in figure 4.3.6.9.1, the national coverage of deworming tablet distribution is 91 percent which is increasing trends for last two fiscal years. For all the provinces, the coverage is higher than 80 percent. All the provinces had improved deworming tablets distribution in the children 12-59 months in comparison with last fiscal years.

Figure 4.3.7.9.2: Round Wise Coverage of Deworming Tablets Distribution to the Children Aged 12-59 Months



Source: HMIS/MD, DoHS

The report is presented separately for Baisakh (April) and Kartik (October) round of FY 2075/076.

4.3.7.10 School Health and Nutrition Programme

The School Health and Nutrition Strategy (SHNS) was developed jointly in 2006 by Ministry of Health and Population (MoHP) and Ministry of Education (MoE) to address the high burden of diseases in school age children. In 2008, a five-year Joint Action Plan (JAP) was endorsed to implement School Health and Nutrition (SHN) Program. The improved use of school-based health and nutrition services, improved access to safe drinking water and sanitation, skill-based health education, community support and an improved policy environment are the core elements of the School Health and Nutrition Programme.

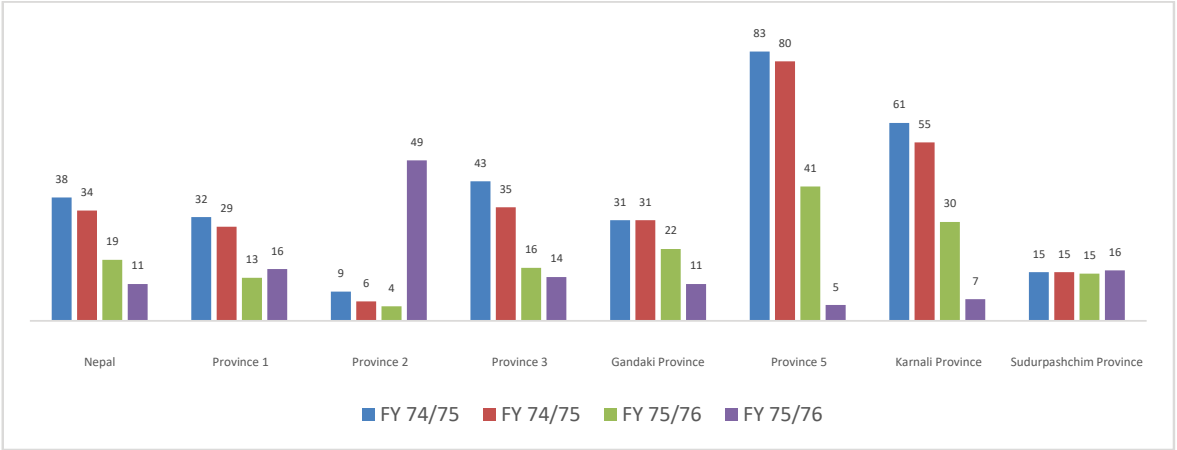
During 2008-2012, government had implemented a pilot SHN programme in primary schools based on the Joint Action Plan in Sindhupalchowk and Syangja districts. This pilot programme has some promising results recommending to scaling up of the program in other districts. With gradual scaling-up, the program has covered all 77 districts since FY 2073/074. The current Joint Action Plan (2071/072 to 2075/76) calls for:

- Annual health screening
- Biannual deworming of Grade 1–10 school children
- A first aid kit box with refilling mechanism in all primary schools
- Hand washing facilities with soap in all schools
- Toilets in all schools
- The use of the new attendance registers in all schools
- Orient school management committees on facilitating health and nutrition activities
- Child club mobilization on health and nutrition issues.

One of the major activities under SHN Program is Biannual School Deworming to all School-aged-children (SAC) that is conducted in first week of Jestha and Mangsir every year. Until FY2072/073, progress in this regard has not been reported in the annual report due to the very

poor, almost no reporting to the system. However, though very low, there is some reporting this FY as presented in the figure 4.3.18 below. As reflected, national coverage of school deworming for FY 2074/075 is 38 percent for girls and 34 percent for boys where as in FY 75/76 is 19 percent for girls and 11 percent for boys.

Figure 4.3.7.10.1 Coverage of School Deworming Tablet Distribution



Source: HMIS/MD, DoHS

4.3.7.11 Adolescent Girls Iron Folic Acid Supplementation

From FY 2072/073, the SHN Program has initiated Weekly Iron Folic Acid (IFA) supplementation to the adolescent girls aged 10-19 years aiming to prevent and control the high burden of Iron Deficiency Anemia among this particular group of population. This activity was piloted in Kathmandu, Dolakha, Khotang, Panchthar, Bhojpur, Saptari, Pyuthan and Kapilvastu in FY 2072/073.

In FY 2073/74, the programme was scaled up to 17 districts namely; Bajura, Bajhang, Doti, Bhaktapur, Rupandehi, Manang, Surkhet, Mahottari, and Bara. Family Welfare Division of DoHS/ MoHP has completed the Training to the concerned officials from all these districts. However, the program was implemented in few districts due to the various reason.

In FY 2074/075, further scaling up of the program was done in additional 24 districts namely; Jajarkot, Rukum East, Rukum West, Dailekh, Bardiya, Nawalparasi East, Nawalparasi West, Baitadi, Achham, Dadeldhura, Rolpa, Dang, Kanchanpur, Dhanusha, Sarlahi, Rautahat, Parsa, Udaypur, Kalikot, Dolpa, Jumla, Mugu and Humla. Likewise, family Welfare Division of DoHS/MoHP has been planning to scale up this programme in additional 12 districts and within three years, the programme will be scaled up to all 77 districts.

Under this component, all the adolescent girls aged 10-19 years are supplemented with weekly Iron Folic Acid tablet biannual basis in Shrawan (Shrwan-Asoj) and Magh (Magh-Chiatria) rounds. In each round, they are provided IFA tablet one tablet every week for 13 weeks. So, each adolescent girl gets a total of 26 IFA tablets in a year.

4.3.7.12 Nutrition in emergencies (NIE)

In addition to the regular nutrition program interventions, Family Welfare Division also provides essential and high-quality services to address the nutrition issues in Emergencies. When an emergency hits by any reasons such as; natural disasters (earthquake, flood, drought, etc.), complex

emergencies(conflicts) or any other causes that highly impacts negatively on overall health, nutrition, and livelihoods of the population, national nutrition cluster led by Family Welfare Division of DoHS/MOHP jointly with UNICEF (co-lead of nutrition cluster) and other nutrition cluster members provides the nutrition in emergency services for the protection of nutrition status of children, pregnant and lactating women. NiE interventions focuses on the pregnant and lactating women (PLWs) and children under five years of age as they are nutritionally the most vulnerable during any type of emergency. Under NiE, following five pillar interventions are implemented in the affected areas of the country.

- Promotion, protection and support to breast feeding of infant and young children aged 0-23 months.
- Promotion of proper complementary feeding to the infant and young children aged 6-23 months.
- Management of moderate acute malnutrition (MAM) among the children aged 6-59 months and among PLWs through targeted supplementary feeding program (TSFP).
- Management of severe acute malnutrition among the children aged 6-59 months through therapeutic feeding.
- Intensification of Micronutrient supplementation for children and women including MNP and vitamin A for children aged 6-59 months, IFA for pregnant and postnatal women.

(a) Small Scale Flood Emergency Response in FY 2075/076:

Nepal experienced continuous rainfall for days starting from 11 July 2019. This triggered widespread flooding and landslides in 35 of the country's 77 districts. Devastating impact from flood and landslide affecting 35 of the country's 77 districts where 98 (62 male and 36 female), 51 (14 girls and 37 boys) number of children who died due to floods and landslides, 29 Number of people missing, 41 Number of people injured, 36,728 Number of households affected, 13,101 Number of households temporarily displaced, 9,984, Number of completely damaged \houses, 19,871 Number of partially damaged houses . Among the affected population, approximately 50,000 are children under 5 years of age and over 100,000 are pregnant and breastfeeding women. With the continued rainfall, lack of essential water, sanitation and hygiene; worsening weather conditions (rain and cold); limited access to nutrition and health services, the situation worsened.

After two weeks of flood, Nutrition cluster conducted rapid nutrition assessment of 6-59 months children by using MUAC tape. Total 5,310 flood affected children aged 6-59 months were assessed out of them 192 children were identified as severe acute malnutrition (4.53%), and 882 children were found as Moderate Acute Malnutrition (16.61%) and Global Acute Malnutrition is 21.14%. the situation was very critical due to very high level global acute malnutrition as well as having many serious aggravating factorssuch as; lack of household food security, lack of IYCF and caring practices, lack of appropriate nutritious foods for infant and young children, pregnant and lactating women and limited health services for the prevention and treatment of childhood illnesses. Due to this substantial increase of incidence and cases of acute malnutrition, nutrition cluster lead by FWD, DOHS/MoHP and co-lead by UNICEF and other nutrition cluster members-initiated interventions to address the nutrition issues as follows:

- Treated 2,248 children with Severe Acute Malnutrition in the eight flood affected districts of Province number 2.
- Initiated IYCF counselling services through FCHVs and MSNP volunteers to the family of G1000D

¹Source: Ministry of Home Affairs <http://drrportal.gov.np/>

- Provided blanket supplementary feeding programme to 28,658 children aged 6-59 months and 9,858 pregnant and lactating women.
- Nutrition cluster BCC working group developed Joint messages on nutrition, health and WASH in three languages (Maithili, Bhojpuri and Nepali) and aired through 50 local FM radios in 8 districts (Nepali-29, Maithili-12, Bojpuri-9) of province 2 and Sunsari and Udayapur of Province number 1.

(b) Bara and Parsa Tornado:

On 31 March 2019 at night, massive storm with strong hurricane hit several places in southern district of Bara and adjoining to Parsa. From the storm, 26 deaths were reported in Bara and one death in Parsa districts due to hurricane and lightning on Sunday night. From the hurricane, about 20 wards of local government were affected. Immediately after this hurricane, nutrition cluster members met together and planned for the response actions. Immediately district-based nutrition cluster was also mobilized along with the UNICEF team from Janakpur, MSNP district coordinators from Bara, Parsa and Rautahat, MSNP volunteers, health workers and FCHVs, the following response actions were implemented:

- Activated eight Outpatient Therapeutic Centers of Bara district are located in the Tornado affected Palikas such as; Kalaiya Hospital, Motairwa Health Post, Bariayarpur Health post, Herdiya PHCC, Piparbatijabdi Health Post, Pheta Health Post, Prasauni health Post and Rampur Health Post. Pheta and Rampur.
- Treated a total 132 Children with Severe acute malnutrition with Ready to Use Therapeutic Food.
- Radio Messages on Infant and Young Child Feeding in emergencies, newborn care, care of pregnant and lactating women was prepared by nutrition cluster and broadcasted from FM radio stations on local language.

(c) Nutrition Cluster preparedness actions:

In nutrition cluster, they are more than 25 members agencies including Government, UN, Donors, INGOs, local NGOs. In FY 2075/076, 9 nutrition cluster meetings were organized by MoHP and UNICEF jointly. Through the nutrition cluster meeting following technical working groups have been formed and activated to provide technical assistance on different aspects of nutrition programme in emergencies:

- IYCF working group
- IMAM working group
- Micro-nutrient working group
- Information management working group
- Assessment working group
- BCC working group

Similarly, following preparedness actions were conducted in FY 2075/076:

- Finalized comprehensive nutrition specific interventions (CNSI) training manual to the health workers and FCHVs and conducted two MTOT in the fiscal year. This training also included nutrition in emergency components as part of capacity building actions.
- Conducted two nutrition in emergency training to the provincial and national stakeholders in Kathmandu where 60 people were trained from provincial health directorate, social development ministries and nutrition cluster members.

- Revised TOR of nutrition cluster
- Developed and endorsed TORs of six nutrition cluster working groups
- Revised nutrition cluster operating guideline
- Prepared/revised three contingency plans to address the issues of nutrition in flood, earthquake and cold wave emergencies
- 4W mapping
- Update the nutrition cluster roster
- Developed three contingency plans

4.3.8: Issues and challenges:

- Adjustment of Health Workers at local government levels not yet completed fully. Therefore, the trained health workers on nutrition programme in many health facilities are not available to implement activities.
- Fiscal procurement of nutrition commodities under offshore procurement still challenging due to difficulty faced in localization of procurement cost estimation and then initiating bidding process.
- Transportation of nutrition commodities and logistic is challenging given that responsibilities are divided into the Federal, Provincial and local Government level. The coordination mechanism in commodity transport has yet to be established
- Despite of high coverage interventions, the quality of the Programme implementation is not satisfactory level.
- Quality improvement (QI) modules on nutrition services is not available to identify critical gaps in the programme and to take corrective action.
- Inter-Ministerial Coordination Mechanism is not functioning well in joint nutrition programme like Adolescent Nutrition Programme.

4.3.8: Lesson learned:

- Initiated nutrition friendly local government mechanism that has developed commitment of local government to eliminate adolescent, maternal and child malnutrition in Nepal within SDG Era.
- Establishment of breastfeeding rooms/corners to promote, support and protect breast feeding has developed awareness on breast feeding among general public, office workers and programme managers; and it is in increasing trends.
- Global SUN GG 2019 provided lesson on; (i) urgent need to work on sustainable food system to face the challenge of high sugary, high fat and savory foods that inviting triple burden of malnutrition. Health sector in coordination with agriculture and food security sector need to lead the food system for nutrition, (ii) despite of high political commitment at all levels, the National Vision sought by MSNP-II is facing challenge on local implementation due to lack of evidence base performance monitoring and reward & penalty system, (iii) financial tracking and expenditure analysis in nutrition is still challenging because the cost of investment in human resource and infrastructure is difficult to estimate in Nepal.
- The indicators profile of HMIS is very heavy in terms of data collection and analysis. Those indicators that are qualitative type requires to have separate mechanism to collect it and then analyse.

4.3.8: Key Priorities for Next Fiscal Year (2077/078):

- Promote MBFHI in all health facilities of 753 municipalities, secondary and tertiary level health

- care centres.
- Roll out of Comprehensive Nutrition Specific Programme (CNSI) package to all 753 municipalities.
- Develop Quality Improvement (QI) module for key interventions in nutrition Programme: e.g. MNP/IYCF, IMAM, Adolescent Nutrition and IFA tablet distribution to pregnant women.
- Promote and apply sustainable food system integrating with infant and young child feeding, adolescent and women nutrition.
- Promote Nutrition Friendly Villages using the framework of Nutrition Friendly Local Governance System.
- Scale up IMAM programme nationwide as a routine health service for the treatment of SAM.
- Endorse for RUTF, F100, F75 and ReSoMal to be a part of national essential drug list of Government of Nepal.
- Scale up MNP/ IYCF programme from 46 districts to 77 districts by December 2022.
- Scale up Adolescent Nutrition Programme from 41 districts to 77 districts.
- Maintain and sustain National Vitamin 'A' programme until Nepal meets the condition to scale back preschool Vitamin 'A' programme.
- Integrate DRR and Climate, Energy and Environment (CEE) within MSNP framework nationwide.
- Improving the capacity consistency and effectiveness of nutrition education in schools.
- Prepare and train teachers and other education staff to help them provide effective nutrition education;
- Work with medical universities and CTEVT in the development of courses in nutrition as part of academic certification and in updating methods courses on how to integrate nutrition in subject-matter areas in the classroom and in materials;
- Establish a framework for future collaborative efforts and partnerships to improve nutrition programme.
- Orient to federal and provincial parliamentarians to make nutrition a big agenda for national development plan.

4.4 Safe Motherhood and Newborn Health

4.2.1 Background

The goal of the National Safe Motherhood Programme is to reduce maternal and neonatal morbidity and mortality and improve maternal and neonatal health through preventive and promotive activities and by addressing avoidable factors that cause death during pregnancy, childbirth and the postpartum period. Evidence suggests that three delays are important factors for maternal and newborn morbidity and mortality in Nepal (delays in seeking care, reaching care and receiving care).

The following major strategies have been adopted to reduce risks during pregnancy and childbirth and address factors associated with mortality and morbidity:

- Promoting birth preparedness and complication readiness including awareness raising and improving preparedness for funds, transport and blood transfusion.
- Expansion of 24 hours birthing facilities alongside Aama Suraksha Programme promotes continuum of care from antenatal care (ANC) to post-natal care (PNC).
- The expansion of 24-hour emergency obstetric care services (basic and comprehensive) at selected health facilities in all districts.

The Safe Motherhood Programme, initiated in 1997 has made significant progress with formulation of safe motherhood policy in 1998. Service coverage has grown along with the development of policies, programmes and protocols. The policy on skilled birth attendants (2006) highlights the importance of skilled birth attendants (SBAs) at all births and embodies the government's commitment to train and deploy doctors, nurses and ANMs with the required skills across the country. Introduction of Aama programme to ensure free service and encourage women for institutional delivery has improved access to institutional deliveries and emergency obstetric care services. The endorsement of the revised National Blood Transfusion Policy (2006) was another significant step for ensuring the availability of safe blood supplies for emergency cases. The main programme strategies are listed in Box 4.4.1.

The Nepal Health Sector Strategy (NHSS) identifies equity and quality of care gaps as areas of concern for achieving the maternal health sustainable development goal (SDG) target, and gives guidance for improving quality of care, equitable distribution of health services and utilisation and universal health coverage with better financing mechanism to reduce financial hardship and out of pocket expenditure for ill health.

Box 4.4.1: Main strategies of the Safe Motherhood Programme

1. Promoting inter-sectoral coordination and collaboration at Federal, Provincial, district and Local levels to ensure commitment and action for promoting safe motherhood with a focus on poor and excluded groups.
2. Strengthening and expanding delivery by skilled birth attendants and providing basic and comprehensive obstetric care services at all levels. The interventions include:
 - developing the infrastructure for delivery and emergency obstetric care;
 - standardizing basic maternity care and emergency obstetric care at appropriate levels of the health care system;
 - strengthening human resource management —training and deployment of advanced skilled birth attendant (ASBA), SBA, anaesthesia assistant and contracting short-term human resources for expansion of services sites;
 - establishing a functional referral system with airlifting for emergency referrals from remote areas, the provision of stretchers in Palika wards and emergency referral funds in all remote districts; and
3. Strengthening community-based awareness on birth preparedness and complication readiness through FCHVs and increasing access to maternal health information and services.
4. Supporting activities that raise the status of women in society.
5. Promoting research on safe motherhood to contribute to improved planning, higher quality services and more cost-effective interventions.

4.2.2 Major activities in 2075/76

Community level maternal and newborn health interventions

Family Welfare Division (FWD) continued to expand and maintain MNH activities at community level including the Birth Preparedness Package (jeevansuraksha flipchart and card) and distribution of matrisurakshachakki (misoprostol) to prevent postpartum haemorrhage (PPH) in home deliveries.

Through FCHV, public health system promotes:

- birth preparedness and complication readiness (preparedness for money, place for delivery, transport and blood donors);
- self-care (food, rest, no smoking and no alcohol) in pregnancy and postpartum periods;
- ANC (Iron supplementation, Td vaccination, deworming tablets), institutional delivery (through SBAs) and PNC (Iron and Vitamin A supplementation);
- essential newborn care; and
- identification of and timely care seeking for danger signs in the pregnancy, delivery, postpartum and newborn periods.

In 2066/67, the government approved PPH education and the distribution of the matrisurakshachakki (MSC) tablets through FCHVs to prevent PPH in home deliveries. For home deliveries, three misoprostol tablets (600 mcg) are handed over to pregnant women by FCHV at 8th month of pregnancy through proper counselling to take immediately after delivery and before the placenta is expelled. Fifty districts were implementing the programme up to 2075/76. Further four district Gorkha, Dolakha, Solukhumbu and Parsa districts, started implementing this program in this fiscal year. Recent NDHS (2016) data shows that only 13 percent of women who gave childbirth without skilled assistance took MSC tablets, this calls for the importance of strengthening this programme as women who delivered at home are likely to be higher risk. As the programme is not yet implemented nationwide, monitoring is not yet integrated in HMIS.

Rural Ultrasound Programme

The Rural Ultrasound Programme aims for the timely identification of pregnant women with risks of obstetric complication to refer to comprehensive emergency obstetric and neonatal care (CEONC) centres. Trained nurses (SBA) scan clients at rural PHCCs and HPs using portable ultrasound. Women with detected abnormalities such as abnormal lies and presentation of the foetus and Placenta Previa are referred to a CEONC site for the needed services. This programme is being implemented in the remote districts. In FY 2075/76, total 15 SBAs were trained on rural ultra sound by NHTC and FWD.

Human Resources

A significant share of FWD's budget goes for recruiting human resources (Doctors, Staff nurses, ANMs) on short term contracts to ensure 24 hour services on MNH at PHCCs and HPs. In FY 2075/2076, FWD provided funds to all Provinces to fulfil HR shortage at hospitals (CEONC sites): total NRs 70,000,000 to recruit CEONC team, NRs 24,534,000 to recruit staff nurses and 14,897,000 for ANMs.

FWD has been coordinating with the National Health Training Centre (NHTC) and the National Academy for Medical Sciences (NAMS) for the pre-service and in-service training of health workers. NHTC provides training on SBA, ASBA, Anaesthesia Assistant, Operation Theatre Management, Family Planning (including Implants and IUCD), CAC and Antenatal Ultrasonography. In 2075/76, 100 SBAs, 11 ASBAs were trained by NHTC and NAMS. By the end of 2075/76 a total of 9,720 SBAs and 208 ASBAs have been trained. The proper placement of trained staff such as ASBAs and anaesthesia assistants (AAs) has been a continuous challenge. FWD continues to monitor the deployment of doctors (MDGP, OBGYN, ASBA) and AAs, and inform DoHS and MOHP as necessary for appropriate transfer. This has resulted in improved functionality of CEONC services.

Expansion and quality improvement of service delivery sites

FWD continued to expand 24/7 service delivery sites like birthing centres, BEONC and CEONC sites at PHCCs, HPs and hospitals. The expansion of service sites is possible mostly due to the provision of funds to contract short-term staff locally. By the end of 2075/76, CEONC services were established in 72 districts, only 60 districts were functional throughout the year. During the fiscal year, 8-12 districts provided interrupted C-section services. Expansion of delivery services continues through the initiation of local government. Total 2101 HPs and 188 PHCCs reported to have providing delivery services in 2075/76.

Onsite clinical coaching and mentoring

Quality service at the service delivery point is one of the focused themes of NHSS and its implementation plan 2016-2021. On-site coaching and clinical skill enhancement of service providers is considered the most effective means to improve knowledge, skills and practices of health service providers (WHO). FWD had started to implement on-site clinical coaching /mentoring programme since 2073/2074 from 16 districts to enhance knowledge and skill of SBAs and non-SBAs nursing staff providing delivery services at BC/BEONC and CEONC service sites. This programme has been scaled up in 17 districts in FY 2075/2076 and 2 new districts after federal structure (East Rukum and Nawalpur) in 2075/2076. At the end of FY 2075/2076, total 320 municipalities of 33 districts implemented onsite clinical coaching and mentoring programme based on coaching/mentoring guideline and tool. This guideline has included mainly three parts; Clinical coaching/mentoring for MNH service providers (SBA and non-SBA), Infection prevention and MNH readiness QI self-assessment. FWD and NHTC started to develop district mentors through

mentor training since FY 2073/2074. Till the end of FY 2075/2076 total 153 district SBA clinical mentors were trained from coaching/mentoring programme implemented districts. They are the key skill persons who visit each BC/BEONC sites and conduct onsite coaching/mentoring along with MNH readiness self-assessment process to enhance capacity of delivery service providers, HF staffs and HFOMC members to make MNH service readiness. A set of models are used for model based practice during clinical coaching. FWD and supporting partners provide these models (Skill Lab Material) to SBA clinical mentors to 51 districts. By end of FY 2075/76, total 1755 MNH service providers received on-site clinical mentoring from SBA mentors (194 in FY 2073/074, 553 in 2074/075, and 1008 in 2075/076) from total 568 health facilities (52 in FY 2073/074, 166 in 2074/075 and 350 in 2075/076) .

MNH readiness Hospital and BC/BEONC Quality Improvement

Improvement in quality of service delivery through self-assessment, infection prevention demonstration and action plan implementation is evidence based effective program as per outcome found in piloting districts, Taplejung and Hetauda hospital in FY 2070/2071. At the end of FY 2075/2076, FWD expanded hospital quality improvement process (HQIP) in 45 CEONC hospitals in 43 districts. The process of quality improvement is also being implemented in birthing centres in integration with onsite coaching/mentoring process. Till FY 2075/076, total QI reported BC/BEONC sites were 421 (44 in FY 2073/2074, 110 in FY 2074/2075 and 267 in FY 2075/2076).

PNC home visit (microplanning for PNC)

Access to and utilization of post-natal care services is a major challenge while the majority of maternal deaths occur during post-natal period. As reported above in PNC section women who received PNC according to the protocol is 16.4 percent in 2075 (HMIS). In FY 2074/75, FWD provided annual budget to 30 Palikas from 15 districts and expanded in to 18 Palikas from 9 districts in FY 2075/76 to strengthen PNC services by mobilizing MNH service providers from health facilities to provide PNC at women's home.

Emergency referral funds

It is estimated that 15 percent of pregnant women will develop serious complications during their pregnancies and deliveries, and 5 to 10 percent of them will need caesarean section deliveries (WHO, 2015) to avoid deaths or long-term morbidity. In cases of difficult geographical terrain and unavailable CEONC services, it is crucial that these women are referred to appropriate centres. To address this issue FWD allocated emergency referral funds to six provinces (Province 1, Bagmati, Gandaki, Province 5, Karnali and Sudurpaschim) for air lifting of women in need of immediate transfer to higher centres. A total of NRs 7,500,000 was allocated to six Provinces to support women when needed. Additional NRs 12,000,000 was allocated for the hospitals in the districts through 7 provinces to support transport fares women who could not afford referral to high facility (nearby CEONC facilities). The main objective of this programme is to support emergency referral transport to women from poor, Dalit, Janajati, geographically disadvantaged, and socially and economically disadvantaged communities

Safe abortion services

Global and national evidence shows that many women face unwanted pregnancy including due to limited access to family planning information and services. Such women who cannot access safe abortion services in a timely way are at a high risk of developing complications due to unsafe abortions, or in the worst case, suicide due to social pressure. In Nepal abortion rate among WRA

is 42 per 1000 women of reproductive age women (15-49), highest in central region (59) and lowest in Far Western region (21). Out of all these abortions, only 42 percent were provided legally at government approved service sites (CHREPA 2016). Thus, there is a need to make safe abortion services available, accessible and affordable to all women with unwanted pregnancies. FWD has defined the four key components of comprehensive abortion care as:

- pre and post counselling on safe abortion methods and post-abortion contraceptive methods;
- termination of pregnancies as per the national protocol;
- diagnosis and treatment of existing reproductive tract infections; and
- provide contraceptive methods as per informed choice and follow-up for post-abortion complication management.

Comprehensive abortion care (manual vacuum aspiration [MVA]) services are available in all 77 district hospitals and majority of PHCCs. Additionally, second trimester abortion services are available in 30 hospitals where CEONC services are also available. Medical abortion (MA) services are being expanded in health posts through the additional training of SBAs. Medical abortion services have been expanded to 60 districts with the support of various partners. In FY 2075/76, a total of 158 sites for MA and 33 sites for MVA were listed to provide safe abortion services in Nepal. A total of 61,160 women received MA and 37,480 received surgical abortion services in this fiscal year.

Obstetric first aid orientations

In 2070/71, FHD started orienting paramedics on first aid to manage obstetric complications at health facilities without birthing centres and to enable paramedics to support SBAs and ANMs at times of emergency. In 2074/75, trainers were trained on this subject in districts.

Nyano Jhola Programme

The Nyano Jhola Programme was launched in 2070/71 to protect newborns from hypothermia and infections and to increase the use of peripheral health facilities (birthing centres). Two sets of clothes (bhoto, daura, napkin and cap) for newborns and mothers, and one set of wrapper, mat for baby and gown for mother are provided for women who give birth at birthing centres and district hospitals. The programme was interrupted due to financial constraints, however, MOHP allocated extra budget due to popular demand.

Aama and Free New born Programme

The government has introduced demand-side interventions to encourage women for institutional delivery. The Maternity Incentive Scheme, 2005 provided transport incentives to women who deliver their babies in health facilities. In 2006, user fees were removed from all types of delivery care in 25 low HDI districts and expanded to nationwide under the Aama Programme in 2009. In 2012, the separate 4 ANC incentives programme was merged with the Aama Programme. In 2073/74, the Free Newborn Care Programme (introduced in FY 2072/73) was merged with the Aama Programme which was again separated in FY 2074/75 as two different programmes with the provisions listed in Box 4.2.2.

Box 4.4.2: Provisions of the Aama Programme and New born programme**Aama programme provision****a. For women delivering their babies in health institutions:**

Transport incentive for institutional delivery: Cash payment to women immediately after institutional delivery (NPR 3,000 in mountains, NPR 2,000 in hills and NPR 1000 in Tarai districts).

Incentive for 4 ANC visits: A cash payment of NPR 800 to women on completion of four ANC visits at 4, 6, 8 and 9 months of pregnancy, institutional delivery and postnatal care.

Free institutional delivery services: A payment to health facilities for providing free delivery care. For a normal delivery health facility with less than 25 beds receive NPR 1,000 and health facilities with 25 or more beds receive NPR 1,500. For complicated deliveries health facilities receive NPR 3,000 and for C- sections (surgery) NPR 7,000. Ten types of complications (anteartum haemorrhage (APH) requiring blood transfusion, postpartum haemorrhage (PPH) requiring blood transfusion or manual removal of placenta (MRP) or exploration, severe pre-eclampsia, eclampsia, MRP for retained placenta, puerperal sepsis, instrumental delivery, and management of abortion complications requiring blood transfusion) and admission longer than 24 hours with IV antibiotics for sepsis are included as complicated deliveries. Anti-D administration for RH negative is reimbursed NPR 5,000. Laparotomies for perforation due to abortion, elective or emergency C-sections, laparotomy for ectopic pregnancies and ruptured uterus are reimbursed NPR 7,000 to both public and private facilities.

b. Incentives to health service provider:

For deliveries: A payment of NPR 300 to health workers for attending all types of deliveries **to be arranged from health facility reimbursement amounts.**

Newborn Care Programme Provision**a. For sick newborns:**

There are four different types of package (Package 0, Package A, B, and Package C) for sick newborns case management. Sick newborn care management cost is reimbursed to health facility. The cost of package of care include 0 Cost for Packages 0, and NPR 1000, NRP 2000 and NRP 5000 for package A, B and C respectively. Health facilities can claim a maximum of NPR 8,000 (packages A+B+C), depending on medicines, diagnostic and treatment services provided.

b. Incentives to health service provider:

A payment of NPR 300 to health workers for providing all forms of packaged services **to be arranged from health facility reimbursement amounts.**

Antenatal care

WHO recommends a minimum of four antenatal check-ups at regular intervals to all pregnant women (at the fourth, sixth, eighth and ninth months of pregnancy). During these visits women should receive the following services and general health check-ups:

- Blood pressure, weight and foetal heart rate monitoring.
- IEC and BCC on pregnancy, childbirth and early new born care and family planning.
- Information on danger signs during pregnancy, childbirth and in the postpartum period, and timely referral to appropriate health facilities.
- Early detection and management of complications during pregnancy.
- Provision of tetanus toxoid and diphtheria (Td) immunization, iron folic acid tablets and deworming tablets to all pregnant women, and malaria prophylaxis where necessary.

Pregnant women are encouraged to receive at least four antenatal check-ups, give birth at a health institution and receive three post-natal check-ups, according to the national protocols. HMIS reported since 2066/67 to track the timing of ANC visits as per the protocol. The percentage of women who had at least one ANC check-up in FY 2075/76 is 110% at national level with 127% [Highest] in Karnali Province and 90% [Lowest] in Sudurpaschim Province [Fig 3.2.1]. The proportion of pregnant women attending at least 4 ANC visits as per the protocol has increased from 53 percent in 2073/74 and 50 percent in 2074/75 to 56 percent in 2075/76 at the national level. All the provinces have shown some improvements as compared to last year in ANC visits as per protocol with highest [70%] achievement in Gandaki Province and lowest [41%] achievement in province 2.

Figure 4.4.3

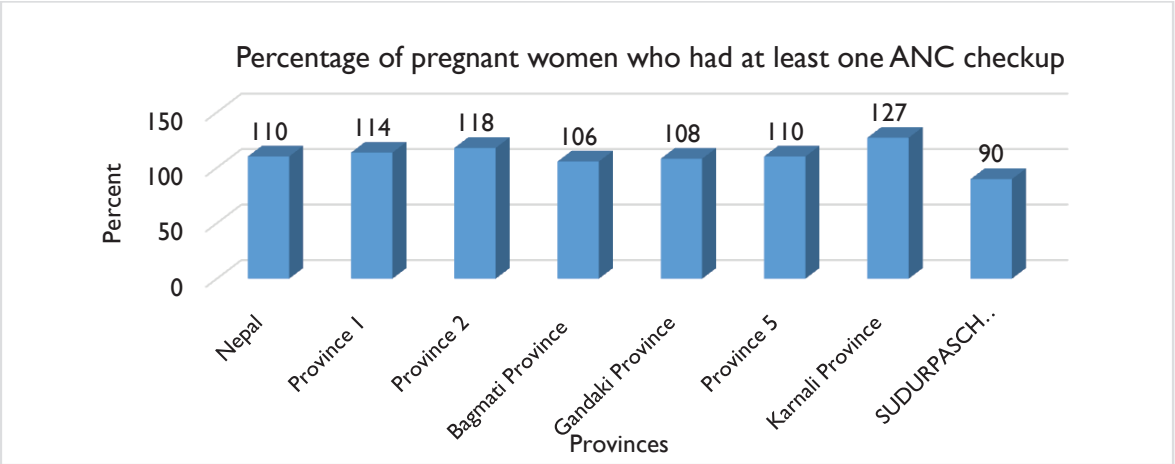


Figure 4.4.4 Women having at least one ANC check-up

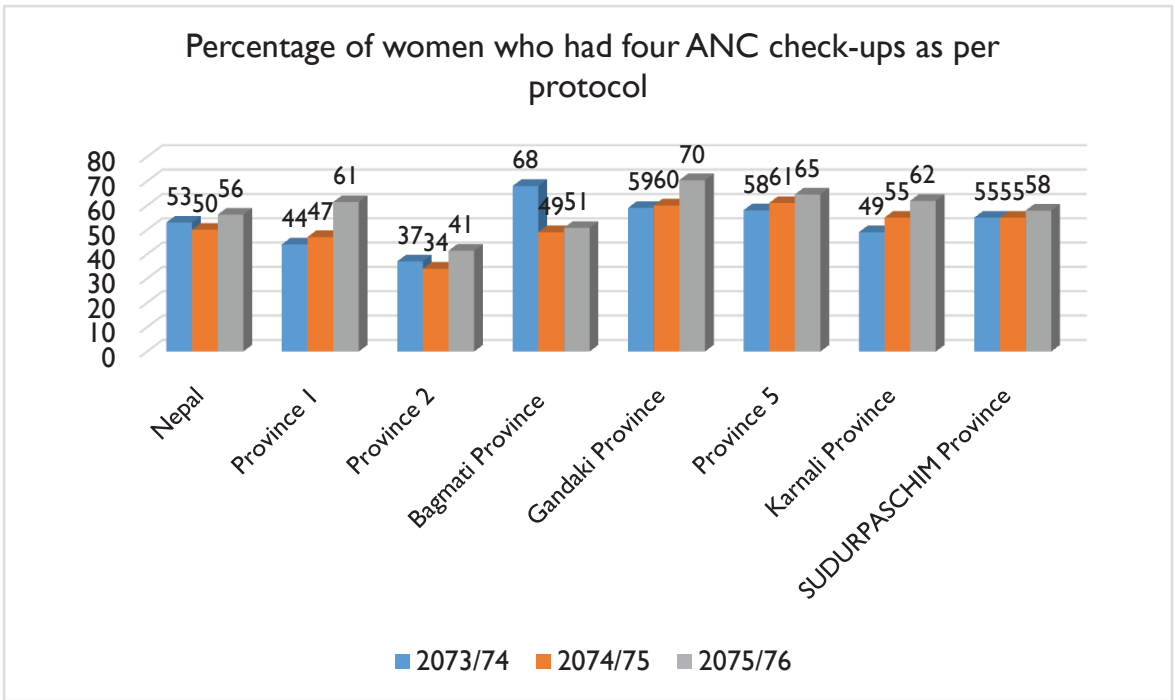
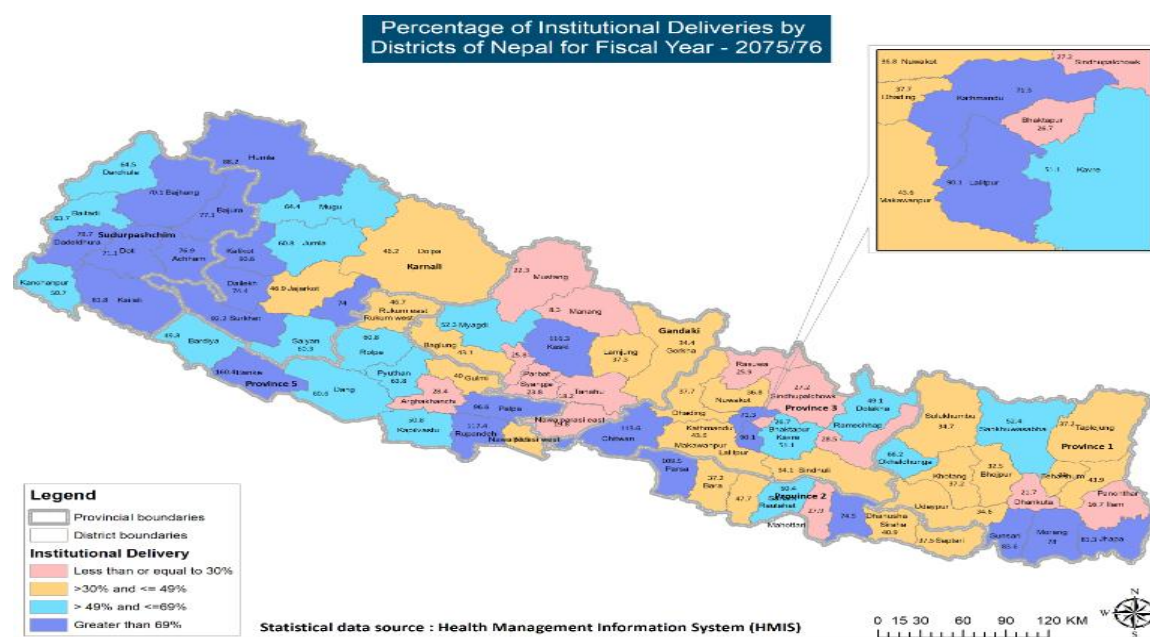


Figure 4.4.5: Institutional deliveries by districts 2075/76



Delivery care

Delivery care services include:

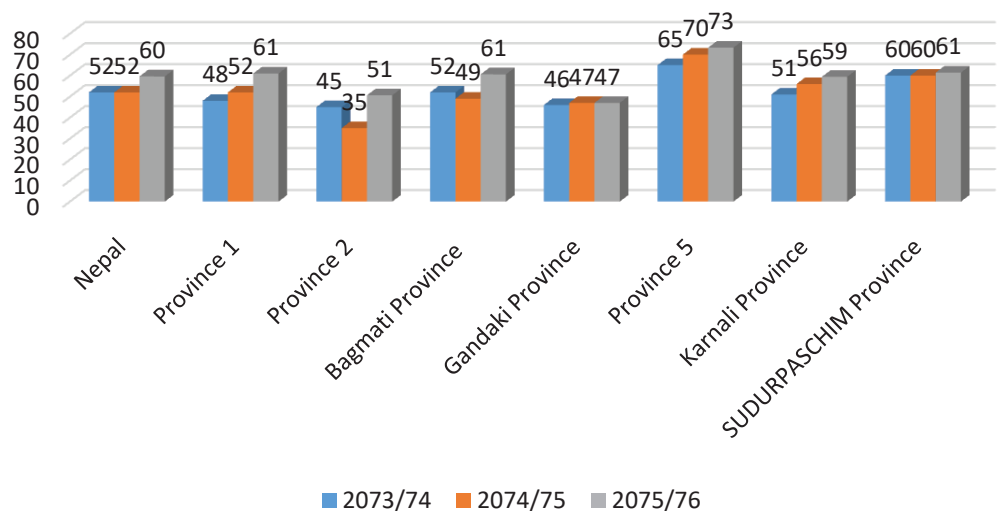
- skilled birth attendants (SBAs) at home and facility-based deliveries;
- early detection of complicated cases and management or referral (after providing obstetric first aid) to an appropriate health facility where 24 hours' emergency obstetric services are available; and
- the registration of births and maternal and neonatal deaths.

Although women are encouraged to deliver at a facility, home delivery using clean delivery kits with provision of misoprostol to prevent post-partum haemorrhage and early identification danger signs and complications, are important components of delivery care in settings where institutional delivery services are not available or not used by the women.

Delivery attended by Skilled Birth Attendants (SBAs):

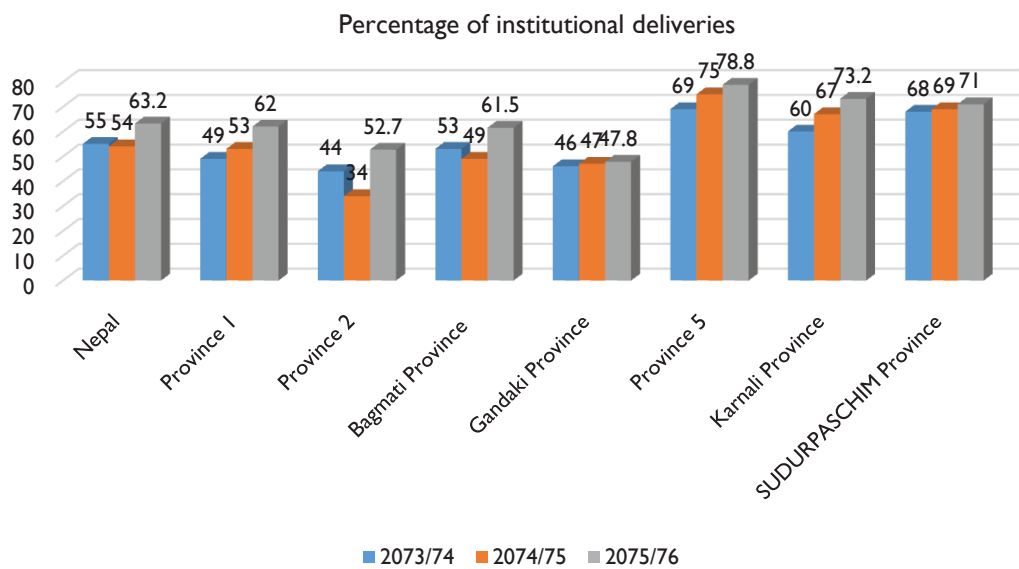
Nepal is committed to achieving 70 percent of all deliveries attended by SBAs and at institutions by 2020 (2076/77) to achieve the SDG target of 90 percent in 2030. At the national level, percentage of births attended by SBAs increased to 60 percent in FY 2075/76 from 52 percent for both FY 2073/74 and FY 2074/75. Similarly, SUDURPASCHIM province also remained at 60 percent for both years. Province five achieved the highest with 73 percent deliveries attended by SBA. The Gandaki province has the lowest percentage of delivery attended SBA at 47 percent which is stagnant from last fiscal year (Figure 4.4.6).

Figure 4.4.6 Percentage of births attended by a Skilled Birth Attendant (SBA)



Institutional delivery: Institutional deliveries as percentage of expected live births have increased to 63 percent in 2075/76 from 54 and 55 percent in FY 2073/74 and FY 2074/75 respectively. As compared to 2074/75, percentage of institutional deliveries increased in all Provinces (Figure 4.4.7).

Figure 4.4.7



Institutional Deliveries by type of Health Facilities

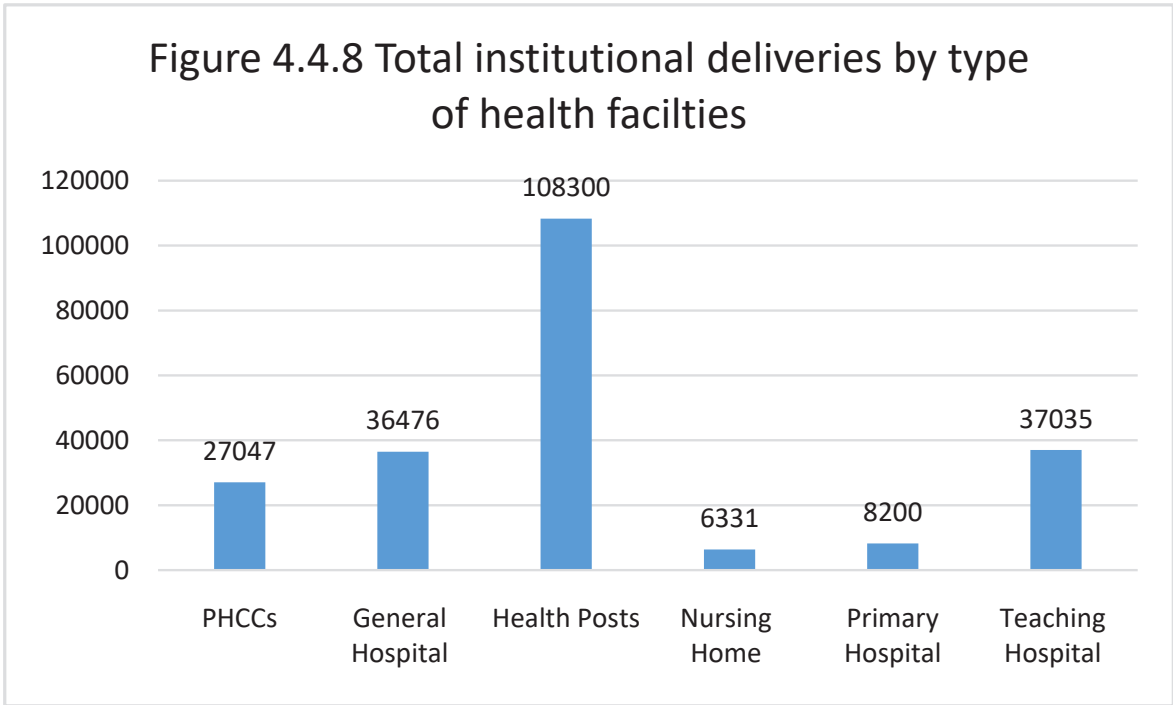
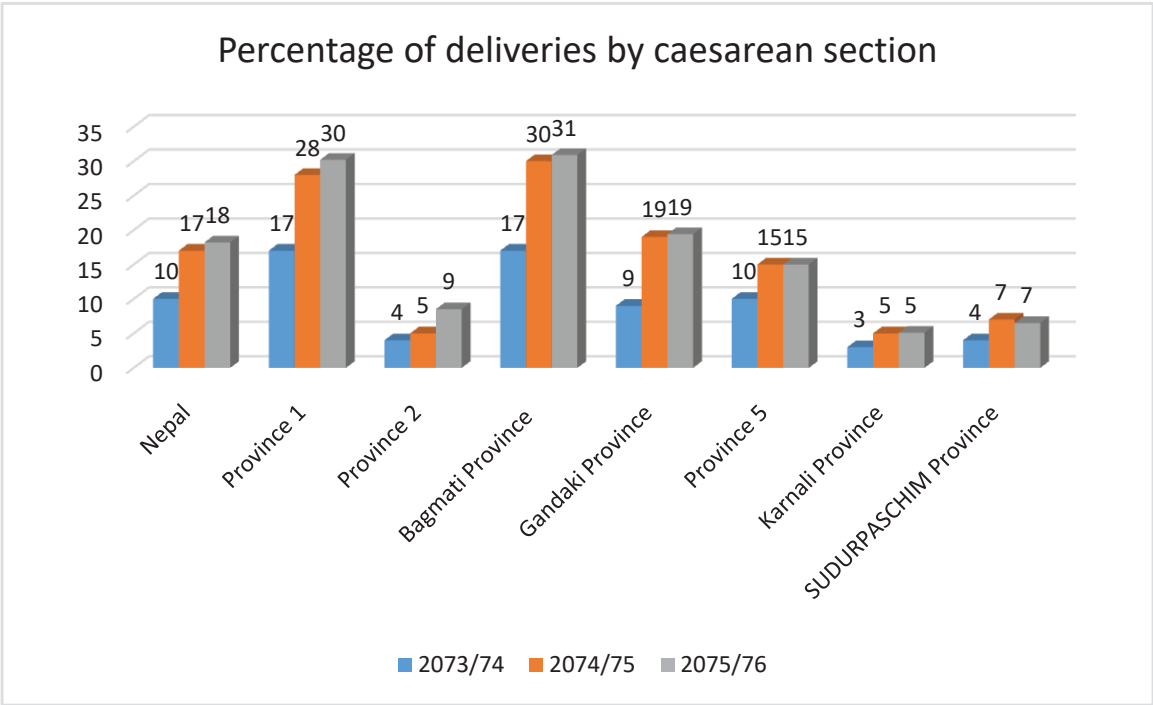


Figure 4.4.8 Total institutional deliveries by type of health facilities

The Health Posts had the highest contribution (108300) followed by teaching (37035) and general (36476) hospitals to conduct institutional deliveries in Nepal [Fig 4.4.8].

Emergency obstetric care: Basic emergency obstetric and newborn care (BEONC) covers the management of pregnancy complications by assisted vaginal delivery (vacuum or forceps), the manual removal of placentas, the removal of retained products of abortion (manual vacuum aspiration), and the administration of parental drugs (for postpartum haemorrhage, infection and pre-eclampsia and eclampsia) and the resuscitation of newborns and referrals. Comprehensive emergency obstetric care (CEONC) includes surgery (caesarean section), anaesthesia and blood transfusions along with BEONC functions.

In FY2075/76, 18 percent of institutional deliveries are conducted by CS. Compared to last fiscal year there is one percentage point increase in the percentage of CS delivery. Very high CS delivery observed in Bagmati Province (31%), Province 1 (30%) and Gandaki Province (19%) (Figure 4.4.9).



Postnatal care

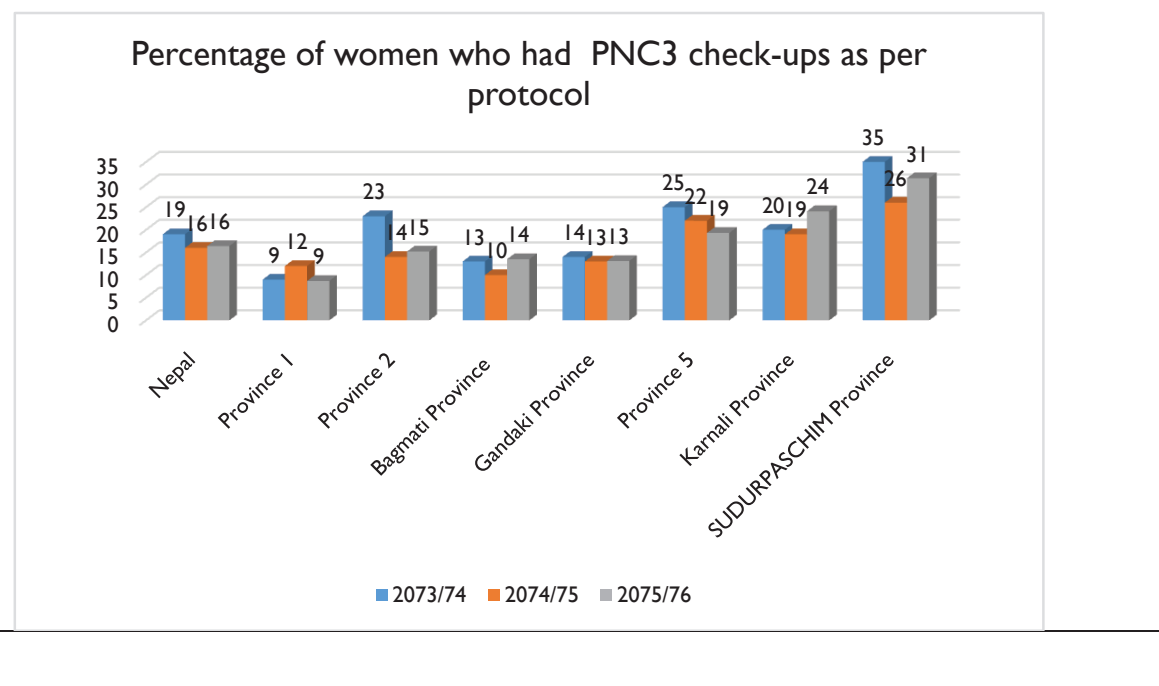
Postnatal care services include the following:

- Three postnatal check-ups, the first in 24 hours of delivery, the second on the third day and the third on the seventh day after delivery.
- The identification and management of complications of mothers and newborns and referrals to appropriate health facilities.
- The promotion of exclusive breastfeeding.
- Personal hygiene and nutrition education, and postnatal vitamin A and iron supplementation for mothers.
- The immunization of newborns.
- Postnatal family planning counselling and services.

The number of mothers who received their first postnatal care at a health facility within 24 hours of delivery is similar to the number of institutional deliveries in almost all health facilities as most health workers reported to have provided post-natal care to both mothers and babies on discharge. The revised HMIS introduced the monitoring of three PNC visits according to a protocol since 2071/72.

The proportion of mothers attending three PNC visits as per the protocol declined from 19 percent in 2073/74 to 16 percent in FY2074/75 and FY 2075/76 (Figure 4.4.10). The service utilization was found highest in Sudurpashim (31%) followed by Karnali Province (24%). It is important to note that proportion of women attending three PNC has always been low compared to other safe motherhood indicators. Cultural and geographical factors affecting the movement of postnatal mothers could be reasons for the low coverage while the perceived low importance of care during the postpartum period could also be significant. There is a need for culturally sensitive interventions to promote access to and the use of postnatal services, especially in geographically challenging areas.

Figure 4.4.10: Provincial and national trends of percentage of women who had 3 PNC check-up as per protocol



Safe abortions

Women of reproductive age have been receiving safe abortion services (SAS) from certified sites since the service began in Nepal from 2060/61. The use of SAS has been increased over the last decade. Total SAS users were 96,138 (12.7%) women in 2073/74; 98,625 (13%) in 2074/75 and 90,677 (12.6%) in 2075/76. The share of medical abortion among total safe abortion service users gradually increased over the last few years, from 53 percent in 2072/73, 56 percent in 2073/74, 62 percent in 2074/75 and 66 percent in 2075/76. Proportion of adolescents (< 20 years) among SAS user declined for medical abortion (9%) and slightly increased (13%) for surgical abortion in this fiscal year. Total reported post-abortion complication also declined over the last three years

Table 4.4.11: Proportion of safe abortion services users, by age

Fiscal year	Aged < 20 years among total Medical SAS users	Aged < 20 years among total Surgical SAS users
2073/74	12%	17%
2074/75	10%	11%
2075/76	9%	13%

The post abortion family planning users have been slightly increased in last two years, 75% in 2074/75 and 76% in 2075/76 in comparison to 71% in 2073/74. The acceptance of post abortion contraception among medical abortion service users was high compared to among surgical abortion users (medical abortion 79% versus surgical abortion 69%). Overall, post-abortion LARC use is higher among women who had surgical abortion (51%) than among medical abortion (26%).

Implementation of Maternal and Perinatal Death Surveillance and Response (MPDSR)

Maternal and Perinatal Death Surveillance and Response (MPDSR) was designed to measure and track all maternal deaths in real time, to understand the underlying factors contributing to mortality and to provide guidance for how to respond to and prevent future deaths. This is a continuous identification, notification, quantification and determination of causes and avoidability of all maternal and perinatal deaths, as well as the use of this information to respond with actions that will prevent future deaths. GoN prioritized and implemented MPDSR in FY 2073/74 MPDSR with further strengthening and expansion.

MPDSR was scaled up in 21 districts out of which 7 districts in this fiscal year (Bajhang, Dailekh, Palpa, Myagdi, Nuwakot, Taplegung and Rautahati, and 99 Hospitals (both public and private) in FY 2075/76. Government of Nepal (GoN) developed MPDSR guidelines 2015. In these districts, both community maternal deaths, hospital maternal deaths and hospital perinatal deaths are reviewed and responses planned.

Community-based MPDSR: Community based MPDSR program was implementing in 21 districts 99 hospitals. In community-based MPDSR program community, maternal deaths and perinatal deaths are reviewed and responses planned.

Hospital-based MPDSR: Currently 99 hospitals are implementing MPDSR program. In hospitals, each maternal death is reviewed individually and perinatal deaths are reviewed in a monthly basis.

Formation of MPDSR Committees at different levels

As per the MPDSR guidelines 2015, there was National MPDSR Committee chaired by the Director General, Directorate of Health Services and MPDSR Technical Working Group (TWG) chaired by Director, Family Health Division. In addition, there are health facility levels MPDSR committees and palika level committees with separate VA and cause of death assignment teams for community MPDSR program. For each hospital implementing MPDSR, there is MPDSR committee formed as per the level of the hospital.

MPDSR On-site coaching program

Family Health Division conducted on-site coaching program to support the districts and hospitals for implementing MPDSR program. The on-site coaching program was done in district for community based MPDSR and hospitals for hospital based MPDSR. During this program available data, forms and documents were reviewed and discussion was done which mainly focused to address the preventable issues.

Review of MPDSR:

A review of MPDSR program was conducted in this fiscal year with an objective to review the update progress on MPDSR in implementing hospitals. Review was conducted in Biratnagar, Butwal, Kathmandu and Dhangadhi which covered all implementing hospitals in Nepal. 2-3 person from each hospital were invited from each hospital to participate in the review.

One stop Crisis Management Centre (OCMC)

One stop crisis management orientation program was successfully completed in five different district hospital i.e. Chautara, Sindhupalchowk, Dhulikhel, Kavrepalanchowk, Sandhikharka,

Argakhachi, Taulihawal, Kapilbastu and Prithivichandra (Nawalparasi) hospitals. The objective of the program was to enhance service provider's knowledge and skill regarding case management.

Issues, constraints and recommendations

Table 4.4.12.: Issues, constraints and recommendations— safe motherhood and newborn health

Issues and constraints	Recommendations	Responsibilities
High maternal mortality rate	- Review of programme implementation and effectiveness - Plan for road map to reduce MMR based on global and Nepal evidences	FWD, DoHS, MoH
Referral mechanism	- Revise the Aama Programme to facilitate an appropriate referral mechanism and improve access to life-saving services. - Develop Referral Guideline.	FWD
Fluctuating functionality of CEONC and birthing centre services	- Focusing on functionality and quality of existing CEONC sites, rather than establishing new sites. - Monitoring service provision status and availability of human resource - Promote the production of skilled service providers (AAs, MDGPs, MD obgyn) and ensure appropriate skill mix at CEONC sites by deployment and appropriate transfer of skilled human resources - Continue allocation of fund for contracting out short – term service providers - Provide locum doctors and anaesthesia assistants in strategically located referral hospitals for each province - Introduce a special package to provide CEONC services in mountain districts - Support local government for training of human resources in necessary skills	MoH , DoHS, FWD, NHTC
Availability of quality maternity care services at hospitals and birthing centres: 24/7 availability of services - skills and knowledge of staff - enabling environment and motivation - overcrowding at referral hospitals.	- Introduce quality improvement process for all maternity care services including QIP self-assessment and on-site clinical coaching - Introduce monitoring process indicator for quality maternity care in health facilities - Adequate budgets allocated for equipment in birthing centres and CEONC sites - Regular MNH skills update programmes for nurses focusing on continuum of care - Introduce construction standards for birthing centres - Support birthing centres at strategic locations only - Provide additional budgetary support for overcrowded hospitals	MoH, DoHS FWD(quality of care) FWD FWD, DHOs, DPHOs FWD, DoHS
Plateauing of 4 ANC use and timely first ANC visits, and very low PNC coverage	- Raise the quality of ANC counselling services, focusing on continuum of care - Develop a special package to encourage timely first ANC visits. - Initiate PNC home visit in selected councils	DHOs, DPHOs, FWD
Low use of institutional delivery and C-section services in mountain districts, and province number 2 and 6	- Produce a strategy to reach unreached sub-populations - Rapidly assess and expand rural ultrasonography (USG) - Expand services in remote and difficult locations and ensure continuous availability of services (birthing centres and CEONC services)	FWD, DHOs, DPHOs
No CEONC services in some remote districts: Rasuwa,	Discussion with local government on the advantages of have CEONC, and challenges in maintaining CEONC	FWD

Manang and Mustang	functionality in low population areas	
The high public demand for free delivery services at BPKIHS	Implement the Aama Programme at BPKIHS	MoH, BPKIHS, FWD, RHDs
The inadequate use of some birthing centres and increasing the number of birthing centres, and increasing use of referral hospitals	- The strategic upgrading of health facilities into birthing centres - Upgrade strategically located birthing centres to provide comprehensive quality primary health care services and aim for 'home delivery free' VDCs - Run innovative programmes to encourage delivery at birthing centres	FWD, DHOs DPHOs
High demand for free surgery for uterine prolapse cases	Increase the budget and target for regional health Hospitals provides regular services of POP surgery .	FWD
Federal structure and governance of health institutions; limited understanding of health service delivery	Orientation of local and provincial level government on their roles in health services delivery and governance	FWD/MOHP

4.5 Family Planning and Reproductive Health

4.5.1 Background

Modern Family planning (FP) refers to female sterilization (e.g. minilap), male sterilization (e.g. no-scalpel vasectomy), intrauterine contraceptive device (IUCD), sub-dermal contraceptive implants (e.g. Jadelle), three monthly injectables (e.g. Depo Provera), the oral pill (combined oral pills), condoms (male condom), lactational amenorrhea method (LAM), emergency contraceptive pill and standard days method (SDM).

The aim of National Family Planning Programme is to ensure individuals and couples fulfill their reproductive needs and rights by using quality FP methods voluntarily based on informed choices. To achieve this, Government of Nepal (GoN) is committed to equitable and right based access to voluntary, quality FP services based on informed choice for all individuals and couples focusing more on hard to reach communities and underserved populations such as adolescents, migrants and other vulnerable or marginalized groups ensuring no one is left behind.

Government commits to strengthen policies and strategies related FP within the new federal context, mobilize resources, improve enabling environment to engage effectively with supporting partners, promote public-private partnerships, and involve non-health sectors. National and international commitments will be respected and implemented (such as NHSSIP 2015-2020, Costed Implementation Plan 2015-2020 and FP2020 etc.).

From program perspective, GoN through its subsidiary (FWD, PHD, Health Section MoSD, Health Offices and municipalities) are trying to ensure access to and utilization of client-centred quality FP services through improved contraceptive use especially among hard to reach communities and underserved populations, broaden the access to range of modern contraceptives method mix including long acting reversible contraceptives (LARC) such as IUCD and implant from service delivery points, reduce contraceptive discontinuation, scale up successful innovative evidence informed FP service delivery and demand generation interventions.

In Nepal, FP information, education and services are provided through the government, social marketing, NGOs and the private sector (including commercial sectors). In government health system, short acting reversible contraceptive methods (SARCs: male condoms, oral pills and injectables) are provided through PHCCs, health posts, Basic Health Service Centres, Urban Health Units (UHC), Community Health Units (CHU), and PHC-ORCs. FCHVs provide information and education to women and couple at community and distribute male condoms and resupply oral contraceptive pills. LARC services are only available in hospitals, PHCCs and health posts that have trained and skilled providers. Access to LARC services in remote areas is provided through satellite clinics, extended visiting service providers-VSPs (both public and ADRA/MSI and MS Ladies (MSI) and mobile camps. Male and female sterilization services (e.g. voluntary surgical contraception [VSC]) are provided at static sites or through scheduled seasonal and mobile outreach services.

Quality FP services are also provided through private and commercial outlets such as NGO run clinic/centre, private clinics, pharmacies, drug stores, hospitals including academic hospitals. FP services and commodities are made available by some social marketing (and limited social franchising) agencies.

FP services are part of basic health care services and are provided free in all public sector outlets.

4.5.2 Objectives, policies and strategies

The overall objective of Nepal's FP programme is to improve the health status of all people through informed choice on accessing and utilizing client-centred quality voluntary FP services. The specific objectives are as follows:

- To increase access to and the use of quality FP services that is safe, effective and acceptable to individuals and couples. A special focus is on increasing access in rural and remote places and to poor, Dalit and other marginalized people with high unmet needs and to postpartum and post-abortion women, the wives of labour migrants and adolescents.
- To increase and sustain contraceptive use, and reduce unmet need for FP, unintended pregnancies, and contraception discontinuation.
- To create an enabling environment for increasing access to quality FP services to men and women including adolescents.
- To increase the demand for FP services by implementing strategic behaviour change communication activities.

The five policies and strategic areas to achieve the above objectives are presented in Box 4.5.1.

Box 4.5.1: Policies and Strategic Areas for FP

1. *Enabling environment*: Strengthen the enabling environment for FP
2. *Demand generation*: Increase health care seeking behaviour among populations with high unmet need for modern contraception
3. *Service delivery*: Enhance FP service delivery including commodities to respond to the needs of marginalized people, rural people, migrants, adolescents and other special groups
4. *Capacity building*: Strengthen the capacity of service providers to expand FP service delivery
5. *Research and innovation*: Strengthen the evidence base for programme implementation through research and innovation

Target of Family Planning

Selected FP goals and indicators to ensure universal access to sexual and reproductive health-care services, including for FP/SRH program are as follows:

Table 4.5.1: SDG Targets and Indicators

Target and Indicators	2015	2019	2022	2025	2030	Source
Proportion of women of reproductive age (aged 15-49 years) who have their need for family planning satisfied with modern methods	66n	71	74	76	80	NDHS, NMICS
Contraceptive prevalence rate (CPR) (modern methods) (%)	47.1	52	53	56	60	NDHS, NMICS
Total Fertility Rate (TFR) (births per women aged 15-49 years)	2.3n	2.1	2.1	2.1	2.1	NDHS, NMICS
Adolescent birth rate (aged 10-14 years; aged 15-19 years) per 1,000 women in that age group	71n	56	51	43	30	NDHS, NMICS

Table 4.5.2: NHSS Implementation Plan (IP) 2016-2021 Target of FP Program:

S · N	Indicator	Baseline			Milestone				Target
		Data	Year	Source	2016	2017	2018	2019	2020
1	Contraceptive prevalence rate (modern methods) CPR	47.1	2014	NMICS		50			55

Family Welfare

2	Method mix of FP								
	Male sterilization	18	2014	NMICS		18			18
	Female sterilization	30.9	2014	NMICS		29.9			27
	IUCD	4.5	2014	NMICS		4.8			5.7
	Implant	5.3	2014	NMICS		5.8			7.3
	Injectable	21.5	2014	NMICS		21.6			21.9
	Pills	9.7	2014	NMICS		9.7			9.7
	Condom	10.2	2014	NMICS		10.3			10.4
3	Unmet need for family planning (%)								
	Lowest quintile	27.2	2015	NMICS		22.4			19.5
	Highest quintile	24.3	2015	NMICS		22.4			19.5
4	% of women who received post abortion FP	75	2015	NA		80			80
5	% HPs (Health Post) with LARC provision	NA	2015	NA	40	50	60	70	80

4.5.3 Major activities in 2075/76

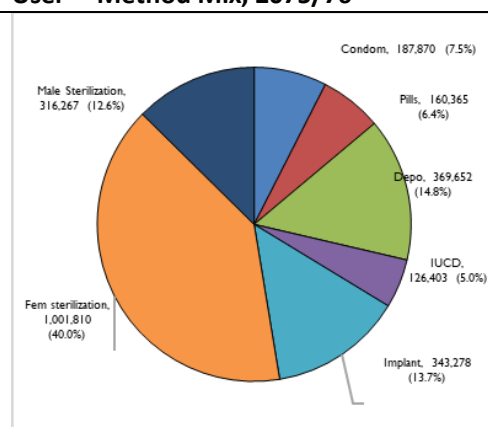
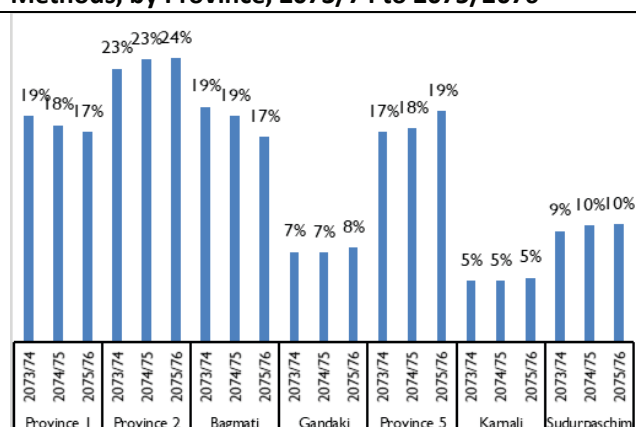
FP programme are implemented at various level (centre, province and municipalities) after the federalisation. Key FP activities carried out in 2075/76 are as follows:

- Provision of regular comprehensive FP service including post-partum and post abortion FP services
- Provision of long acting reversible services (LARCs-IUCD and Implant)
- FP strengthening program through the use of decision-making tool (DMT) and WHO medical eligibility for contraceptive (MEC) wheel
- FP micro planning for addressing unmet need of FP in hard to reach communities and underserved populations
- Permanent FP methods or Voluntary Surgical Contraception (VSC)
- Implementation of public private partnership (PPP) in FP program at high population district
- Strengthening of institutionalized FP service center as a training center
- Provision of roving ANM (RANM) and VSP service to increase FP service users
- Integration of FP and immunization services
- Satellite clinic services for long acting reversible contraceptives
- Contraceptive update for Obstetrician/Gynecologist, nurses & concerned key FP players
- Interaction program on FP and RH including ASRH with pharmacist and marginalized communities
- Community interaction with satisfied clients for promoting permanent method and IUCD
- Strengthening of ASRH services
- Strategy, guideline, protocol and standard development and updating related to FP, ASRH, PPP

4.5.4 Achievements-2075/76

Current users

Female sterilization (40%) occupies the greatest part of the contraceptive method mix among all current user, followed by Depo (14.8%), Implant (13.7%), male sterilization (12.6%), oral pills (6.4%) and lastly IUCD (5%) in 2075/76 (Figure 4.5.1).

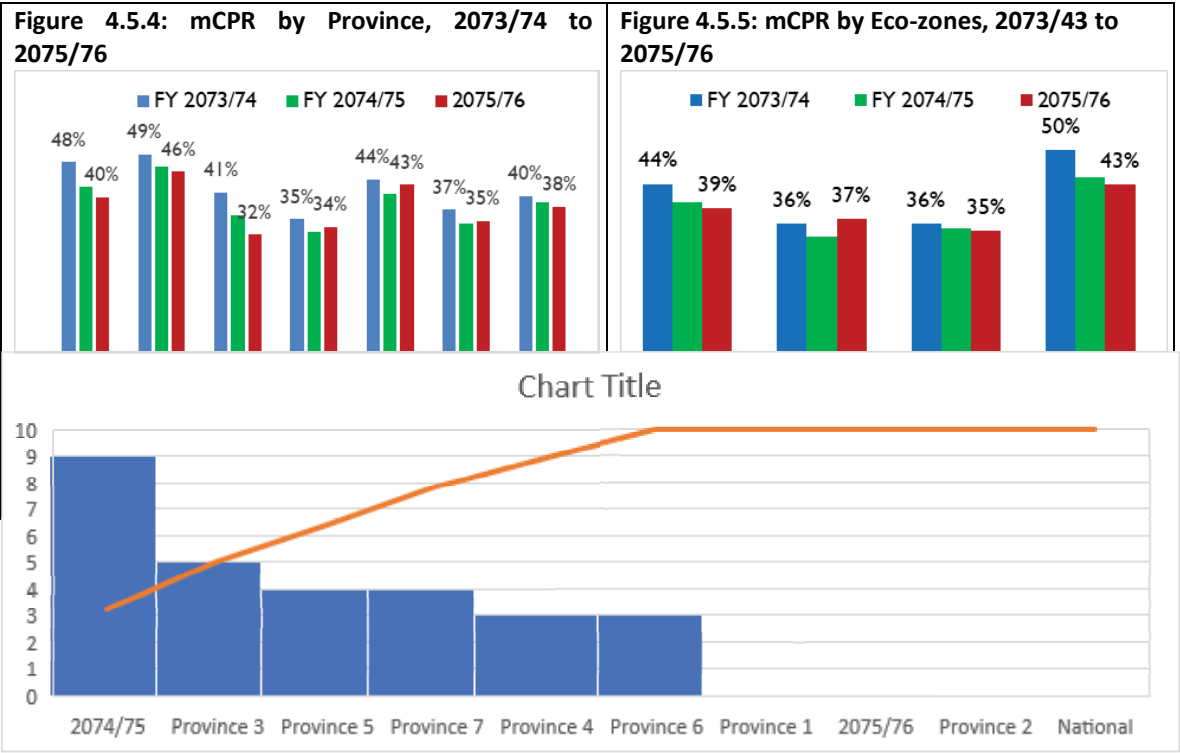
Figure 4.5.1: Proportion of FP Current User— Method Mix, 2075/76**Figure 4.5.2: Share of FP Current Users (%), all Methods, by Province, 2073/74 to 2075/76**

Province 2 has the highest proportion (24%) of current users while Karnali Province (5%) has the lowest (Figure 4.5.2) in 2075/76. Total number of permanent current users exceeds that of spacing method at national level and in Province 1 and 2 (Table 4.5.3). The trend of share of total current users (in %) shows an increase in 2075/76 in Province 2 and 5 than in previous year (Figure 4.5.2). Nationally, current users (absolute numbers) of all modern methods are in decreasing trend. A decrease of 26,000 is observed in 2075/76 than in previous year. Gandaki Province and Province 5 however shows an increased in number than previous year (Table 4.5.3).

Table 4.5.3: FP Current Users (Modern Methods) by Province, 2073/74 to 2075/76 (in '000)

Method	Province 1			Province 2			Bagmati			Gandaki			Province 5			Karnali			Sudurpashchim			National		
Year	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76
Spacing methods	266	217	207	126	109	120	304	255	220	99	86	100	295	272	310	80	74	82	149	145	149	1,321	1,161	1,188
Permanent methods	239	237	230	486	483	470	223	218	206	103	101	97	176	176	169	57	55	52	100	99	95	1,385	1,371	1,318
Total users	505	454	437	612	592	590	527	473	426	202	188	196	471	448	479	137	129	134	249	244	244	2,707	2,532	2,506

The modern contraceptive prevalence rate (mCPR) at national level is 39% in 2075/76 (Figure 4.5.4). Province 2 has the highest mCPR of 46% while Bagmati has the lowest (32%). Five Provinces (1, 3, Gandaki, Karnali and Sudurpashchim) have mCPR less than national average (39%). National and Provincial (1, 2, Bagmati and Sudurpashchim) mCPR has decreased in year 2075/76 than that of previous year (Figure 4.5.4). Ecological region wise, mCPR of Terai (43%), although in decreasing trend, is higher than national average (39%) while that of Mountain and Hill ecological region remain below the national average (Figure 4.5.5).



District-wise HMIS data indicates that in 2075/76 five districts had mCPR greater than or equal to 50%, 59 districts had mCPR between 30-50% and 13 districts had mCPR less than 30% (Figure 4.5.5, 4.5.6). Parsa has the highest mCPR (67%) while Kathmandu the lowest (20%). Parsa district was at the top of the mCPR list previous year also. Kathmandu district replaced Solukhumbu this year to be the bottom last of the mCPR list.

The number of districts with mCPR below 30 percent decreased from 18 in 2074/75 to 13 in 2075/76 indicating improved performance among the low mCPR districts (Figure 4.5.6 and 4.5.7).

Figure 4.5.6: mCPR by Districts 2075/76

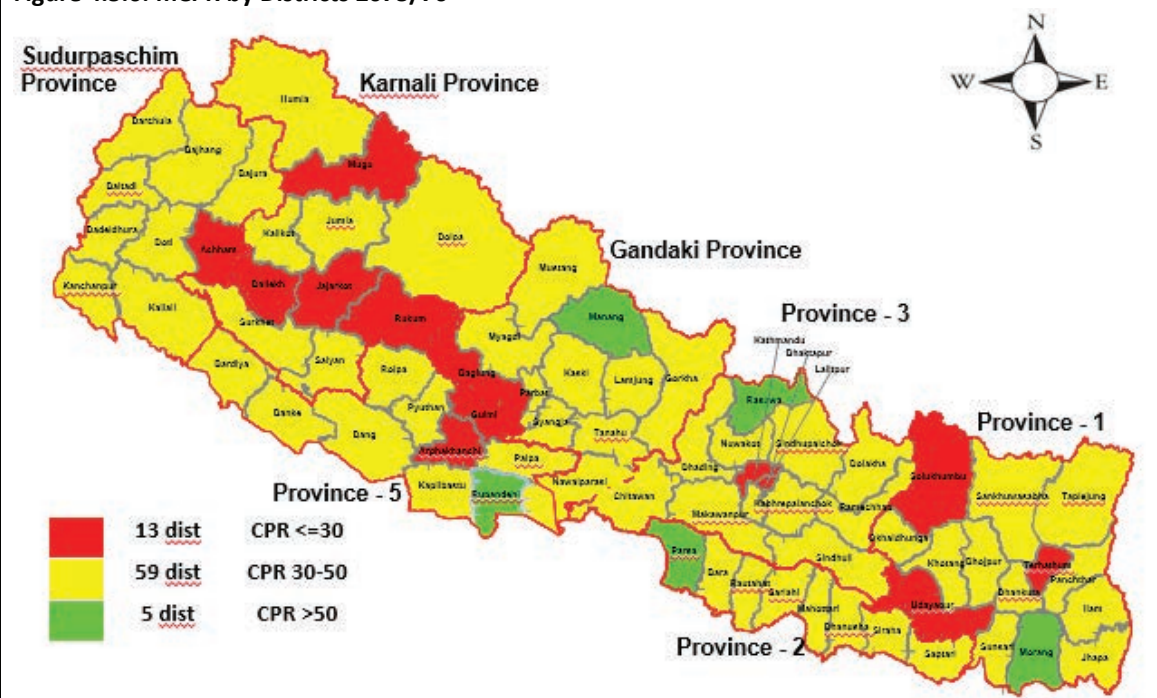


Figure 4.5.7: S-Curve Pattern of CPR Growth, 2075/76

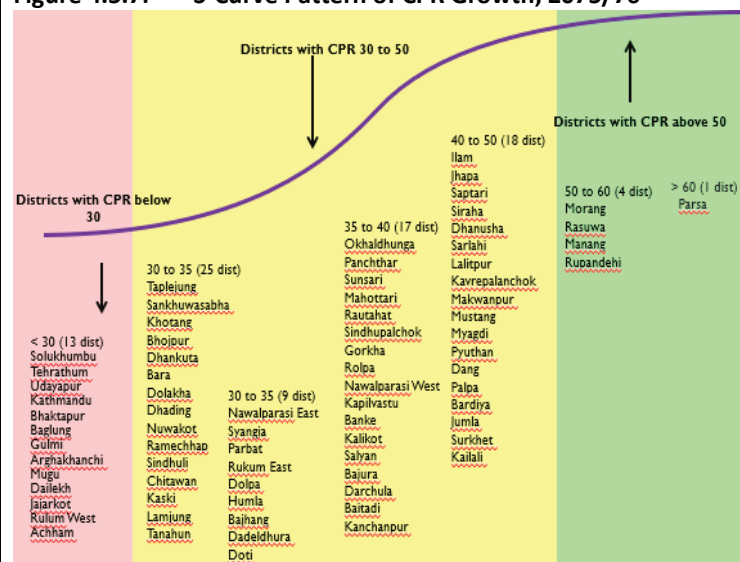
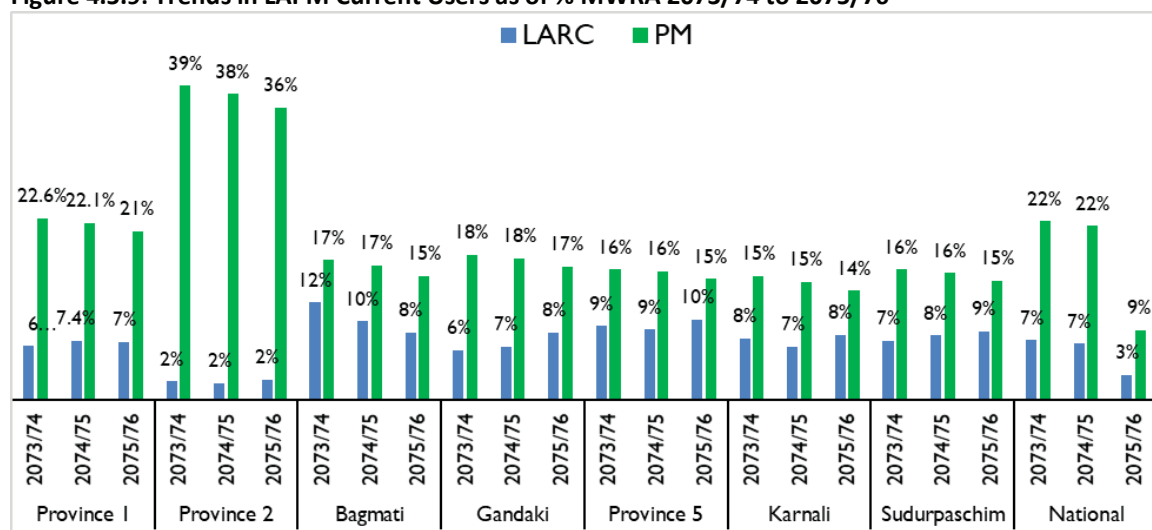


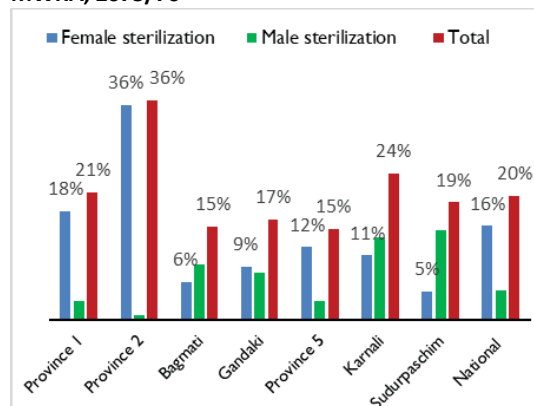
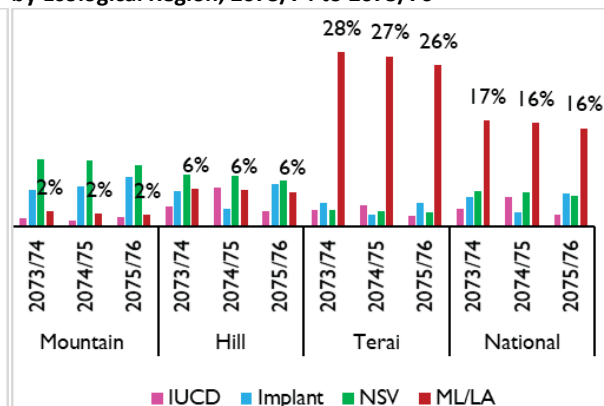
Figure 4.5.8: Trends in mCPR by Districts, FY 2073/74-2075/76



Permanent method (PM-male and female sterilization) occupies the majority of share of current users among LARCs and permanent method (LAPM) in all provinces and most prominent in Province 2 (Figure 4.5.9). However, current users of permanent methods are in decreasing trend both at national and provincial level. Whereas LARC current users is in increasing trend in three provinces (Gandaki, Province 5 and Sudurpaschim) (Figure 4.5.9). Province 2 has the lowest percentage of LARCs current users.

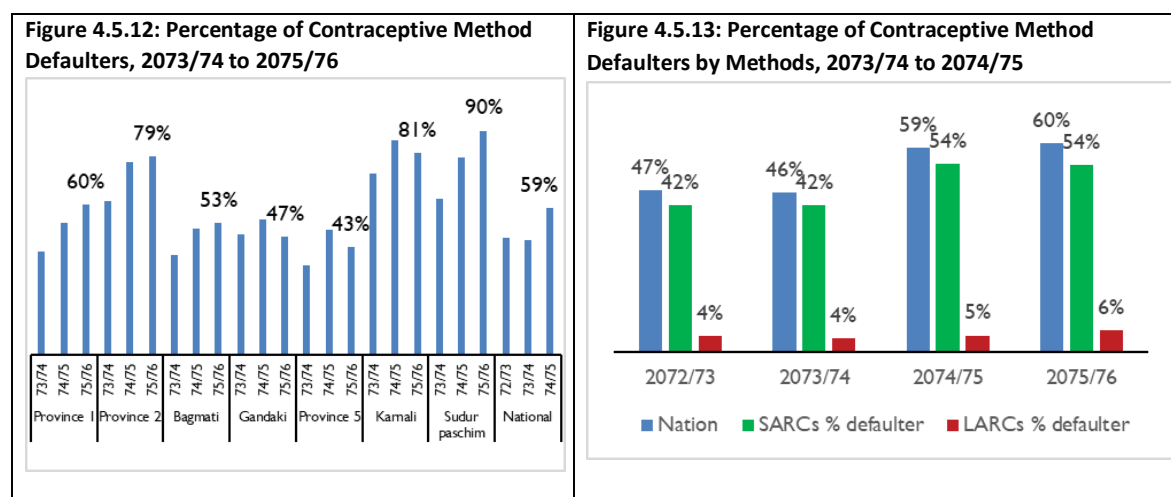
Figure 4.5.9: Trends in LAPM Current Users as of % MWRA 2073/74 to 2075/76

Female sterilization (ML/LA) contributes about 36% in contraceptive method mix in Province 2 (Figure 4.5.10). It is evident that female sterilization (minilap under local anaesthesia--ML/LA) is popular in Terai (Figure 4.5.11) which have contributed significantly also in national average. Male sterilization (NSV) on the other hand is more popular in Mountain and Hill than Terai (Figure 4.5.11). Compared to IUCD, implant seems to be more popular among women of reproductive age in all ecological region of Nepal. As mentioned earlier, female sterilization carries the highest proportion of current user in Terai region (Figure 4.5.11).

Figure 4.5.10: Sterilization Current Users as % of MWRA, 2075/76**Figure 4.5.11: Trend, LAPM Current Users as % of MWRA by Ecological Region, 2073/74 to 2075/76**

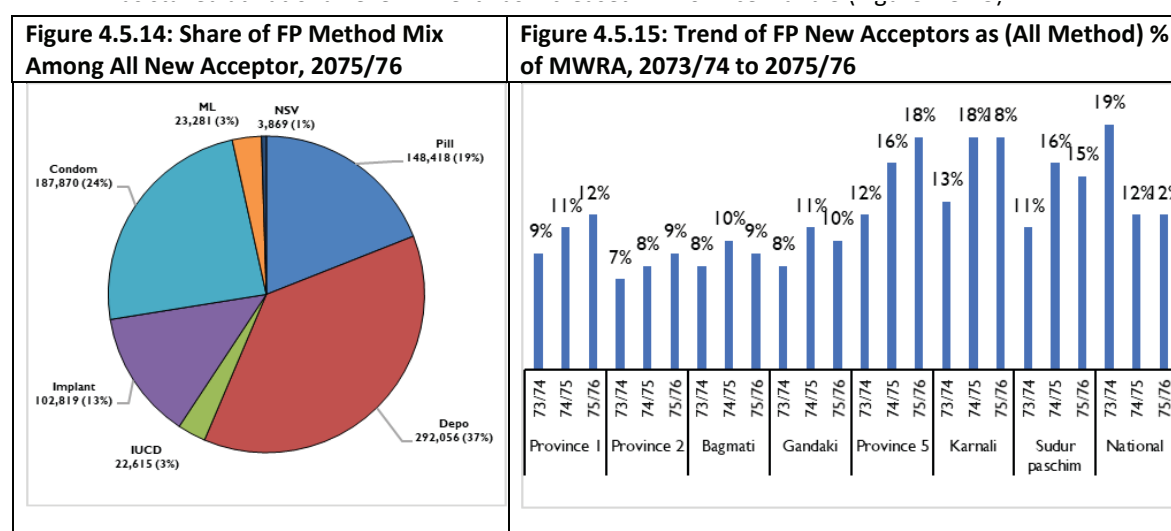
Contraceptive defaulters (for all temporary methods excluding condom), a proxy indicator for contraceptive discontinuation (calculated against current users), is high in Nepal. About 59% of contraceptive users have discontinued using the method (Figure 4.5.12). These women may choose (switch to) less effective methods or may not use any method (discontinued while still in need) leading to risk of unintended pregnancy and its consequences. Gandaki Province (47%) and Province 5 (43%) has low defaulter rate while Sudurpaschim Province has the highest (90%) (Figure 4.5.12). Compared to SARCs (short acting reversible contraceptives—pills and Depo), LARCs has low defaulter rate (Figure 3.1.13) in all Provinces. LARCs are the most effective as well as most cost-effective contraceptives. Trends of contraceptive discontinuation have increased in 2075/76

(Figure 4.5.12) indicating quality of FP service delivery issues. Globally, LARCs are promoted as first line contraceptives for all prospective clients. The high discontinuation of SARCs and low uptake of LARCs in Nepal indicates concerns over and the need of programmatic focus on both supply and demand aspect sustaining the past gains and focusing more on LARCs.



New acceptors

Depo (37%) occupies the greatest part of the contraceptive method mix for all method among new acceptors, followed by condom (24%), pill (19%), implant (13%), IUCD (3%), female sterilization (ML3%) and lastly male sterilization (NSV1%) in 2075/76 (Figure 4.5.14). FP new acceptor (all method) as % of MWRA has stalled at national level while it has increased in Province 1 and 5 (Figure 4.5.15)



New acceptors VSCs

Province 2 recorded the highest number of VSCs/permanent methods (12,562) while Karnali Province the lowest (827) (Table 4.5.4). Note that the projected numbers of new VSC acceptors was increased from 40,000 in 2073/74 to 42,300 in 2074/76 (Table 4.5.5). The trend of share of new acceptors (absolute numbers) shows an increase in 2075/76 than in previous year in all Provinces except that of Bagmati, Province 5 and Sudurpaschim Province (Table 4.5.4). Nationally, new

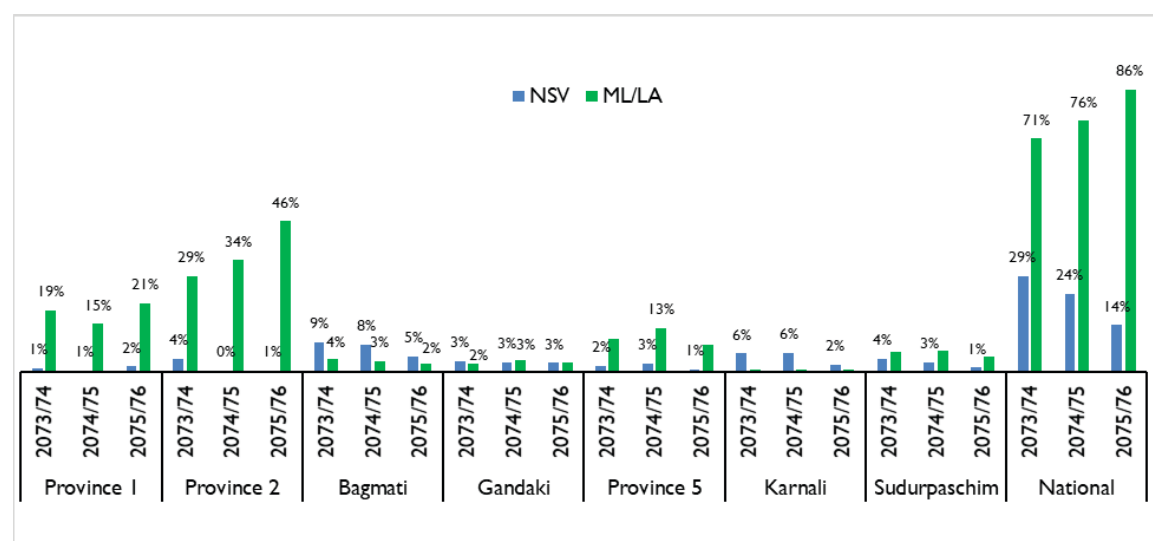
acceptors of all modern methods (absolute numbers) have increased by 25,000 plus in 2075/76 than in previous year.

Table 4.5.4: New Acceptors (All Modern Methods) by Province, 2073/74 to 2075/76 (in '000)

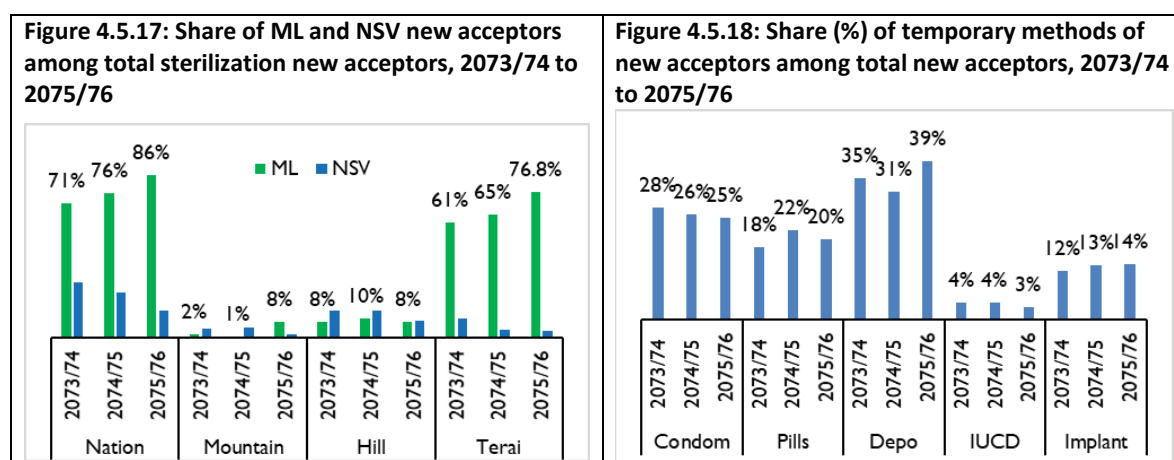
Variables	Province 1			Province 2			Bagmati			Gandaki			Province 5			Karnali			Sudur pashchim			National		
Year	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76
SARCs	95	86	96	85	79	84	108	100	88	54	47	46	157	146	175	55	57	59	85	81	80	642	598	628
LARCs	21	25	23	12	14	15	35	32	25	10	11	10	25	27	29	7	7	9	15	14	13	129	132	125
Permanent methods	5	3	6	9	8	13	3	3	2	1	1	2	3	4	3	1	1	1	3	2	2	30	25	27
Total new acceptors	123	115	125	108	102	112	148	135	115	67	61	58	186	177	207	64	66	67	103	97	95	802	756	781

Percentage of share of sterilization (ML) new acceptors among total new acceptors is highest (46%) in Province 2 and in increasing trend (Figure 4.5.16). Women and men in Gandaki Province and Karnali Province accepted least number of VSCs (Table 4.5.4). Male acceptors dominated Bagmati and Karnali Province (Figure 4.5.16). Likewise, Province 2 has the highest numbers (absolute number) of sterilization in 2075/76 as in previous years (Table 4.5.4, Figure 4.5.16)

Figure 4.5.16: Share of ML and NSV New Acceptors Among Total Sterilization New Acceptors, 2073/74 to 2075/76



Female VSC new acceptors were highest in Terai ecological region followed by Hill (Figure 4.5.17). Male VSC acceptors exceeds that of female VSC in Hill ecological region (Figure 4.5.17)



Achievement of minilap and Vasectomy new acceptors, against the projection for 2075/76 is 64%. However, nation wise, total numbers of VSC new acceptors have increased in 2075/76 (by 1,232). Karnali Province achieving the lowest (37%) while Province 1 and 2 the highest (77%) (Table 4.5.5). However, in absolute numbers as expected, Province 2 outperformed others.

4.5.5: Trend of VSC New Acceptors Against Projection by Province, 2073/74 to 2075/76

Variables	Province 1			Province 2			Bagmati			Gandaki			Province 5			Karnali			Sudur pashchim			National		
	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76
Projected	6875	5450	7950	11600	9300	16400	5100	3775	4250	2400	2400	2350	6600	4100	5225	2150	1950	2225	4275	3025	3900	40000	30000	42300
Achievement	5989	3930	6118	9988	8909	12562	3955	3020	1965	1749	1642	1552	3617	4135	2502	1880	1792	827	3055	2490	1624	30233	25918	27150
% achievement	87%	72%	77%	86%	96%	77%	65%	80%	46%	73%	68%	66%	55%	100%	48%	87%	92%	37%	72%	82%	42%	77%	86%	64%

New acceptors of spacing methods

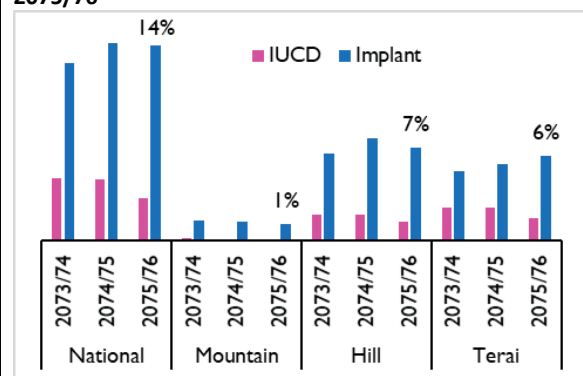
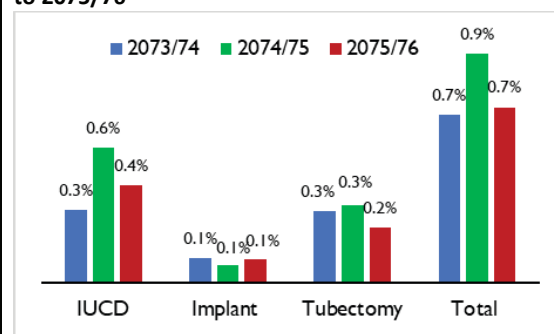
Nationally, new acceptors of all temporary methods (absolute numbers) have increased in 2075/76 than in previous year. Highest numbers of new acceptors for spacing (temporary) methods in 2075/76 are reported in Province 5 (Table 4.5.6).

Method wise Implant, Depo and Pills showed increasing trend. Among LARCs, implant significantly dominated IUCD in all provinces (Table 4.5.6 and Figure 4.5.19). Likewise, implant acceptors are higher than IUCD in all ecological regions (Figure 4.5.19).

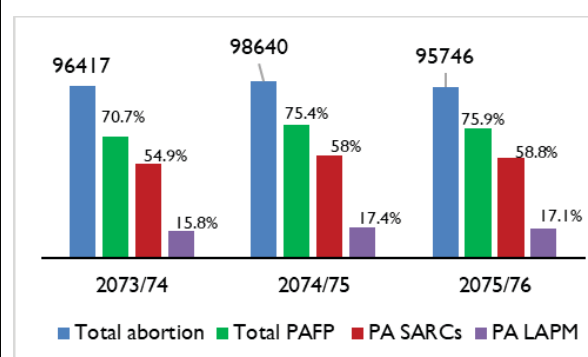
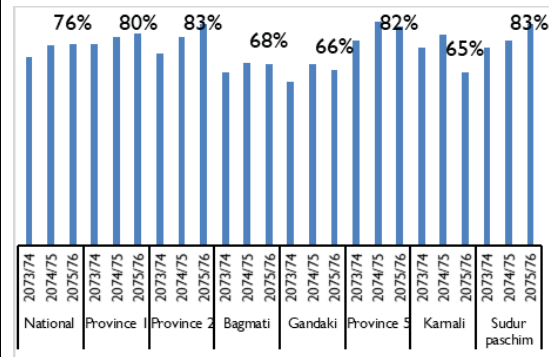
Table 4.5.6: New Acceptors (All Temporary Methods) by Province, 2073/74 to 2075/76 (in '000)

Variables	Province 1			Province 2			Bagmati			Gandaki			Province 5			Karnali			Sudur pashchim			National total users		
	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76	73/74	74/75	75/76
IUCD	3.9	3.7	2.4	5.1	5.4	3.4	10.7	9.2	5.4	3.5	2.7	2.6	6.3	6.7	5.9	0.8	0.6	0.9	3.2	3.1	1.9	33.9	31.6	22.6
Implant	17.7	21.6	20.9	7.7	8.8	11.8	25	22.9	20.	7.2	9	7.3	19.2	20.6	23.2	6.5	6.5	8.2	12	11	11.2	95.6	100.8	102.8
Depo	45.7	41.7	51.3	38.3	37.5	41.1	55.2	52.3	44.7	20.6	17.6	17.1	61.9	55.5	74.2	26	29.1	30.	31.1	33.2	33.5	279.2	267.1	292.1
Pills	23	21.7	21.8	21.8	18.8	22.3	23	23.5	19.9	13.6	10.9	11.2	33.8	33.7	44.3	11	12.7	14.6	16	14.8	14.3	142.7	136.4	148.4
Condom	26.7	22.6	23.2	25.3	22.7	20.9	30.2	24.7	23.5	20.8	19.1	18.	61.6	57	56.	18	15.4	14.4	38.3	33	31.8	221.3	194.8	187.9
Total new temp. methods acceptors	117.0	111.3	119.6	98.2	93.2	99.5	144.1	132.6	113.5	65.7	59.3	56.2	182.8	173.5	203.6	62.3	64.3	68.1	100.6	95.1	92.7	772.7	730.7	753.8

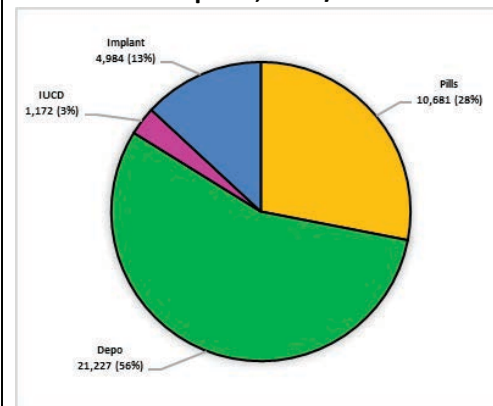
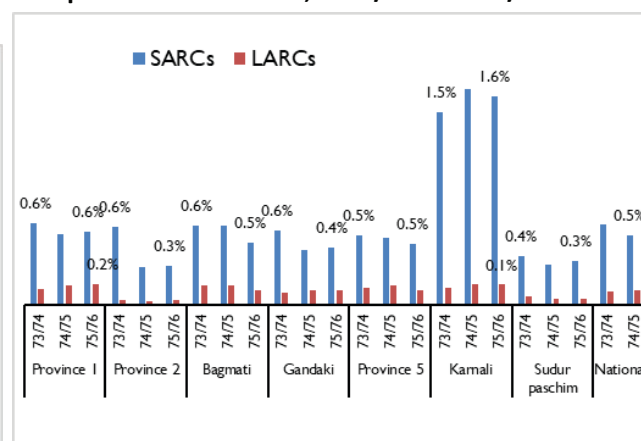
Except for implant, post-partum uptake of FP method has decreased in 2075/76 (Figure 4.5.19). Implant uptake within 48 hours of delivery as reported in HMIS reports needs to be verified as the National Family Planning Protocol (NMS Vol 1, 2010) has yet to approve this practice in Nepal. This could be reporting error or providers are already inserting implants to post-partum women before discharge from hospitals or birthing centres

Figure 4.5.19: Share (%) of LARCs Methods of New Acceptors Among Total New Acceptors, 2073/74 to 2075/76**Figure 4.5.20: Post-partum FP Method Acceptance as Proportion Among Expected Live Births, 2073/74 to 2075/76**

FP use after abortion is encouraging (Figure 4.5.21). Contraceptive uptake among total reported abortion services is 75.9%, an increase from 2073/74 (70.7%) (Figure 4.5.21) but only 17.1% is contributed by LARCs indicating women after abortion are relying on less effective methods (Figure 4.5.21, 4.5.22, 4.5.23). Karnali Province shows the lowest post abortion contraceptive uptake (65%) (Figure 4.5.22).

Figure 4.5.21: Proportion of Post Abortion FP Method Uptake by Method Type, 2073/74 to 2075/76**4.5.22: Percentage Post Abortion FP Uptake 2073/74 to 2075/76**

Less than 1% of under 20 years of age population (a proxy for adolescent population) accepted modern contraceptive methods (Figure 4.5.24). More than half of the method mix is contributed by Depo (56%--Figure 4.5.23). Adolescents in Karnali Province reported to accept higher proportion of contraceptives compared to other Provinces (Figure 4.5.24). Adolescents have high unmet need while contraceptive use is low, this is indicative of implementation challenges of comprehensive sexual and reproductive health programmatic in general and adolescent's family planning program in particular in Nepal.

4.5.23: Share of Temporary Method Mix (Excluding Condom) Among Under 20 Total New Acceptors, 2075/76**4.5.24: Under 20 Years Temporary Method New Acceptors as % of MWR, 2073/74 to 2075/76**

4.5.5 Issues, constraints and recommendations

Table 3.1.7: Issues and Constraints — Family Planning

Issues and constraints	Recommendations	Responsibility
- Suboptimum access to and use of FP services by hard to reach communities and underserved populations - Limited health facilities providing five contraceptive methods - High contraceptive discontinuation - Underutilized LARCs - Inadequate trained human resources on LAPM - Functionality of IFPSCs	- Implement FP micro-planning in low contraceptive prevalence wards/municipalities - Conduct targeted mobile outreach and satellite clinics focusing on LARCs - Mobilize VSPs (for LARC services) and RANMs	FWD, PHD, MoSD, municipalities
	- Ensure availability of LARCs commodities - Improve quality of FP services delivery	LS/MD, FWD, PHD, MoSD, PHS, municipalities
	- Improve FP education, information and services for adolescents including CSE - Scale up school health nurse programme - Scale up integrated FP/EPI clinics and postpartum and post-abortion services	FWD, MOE, PHD, MoSD, municipalities
	Strengthen FP services in urban health and community health clinics	FWD, PHD, MoSD, municipalities
	- Strengthen and expand the capacity of FP training sites - Explore LARCs coach-mentorship initiative	FWD, NHTC, PHTC, PHD, municipalities
	Expand and strengthen FP services in private hospital	MoHP, FWD, MD, PHD, MoSD
	Update the knowledge of FCHVs on LARC	FWD, PHD, municipalities
	Establish the role and responsibility of IFPSC in the federal context to ensure FP service delivery	MoHP, MoSD, PHD, municipality

4.5.6 FAMILY PLANNING 2020 (FP 2020)

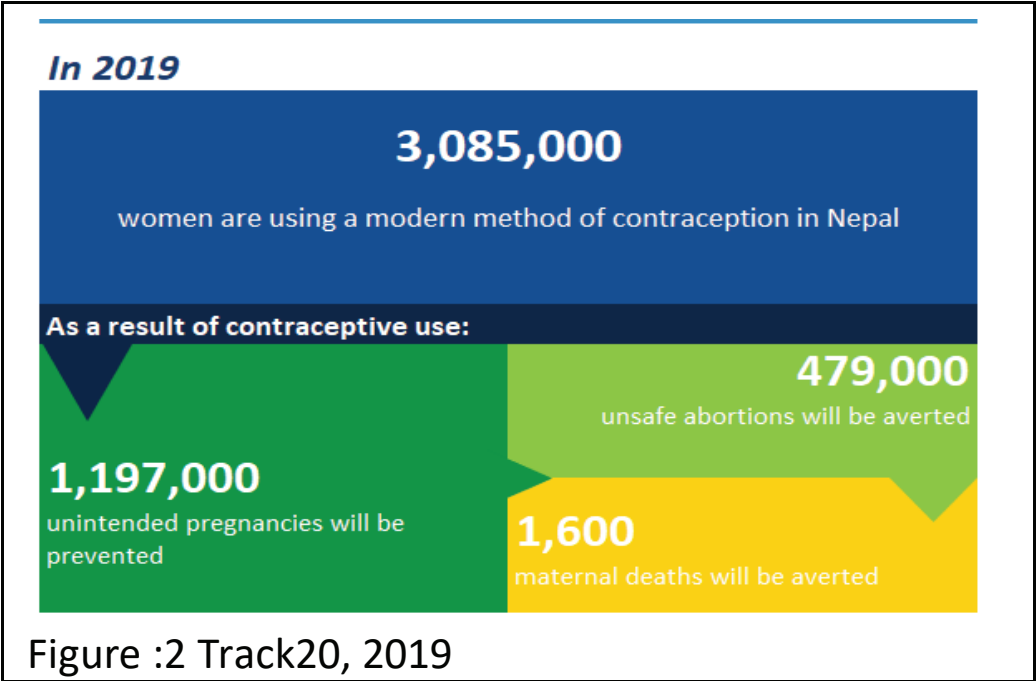
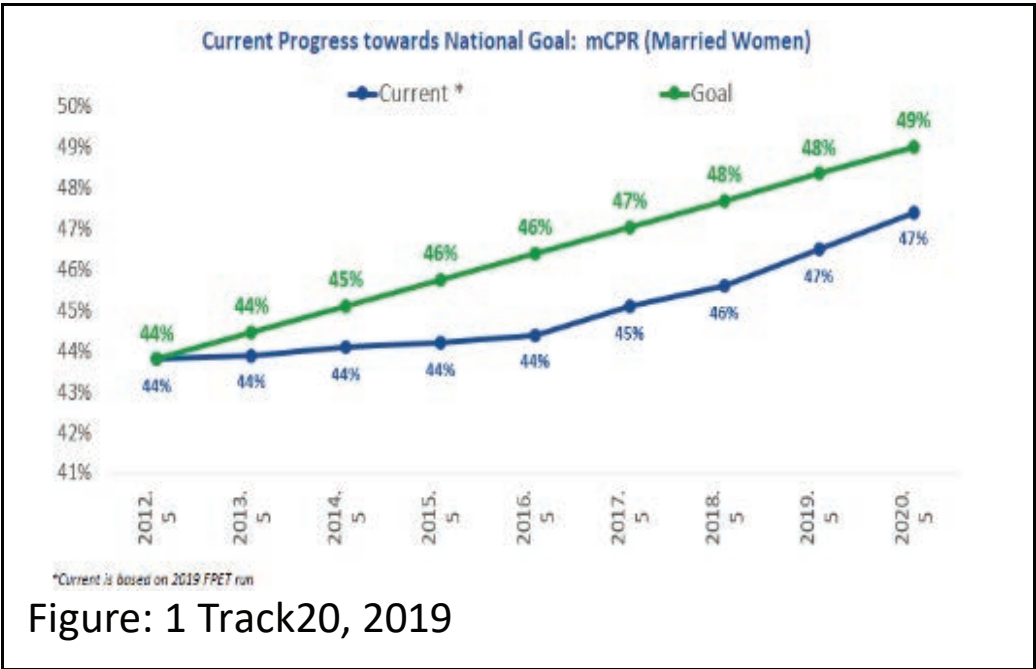
Family Planning 2020 (FP2020) is a global partnership to empower women and girls by investing in rights-based family planning (FP). FP2020 works with governments, civil society, multilateral organizations, donors, and the private sector to enable 120 million more women and girls to use modern contraceptives by 2020. Achieving the FP2020 goal is a critical milestone to ensure universal access to sexual and reproductive health (SRH) and reproductive rights by 2030 as laid out in Sustainable Development Goals 3 and 5.

The Government of Nepal (GoN) joined the FP2020 movement in 2015 with commitments to ensure equitable access to voluntary FP services based on informed choice for all individuals and couples, in particular, those who are most excluded and vulnerable. The commitment made by GoN pertains to three overarching themes - Policy and political environment; FP financing; and FP programme and service delivery. These commitments were further revitalized during the London Summit in 2017 where GoN reiterated its commitment to increase the government budget for Family Planning by 7% each year up to 2020; accelerate progress in increasing the number of additional users of modern contraceptive methods by an estimated 1 million by 2020, and increasing the proportion of FP demand satisfied (FPDS) to 71% by 2020. Moreover, with a special focus on meeting the FP needs of adolescents and youths, Nepal committed that it will strive to expand the contraceptive method mix that reflect their preferences.

Figure: 1 Track20, 2019

Nepal is well on track towards achieving FP2020 commitments bolstered by progressive and favourable policy environment on FP. FP has been enshrined as a fundamental right in the

constitution, and included in the basic health service package under the Public Health Act 2018, thus paving a way towards universal health coverage of FP services. The 15th National Plan (2018/2019-2022/2023) of the Government of Nepal has pushed forward the agenda of SRH/FP. In addition to the Public Health Act2018, the Reproductive Health Act2018, as well as the Safe Motherhood Roadmap (2020-2030being finalized) emphasize the availability and accessibility of rights-based FP services. In terms of coverage, modelled estimates show Nepal is well within range of achieving its targetof 49% modern contraceptive prevalence by 2020 (Fig 1), an important achievement that implies delivering services to over 3 million women in 2019. As a result of this level of use, 1.2 million unintended pregnancies were averted and 479,000 unsafe abortions and 1,600 maternal deaths were averted (Fig 2).



The Government of Nepal has consistently increased the budget for Family Planning over the period of last five years. Over last five years, the government budget for family planning has increased by two-third (NPR 296,107,000 in Nepali fiscal year 2072/73 (2015/16) vs. NPR 496,687,000 in 2076/77) (2019/20). GoN has been successful in engaging and leveraging support from external development partners in the areas of service delivery and provision of FP commodities.

To increase the range of contraceptives, Ministry of Health and Population has prioritized capacitating health institutions and service providers through training as well as accreditation of training sites on LAPM (Long Acting and Permanent Method). In the new federalized context, there are seven Provincial Health Logistics Management Centers to ensure forecasting, quantification and supply of FP commodities. Moreover, various interventions are being undertaken nationally to broaden method choice and availability namely the provision of client-centered, voluntary, quality FP services through dedicated mobile/outreach FP service providers to the most excluded and vulnerable groups; tailored demand generation activities to increase the uptake of FP methods among special groups with high unmet need such as religious and ethnic minorities, poor women and women from remote locations; focus on post-partum and post-abortion FP in selected health facilities; feasibility and acceptance operational research on Sayana Press® in two districts (with expectation to national scale up); Municipal level hot spots mapping of adolescents fertility for all 753 municipalities to identify the priority areas for need based interventions and developing partnership with the civil societies organizations led by various groups such as people living with disabilities, youths advancing 'leaving no one behind'.

4.6 Adolescent Sexual and Reproductive Health

4.6.1. Background

National Adolescent Sexual and Reproductive Health (ASRH) is one of the priority programs of Family welfare Division (FWD), Department of Health Services. Nepal is one of the country in South Asia which has developed and endorsed the first National Adolescent Health and Development (NAHD) Strategy in 2000. To support district health managers to operationalize the strategy, an implementation guideline on Adolescent Sexual and Reproductive Health (ASRH) was developed in 2007 and piloted in 26 public health facilities of 5 districts (Bardiya, Surkhet, Dailekh, Jumla, Baitadi). ASRH barrier study “Assessing supply side constraints affecting the quality of adolescent friendly services (AFS) and the barriers for service utilization” carried out in 2014 under leadership of FWD or interventions were implemented in BS.2072 (2015) as part of system strengthening (capacity building, certification for quality delivery of AFS in friendly manner) and awareness raising interventions among adolescents and key stakeholders. To address the needs of emerging issues of adolescents in the changing context, the NAHD strategy is revised in 2018 the main aim of revision of strategy was to address the problem face by the adolescent in Nepal. Adolescents aged 10 to 19 constitute 24% of the population in Nepal. Nepal is 3rd highest country in child marriage though legal age at marriage is 20. Seventeen percent of girls aged 15-19 years are already mothers or pregnant with their first child. Only 15% of currently married adolescents use a modern method of contraceptives. The Adolescent Fertility Rate (AFR) is an increasing trend from 81 in 2011 to 88 in 2016 per 1,000 women of 15-19 years.

4.6.2. Vision, Mission, Goal, objectives, target, strategic principle and direction

Vision: To enable all adolescents to be healthy, happy, competent and responsible.

Mission: Optimal use of the available methods and establishing strong bond between the concerned parties and developing strategy with the view of securing the health and development of adolescents.

Goal: To promote the sexual and reproductive health of adolescents.

General Objective: By the year 2025, all adolescents will have positive life styles to enable them to lead healthy and productive lives.

Specific Objectives

- To create safe, supportive and protective environment for all adolescents.
- To increase adolescents’ access to scientifically sound and age appropriate information about their health and development
- To enhance life skills and improve the health status of adolescents
- To increase accessibility and utilization of adolescent friendly quality health and counseling services.

Targets:

- To make all health facilities as adolescent friendly as per the envision of National Health policy (2014) and NHSS (2016-2021)
- To ensure universal access to ASRH services as for the Nepal Health Sector Strategy Implementation Plan (2016-2021) aims to: *scale up Adolescent Friendly Service (AFS) to all*

health facilities; behavioral skill focused ASRH training to 5,000 Health Service Providers and more than 100 health facilities to be certified with quality AFS by 2021

The programme aims to reduce the adolescent fertility rate (AFR) by improving access to family planning services and information.

Strategic Principles and Direction

- a. Participation and leaderships of Adolescent
- b. Equality and equity
- c. Right with responsibility
- d. Strategies partnerships
- e. Role of central, province, and local government

4.6.2. Achievements in FY 2075-76 (FY 2018/2019)

1. Scale-up of Adolescent Friendly Service: The National ASRH program has been scaled up in 74 out of 77 districts (Khotang, Chitawan, Tanahu not implemented in this three districts) 1331 health facilities till the end of current fiscal year 2074/75.

2. Strengthening Health facilities for AFS:

2.1 ASRH Clinical Training site development:

Total six ASRH clinical training sites has been established.

2.2 Competency based ASRH training to the Health service providers:

Total 1768 health service providers trained on behavioural and skill focused competency based 5 days ASRH training from 2015 to Dec 2018 (BS. FY 2071/72 to 2074/75)

3: Demand generation interventions on ASRH Program:

Different awareness raising activities on ASRH was carried out in this FY under leadership of National Health Education Information and Communication Center (NHEICC) and FWD. Different approaches like My First Baby (MFB), Partner Defined Quality for Youth (PDQY), school health program were implemented to raise awareness among adolescents. These activities helped adolescents to understand the problems during adolescence, their mitigation approach and services available at HF addressing their needs.

3.1 Establishment of AFICs in schools:

A total of 297 AFICs were established in school to establish link between AFS in health facilities and AFICs in schools. The AFICs is equipped with ASRH related IEC/BCC materials such as 8 sets of ASRH booklet, Adolescent health and development flip chart; comic book on ASRH, poster on finger pointing to AFS, brochure on delay marriage, danger signs during pregnancy with orientation to the teachers, parents, school health management, and health service providers from AFS to utilize the IEC materials by both teachers and adolescents girls and boys as well as access to AFS services by adolescents when and as needed. A total of 2,822 teachers, parents, students and health service providers were sensitized on ASRH, AFIC, and CSE to create enabling environment in the community and promote the utilization of AFS.

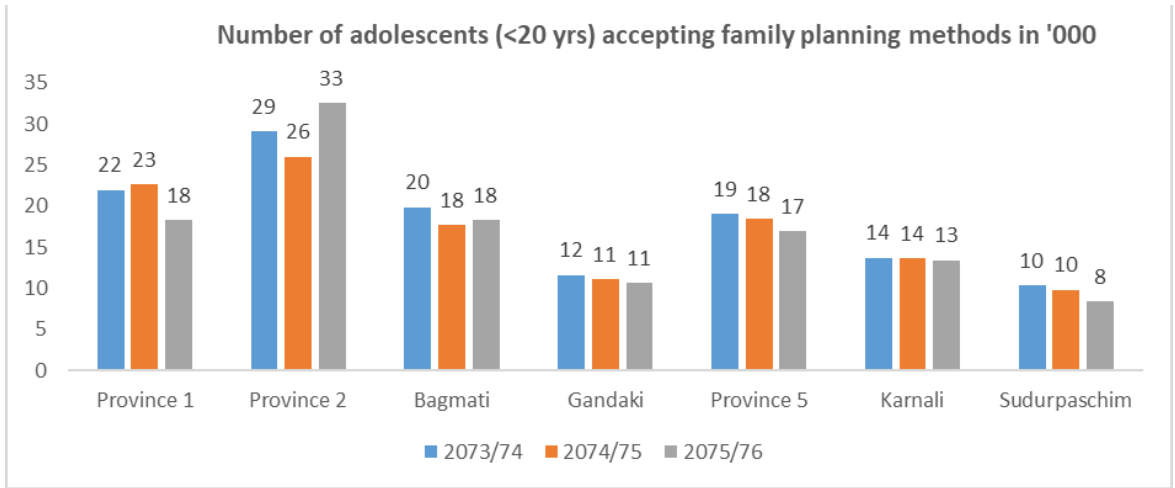
3.2 Menstrual Hygiene Management (MHM):

Menstrual Hygiene management is implemented in 77 district with distribution of sanitary pad from local level for limited school. The MHM training package was developed jointly by Ministry of Health and Ministry of Education and designed to build capacity of teachers of the AFIC in schools and health workers of the Adolescent Friendly service sites. The school teachers who are trained on MHM are regularly conducting menstrual management session in schools. The schools with AFIC are also coordinating with the trained health service providers to conduct session on MHM for students.

4.6.3 ASRH service Utilization

Family planning services

The figure below shows the trend of family planning service utilization among the adolescents. The number of adolescents utilizing family planning service is highest in the province 1 and the lowest in sudurpachim province. The number of adolescents accepting family planning has decrease in province 1, Karnali and sudupaschim province in 2075/76 compared to 2074/75.



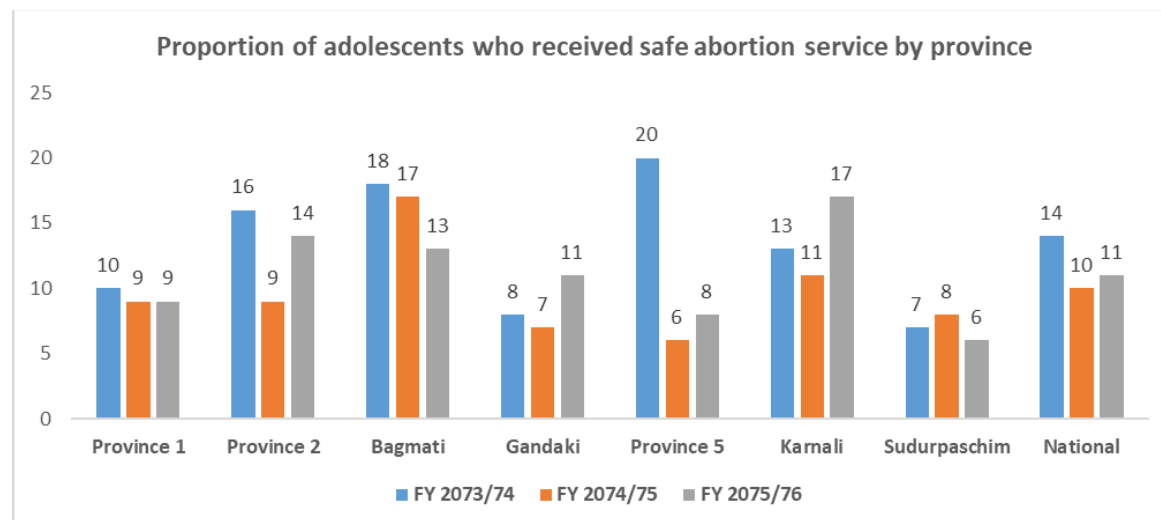
Safe motherhood services

The table below reports the number of adolescents seeking safe motherhood services. Province 2 had highest number of adolescents who received safe motherhood services whereas Sudurpaschim has the lowest number of adolescents.

	1st ANC (any time)	1st ANC (as per protocol)	4 ANC as per protocol
National	118408	77881	52226
Province 1	18261	12208	8557
Province 2	32541	18397	9714
Bagmati	18294	11926	8703
Gandaki	10657	7419	5749
Province 5	16883	12437	8961
Karnali	13409	8951	5826
Sudurpaschim	8363	6543	4716

Safe Abortion Services

The proportion of adolescents who received safe abortion services is highest in province 5 and the lowest in Sudurpaschim province. Compared to the FY 2075/75, proportion of adolescents seeking abortion services has increased or remained at same level in all province except Bagmati and Sudurpaschim province.



4.6.4 List of Certified AFS sites with pre- certification and certification score obtained disaggregated

S. N	District	AFS sites	Pre-score	Certification score	Date of certification
Province 1					
1	Sunsari	Harinagara PHCC	90.09%	90.90%	May 2018
2	Sunsari	Chatra PHCC	90.09%	91.53%	May 2018
3	Sunsari	Sitapur HP	92.00%	91.00%	April 2016
4	Sunsari	Ithari PHCCC	91.30%	93.00%	April 2016
5	Udaypur	Hadiya HP	81.37%	91.93%	June 2018
6	Udaypur	Tapeshwari HP	89.63%	88.23%	June 2018
7	Udaypur	Jogidah HP	98.70%	98.80%	November 2017
8	Udaypur	Sundurpur HP	94.70%	94.70%	November 2017
9	Udaypur	Hardeni HP	94.70%	94.70%	November 2017
Province 2					
10	Mahottari	Bardibas Hospital	90.70%	93.30%	November 2016
11	Mahottari	Gaushala PHCC	89.40%	94.00%	November 2016
12	Mahottari	Bharatpur HP	93.60%	81.00%	November 2017
13	Rautahat	Basantpatti HP	83.43%	83.38%	June 2018
14	Rautahat	Barahampuri HP	89.83%	96.19%	June 2018
15	Rautahat	Kanakpur HP	93.00%	93.00%	November 2016
16	Rautahat	Patura PHCC	85.60%	91.50%	November 2016

17	Rautahat	Sarmujwa HP	90.00%	96.80%	November 2016
18	Sarlahi	Sisautiya HP	90.00%	96.19%	June 2018
19	Sarlahi	Bhaktipur HP	96.20%	98.40%	November 2016
20	Sarlahi	Achalgad PHCC	94.40%	96.90%	November 2016
21	Sarlahi	Pipariya HP	95.50%	98.40%	November 2016
22	Saptari	Hanumanagar HP	90.90%	96.80%	November 2017
23	Saptari	Bordhebarsain HP	91.50%	93.10%	November 2017
24	Saptari	Patthagada HP	91.50%	93.40%	November 2017
Bagmati					
25	Kathmandu	SPN Clinic, Putalisadak	100.00%	92.60%	August 2017
26	Sindhuli	Sirthuali PHCC	92.30%	98.41%	March 2018
27	Sindhuli	Chapauli HP	93.12%	94.07%	March 2018
28	Sindhuli	Belghari PHCC	87.20%	87.00%	December 2015
29	Sindhuli	Beseshwor HP	92.30%	96.00%	December 2015
30	Sindhuli	Shilapati HP	90.70%	97.00%	December 2015
Gandaki					
31	Kaski	SPN Clinic, Pokhara	95.00%	87.80%	August 2017
Province 5					
32	Arghakanchi	Thada PHCC	89.13%	92.20%	January 2017
33	Arghakanchi	Hanspur HP	96.00%	92.20%	January 2017
34	Dang	Gaduwa HP	92.26%	91.41%	July 2018
35	Dang	Sashaniya HP	95.00%	94.70%	July 2017
36	Dang	Satbariya HP	95.00%	91.00%	July 2017
37	Kapilvastu	Jaynagar HP	91.73%	91.53%	May 2018
38	Kapilvastu	Barkalpur HP	98.41%	98.41%	May 2018
39	Kapilvastu	Gauri HP	83.00%	92.00%	August 2016
40	Kapilvastu	Tilaurakot HP	90.00%	98.00%	August 2016
41	Kapilvastu	Shivpur HP	98.00%	98.00%	August 2016
Karnali					
42	Pyuthan	Khaira HP	88. %	95.63%	July 2018
43	Pyuthan	Sotre	83.01%	89.43%	July 2018
44	Pyuthan	Puranthanti HP	92.00%	95.00%	December 2015
45	Pyuthan	Okharkot HP	92.00%	95.00%	December 2015
46	Pyuthan	Bhingri PHCC	92.80%	95.60%	July 2017
47	Pyuthan	Gothiawang HP	93.40%	89.70%75	July 2017
48	Rolpa	Kotgaun HP	94.60%	93.01%	July 2018
49	Rolpa	Khumel HP	92.60%	96.20%	November 2017
50	Rolpa	Libang HP	94.70%	94.70%	December 2017
51	Rukum	Sylakapha HP	94.70%	96.80%	September 2016

Family Welfare

52	Rukum	Bafikot HP	96.00%	96.20%	September 2016
53	Rukum	Smiruti HP	96.00%	96.20%	September 2016
Sudurpaschim					
54	Achham	Duni HP	91.80%	96.00%	December 2015
55	Achham	Kalika HP	85.10%	83.00%	December 2015
56	Baitadi	Kuwakot	96.80%	96.82%	April 2018
57	Baitadi	Sharmali	98.40%	98.41%	April 2018
58	Baitadi	Shankarpur HP	84.70%	94.97%	July 2018
59	Baitadi	Kesharpur PHCC	86.70%	90.08%	July 2018
60	Baitadi	Bhunali HP	88.00%	97.00%	December 2016
61	Baitadi	Siddheswor HP	86.80%	90.60%	December 2016
62	Bajhang	Sunkuda HP	84.77%	95.63%	July 2018
63	Bajhang	Bhairavsthan HP	81.30%	85.00%	December 2015
64	Bajhang	Deulekh PHCC	94.00%	97.20%	December 2015
65	Bajhang	Kharitadi	91.50%	98.00%	December 2016
66	Bajhang	Chhana HP	83.70%	90.00%	December 2016
67	Bajura	Tate HP	92.06%	92.06%	April 2018
68	Bajura	Kaileshmandu HP	86.00%	98.30%	May 2017
69	Bajura	Jaguda HP	90.00%	95.00%	May 2017
70	Dadeldhura	Samaiji HP	80.00%	92.19%	July 2018
71	Dadeldhura	Nawdurga	80.00%	93.10%	May 2017
72	Dadeldhura	Bagarkot HP	87.00%	93.10%	May 2017
73	Dadeldhura	Aalital HP	91.00%	87.80%	June 2017

4.6.5. Issues and recommendations — Adolescent Sexual and Reproductive Health

Issues and problems raised at recent regional and national review meetings and during joint monitoring of the certification process are summarized in Table 3.6.6.

Table 3.6.6: Issues and Recommendations from Regional and National Review Meetings and Joint Monitoring

Issues	Recommendations	Responsibility
High prevalence of early marriage and teenage pregnancy	Intensify community awareness activities and effectively implement the law	NHEICC, FWD, MoHP, line ministries province, local level and partners
Low CPR and high unmet need for contraception among vulnerable populations including adolescents	Run innovative activities to increase access to family planning services and information in hard to reach areas and among vulnerable populations including adolescents	FWD, DoHS, MoHP, province, local level
Quality assurance of ASRH Programme	Certify health facilities using “the quality improvement and certification tool for AFS 2015” to promote the delivery of adolescent friendly quality services.	FWD province, local level and ASRH partners
Inadequate trained human	Strengthen ASRH clinical training sites and develop	NHTC province, local

resources on ASRH in health facilities	the capacity of service providers with “behavioural and skill focused competency based 5 days ASRH training” at all health facilities and specially AFS sites	level and ASRH Partners
Inadequate monitoring	Increase the number of joint monitoring visits to AFS sites at different levels	WD, MD, HOs province, local level and ASRH partners
Inadequate resources allocated to the programme	Allocate sufficient resources at central, district and local levels	FWD, DHOs province, local level
Inadequate links with other programmes (family planning, safe motherhood, HIV)	Advocate for the functional integration of ASRH issues and services in other thematic areas/programmes	FWD province, local level and ASRH partners
Inadequate IEC/BCC materials	Ensure the supply of ASRH related IEC/BCC materials to health facilities	FWD, NHEICC, HOs province, local level and ASRH partners
Lack of disaggregated ASRH data (by age/sex) and integration in HMIS	Revise the monthly/annual reporting format (Annex 5: ASRH Programme Implementation Guidelines, 2011) and advocate to incorporate in HMIS	FWD,MD, NHTC, province, local level and ASRH partners

Reproductive health morbidity prevention and management program

Management of pelvic organ prolapse and Obstetric Fistula

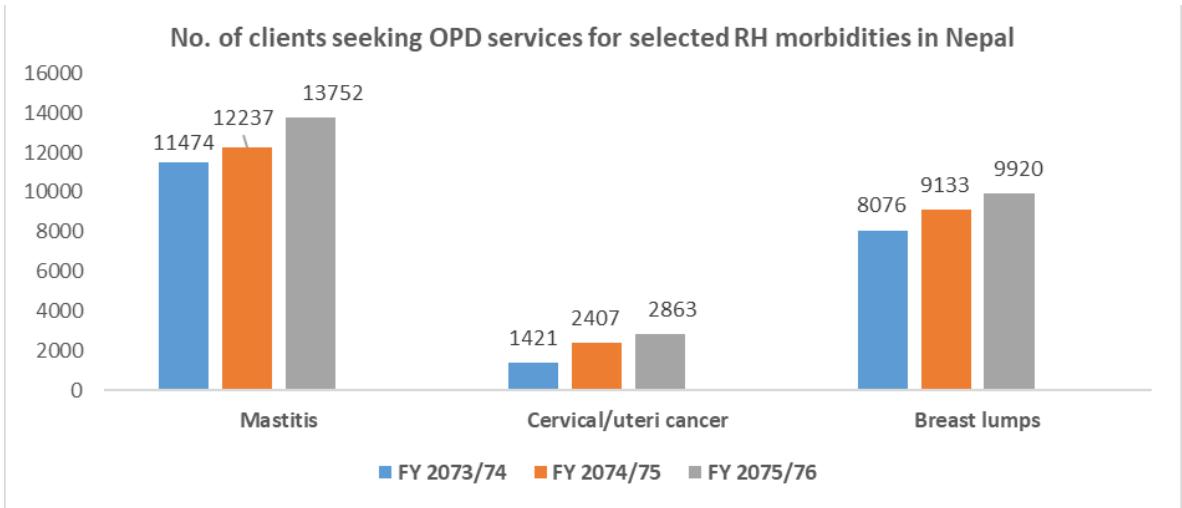
Pelvic organ prolapse (POP) is common reproductive health morbidity in Nepal with negative health and social consequences. Multiparity, maternal malnutrition, too frequent pregnancies and heavy work after delivery are the main risk factors for POP. Each year the government allocates funds for the management of POP that includes free screening, providing silicon ring pessaries, Kegel’s exercise training and free surgical services at designated hospitals.

Cervical cancer screening and prevention

Cervical cancer is the most common cancer among women in Nepal, accounting for 21.4 percent of all cancer among women. The national guidelines on cervical cancer screening and prevention (2010) call for screening at least 50 percent of women aged 30–60 years and reducing the mortality due to cervical cancer by 10 percent with recommended screening among this group every five years. Cervical cancer screening is done by visual inspection of the cervix by trained health workers using acetic acid. If any signs of a pre-cancerous lesion are seen, women are referred for cryotherapy to cure the lesion. This approach is cost-effective as the early detection of lesions and early management by cryotherapy will usually prevent progression to cervical cancer, and the cost of scaling up this activity is relatively low. Budget was allocated in all 753 Palika to conduct the cervical cancer screening and prevention program. However, due to limited trained health worker, it is difficult to ensure that service is in full-fledged. In this reporting year FY 2075/76, total 51 health workers were trained on visual inspection with acetic acid and cryotherapy.

Utilization of health services for selected reproductive health morbidity in Nepal

The graph below shows the trend of clients seeking OPD services for selected reproductive morbidities in Nepal. The graph shows the increasing trend for all services in last three years.



Source: HMIS/MD, DoHS

4.7 Primary Health Care Outreach

4.7.1 Background

Health facilities were extended to the village level under the National Health Policy (1991). However, the use of services provided by these facilities, especially preventive and promotive services, was limited due to accessibility factors. Primary health care outreach clinics (PHC-ORC) were therefore initiated in 1994 (2051 BS) to bring health services closer to the communities.

The aim of these clinics is to improve access to basic health services including family planning, child health and safe motherhood. These clinics are service extension sites of PHCs and health posts. The primary responsibility for conducting outreach clinics is of ANM and paramedics. FCHVs and local NGOs and community based organisations (CBOs) support health workers to conduct clinics including recording and reporting.

Based on local needs, these clinics are conducted every month at fixed locations, dates and times. They are conducted within half an hour’s walking distance for their catchment populations. ANMs/AHWs provide the basic primary health care services listed in Box 4.7.1.

Box 4.7.1: Services to be Provided by PHC-ORCs According to PHC-ORC Strategy	
Safe motherhood and newborn care: • Antenatal, postnatal, and newborn care • Iron supplement distribution • Referral if danger signs identified.	Child health: • Growth monitoring of under 3 years children • Treatment of pneumonia and diarrhoea.
Family planning: • DMPA (Depo-Provera) pills and condoms • Monitoring of continuous use • Education and counselling on family planning methods and emergency contraception • Counselling and referral for IUCDs, implants and VSC services • Tracing defaulters.	Health education and counselling: • Family planning • Maternal and newborn care • Child health • STI, HIV/AIDS • Adolescent sexual and reproductive health. First aid: • Minor treatment and referral of complicated cases.

4.7.2 Service coverage

In 2075/76, 2.8 million people were served at 138,125 outreach clinics (Table 4.7.1). A total of 138,125 clinics were run which represents 92% of the targeted number (138,125 clinics x 12 = 1,657,500 in a year). The table below shows total number of PHC ORC conducted by province. The highest number of clinics was conducted in province 2 and the highest peoples was served in province 5.

Table 4.7.1: PHC-ORCs Conducted and People Served in 2075/76 by Province

Province	Total no. clinics	Services provided to clients (new+old)
Province 1	25,642	459,038
Province 2	25,872	499,384
Bagmati	20,938	380,100
Gandaki	15,965	301,013
Province 5	22,008	529,097
Karnali	11,038	253,398
Sudurpashchim	16,662	399,273
National	138,125	2,821,303

Source: HMIS/MD, DoHS

The table below shows that number of people provided with deworming tablets, iron tablets and vitamin A for postpartum. The highest number of clients served by PHC ORC was in Province 2.

Table 4.7.2: PHC-ORC Clinics Distributed Medicines/Served Peoples by Province in FY 2075/76

Province	Deworming Tablets	Iron Tablets	Vit A for Postpartum
Province 1	11199	43803	5390
Province 2	33203	103512	20409
Bagmati	5623	22709	3148
Gandaki	3183	15240	1769
Province 5	13112	59797	3674
Karnali	7343	15706	3553
Sudurpashchim	3089	18244	1374
National	76752	279011	39317

The tables below 4.7.3 shows the last 3 years trend of services provided by PHC-ORC clinics. In comparison to last FY 2074/75, the service delivery of PHC-ORC clinics is in increasing trend except Depo. In FY 2075/76 primary treatment has been increased in comparison to last FY (Table 4.7.3).

Table 4.7.3: Trend of Services Provided by PHC-ORCs

Service Types	2073/74	2074/75	2075/76
Primary treatment	817,748	894,377	1,263,499
Depo (Number)	189,686	175,555	166,655
ANC (times)	249,525	236,238	246,402
PNC (times)	43,752	37,707	39,330
Growth monitoring (0-11 Months)	385,076	929,851	1,589,883

Source: HMIS/MD, DoHS

4.7.3 Issues, constraints and recommendations

Table 4.7.4: Issues, Constraints and Recommendations— Primary Health Care Outreach

Issues / constraints	Recommendation	Responsibility
All the PHC-ORCs are not functional	Functionalize all PHC-ORCs by resolving all issues at every levels	FWD, HO

EPIDEMIOLOGY AND DISEASE CONTROL

5.1.1 Malaria

5.1.1.1 Background

Nepal's malaria control programme began in 1954, mainly in the Tarai belt of central Nepal with support from the United States. In 1958, the National Malaria Eradication Programme was initiated and in 1978 the concept reverted to a control programme. In 1998, the Roll Back Malaria (RBM) initiative was launched for control in hard-core forests, foothills, the inner Tarai and hill river valleys, which accounted for more than 70 percent of malaria cases in Nepal. Malaria is a greater risk in areas with an abundance of vector mosquitoes, amongst mobile and vulnerable populations, in relatively inaccessible areas, and during times of certain temperatures.

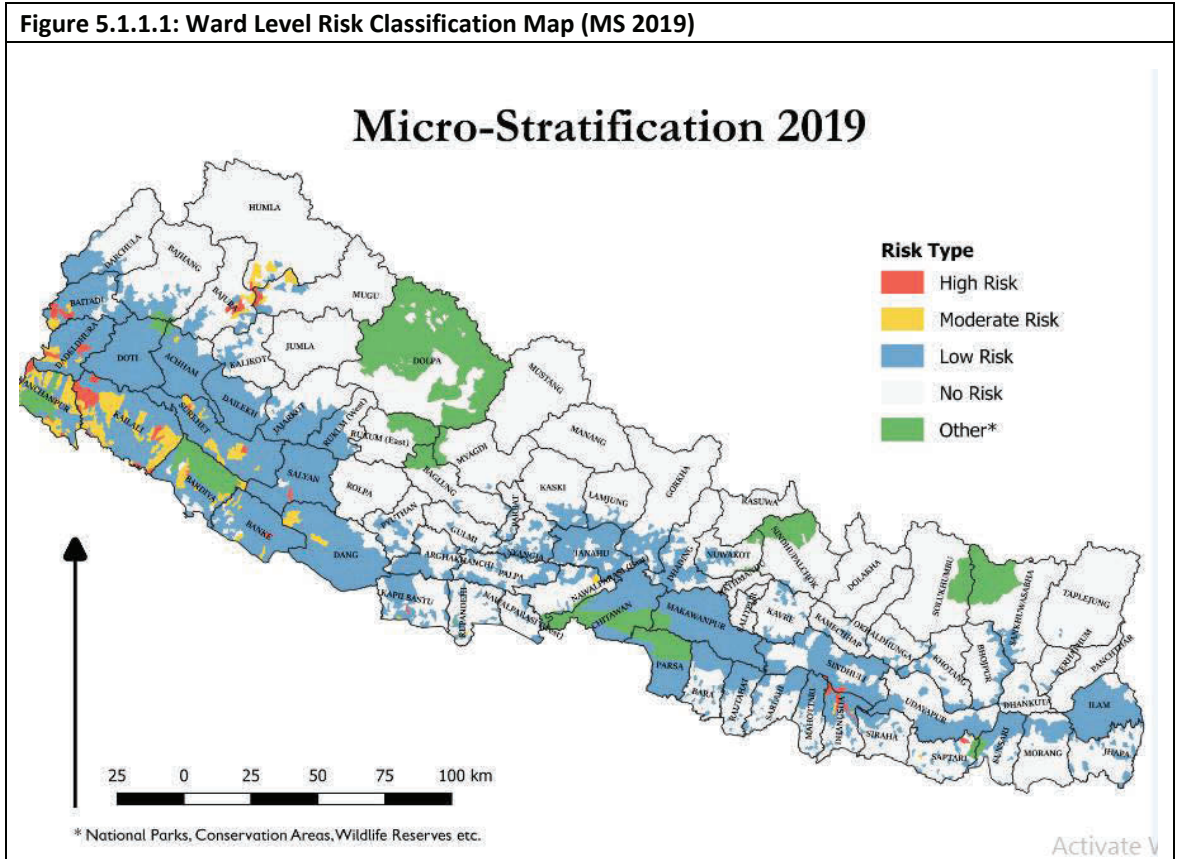
Malaria risk stratification 2019 was tailored to suit the changing epidemiology of malaria in the country and to ensure appropriate weightage is allotted to key determinants of malaria transmission as recommended by external malaria program review. Malaria data from last three years reveals that even within Rural Municipalities or Municipalities, malaria is concentrated within some wards while other wards remain relatively free of malaria. In these settings, transmission is typically sufficiently low and spatially heterogeneous to warrant a need for estimates of malaria risk at a community level, the wards. In order, to refine the risk stratification at the community level and thereby define the total population at risk of malaria; malaria risk micro- stratification was conducted at the wards level of Rural Municipality or Municipalities.

The methodology used recent malaria burden data supplemented by information on the spatial distribution of key determinants of transmission risk including climate, ecology, and the presence or abundance of key vector species and vulnerability in terms of human population movement. The method was based on 2012 and 2016 micro-stratification study and it was recommended by Epidemiology and Disease Control Division (EDCD) and Malaria Technical Working Group (TWG). EDCD provided the overall oversight of the study.

Disease burden, geo-ecology & entomological risk, and vulnerability were given a defined weight and each ward received a weightage response on the three determinants. A median annual API was calculated for each ward based on the last 3 years (16th July 2016-15th July 2019) malaria burden data of the ward and a mean API was derived from the 3 years median API. A standard deviation was calculated and $2 \times SD + \text{mean}$ was taken as a high disease burden ward and the ward was allotted 100 % of total disease burden weight (0.6). Similarly, moderate and low disease burden wards were identified and allotted their weightage response. Receptivity was allotted a total weight of 0.3, which was further divided into eco-environment (0.1) and presence of vectors (0.2). Vulnerability was allotted a total weight of 0.1, which was further divided, and weightage response was allotted as: high mobility areas (0.1) and moderate (0.05) to low (0.01) mobility areas. The weightage response of each determinant for a ward was calculated and the summation of the three determinants was converted into percentage. A cut off percentage of 75 or more was agreed as the criteria to define a high-risk ward.

Based on this method, micro stratification 2019 was updated and the wards were designated as high, moderate, low and no risk wards. High risk wards were identified in 47 wards scattered across 15 districts. Out of these high-risk wards, 6 wards in Province 2, 1 ward in Province 3, 3 wards in Province 5, 7 wards in Karnali Province and 30 wards in Sudurpashchim Province while no high-risk ward was detected in Province 1 and Gandaki Province. Furthermore, moderate risk wards were identified in 151 wards in 18 districts (5 additional districts to the 15 districts that contained high risk wards) of these moderate risk wards, 6 wards in Province 2, 1 ward in Gandaki Province, 22 wards in Province 5, 18 wards in Karnali Province and 104 wards in Sudurpashchim Province while no even moderate risk ward was in Province 1.

Malaria transmission is concentrated in the Sudurpashchim and Karnali Province with these two provinces accounting for approx. 79% high risk burden and around 83% moderate risk burden. Malaria transmission has reached low level of endemicity in most of the Tarai regions (plain lands) but malaria infection is increasingly being detected in upper hilly river valleys, which was traditionally classified as “No Malaria” risk. A relative incidence analysis of malaria infection in upper hilly river valleys suggest that malaria infection was endemic in the area, with adults developing immunity with repeated exposures as they grow older and children bearing the brunt of the infection due to immature immunity (incidence is significantly higher in children less than 14 years as compared to adolescents and adults 15+).



Source: Malaria micro stratification report 2019

Nepal's National Malaria Strategic Plan (NMSP, 2014–2025) has shown in Box 5.1.1.1.

Box 5.1.1.1: National Malaria Strategic Plan (2014–2025 Revised)

National Malaria Strategic Plan (NMSP 2014 – 2025) was revised since it was developed in 2013 and targeted Pre-elimination, and is as a result out of step with the latest normative guidance on malaria elimination from the World Health Organization (WHO) (“Global Technical Strategy 2016 – 2030” and ‘A framework for malaria elimination, 2017’), current country structure, disease epidemiology, 2017 mid term malaria program review. This plan has inherent Government of Nepal’s commitment and seeks appraisal of external development partners, including the Global Fund, for possible external funding and technical assistance. The aim of NMSP is to attain **“Malaria Free Nepal by 2025”**..

National Malaria Strategic Plan (2014 – 2025, Revised) are phased malaria elimination by province:

- Achieve Malaria Elimination (zero indigenous cases) throughout the country by 2022;
 - Province 1, Bagmati & Gandaki “get to zero indigenous case” by 2020,
 - Province 2 & 5 “get to zero indigenous case” by 2021,
 - Province Karnali & 7 “get to zero indigenous case” by 2022, and
- Sustain malaria – free status and prevent re-introduction of malaria in provinces after getting to zero indigenous case.

Goal: In line with the WHO Global Technical Strategy for Malaria 2016–2030 (GTS) and the Asia Pacific Leaders Malaria Alliance Malaria Elimination Roadmap, the goals of the National Malaria Strategic Plan 2014 – 2025 are:

- Achieve Malaria Elimination (zero indigenous cases) throughout the country by 2022; and
- Sustain malaria – free status and prevent re-introduction of malaria.

The specific objectives of NMSP (2014 -2025, Revised) are as follows:

- Strengthen surveillance and strategic information on malaria for effective decision making.
- Ensure effective coverage of vector control intervention in the targeted malaria risk areas.
- Ensure universal access to quality assured diagnosis and effective treatment for malaria.
- Develop and sustain support from leadership and communities towards malaria elimination.
- Strengthen programmatic technical and managerial capacities towards malaria elimination.

Current Achievement

By 2018, National Malaria Program had achieved 55% reduction in indigenous malaria cases compared to 2013, In 2016, 3 deaths were recorded in an imported case of malaria, and foci investigation activity also got momentum in this year. In 2075/76, there were altogether 121 foci which were gone through the investigation.

Rationale for amending the NMSP

Nepal is primarily a low malaria endemic country with around 80% of malaria cases due to *P. vivax* and the remaining burden due to *P. falciparum* with occasional case reports of *P. ovale* or *P. malariae* mostly imported from Africa. *Vivax* parasites have unique biological and epidemiological characteristics that pose challenges to control strategies that have been principally targeted against *Plasmodium falciparum*. Infection with *P. vivax* typically results in a low blood-stage parasitemia

with gametocytes emerging before illness manifests, and dormant liver stages causing relapses. As a consequence of low parasitemia, high prevalence of asymptomatic infection and difficulty in detection of the parasites, ability to infect mosquitoes before development of clinical symptoms, and appearance of relapse within months to years of the primary infection; *P. vivax* pose a great challenge to malaria elimination. Radical cure with at least 2 weeks of Primaquine is required to clear the hypnozoites but the drug can only be given after a normal G6PD test. Besides, current point of care rapid tests may not identify heterozygotes G6PD deficient female despite a normal rapid test and such a case may hemolyze on exposure to Primaquine. *P. vivax* tolerates a wider range of environmental conditions and is more likely to lead to geographical expansion. Conventional control methods of minimizing human contact with mosquito vectors through insecticide-treated mosquito nets and indoor residual spraying – may be less effective against *P. vivax*. This is because, in many areas where *P. vivax* predominates, vectors bite early in the evening, obtain blood meals outdoors and rest outdoors. In addition, vector control has no impact on the human reservoir of latent hypnozoite stage parasites residing in the liver, which are responsible for an appreciable proportion of morbidity.

To recollect, National Malaria Strategic Plan has to address the following issues:

1. *P. vivax* is the overwhelmingly predominant parasite species in Nepal and strategy should reflect the importance of *P. vivax* in elimination programme and it should target *P. vivax* with novel and innovative interventions.
2. Traditional conventional interventions are neither effective for *P. vivax* control nor elimination.
3. Novel interventions based on strong evidence are required to clear hypnozoites in the liver and prevent relapse, point of care tests to detect asymptomatic and sub-microscopic infections, and new community based testing and treatment methods to increase access to quality assured and quality controlled diagnosis and prompt effective treatment. Ensure G6PD point of care test and roll out radical cure treatment for *P. vivax* infection.
4. Without interrupting *P. vivax* (reduction will not be sufficient) transmission, achieving malaria elimination is unlikely.

5.1.1.2 Major activities in 2075/76

- 2,76,225 LLIN was distributed as mass distribution and 81,133 LLINs were distributed through continuous distribution to people leaving in risk areas, army police, pregnant women at their first ANC visits.
- Conducted the ward-level micro-stratification of malaria cases in 77 districts.
- Continuation of case-based surveillance system as key intervention, including web-based recording and reporting system for districts. The MDIS is now fully operational.
- Orientated district and peripheral level health workers on case based surveillance and response.
- Carried out detailed foci investigation at more than 100 sites.
- Revitalized the malaria microscopy quality assurance system with collaboration between the Epidemiology and Disease Control Division (EDCD) and VBDRTC, with technical assistance from WHO.
- Orientated district health workers and FCHVs on the government's malaria elimination initiative and their role in detecting cases and facilitating early treatment.

- Orientated mother groups and school children on malaria prevention and the need for early diagnosis and prompt treatment.
- Conducted quarterly and annual review meetings for district and central level staff. Participants reviewed data from peripheral facilities and revised it based on suggestions.
- Conducted operational research on malaria vector behaviour and insecticide resistance.
- Conducted regular vector control (indoor residual spraying) biannually across high and moderate risk districts.
- Conducted detailed case based investigation and fever surveys around positive index cases.
- Conducted integrated entomological surveillance around twelve different sites of thought-out the country.
- Celebrated World Malaria Day on 25 April.

Achievements

Nepal achieved MDG 6 ahead of time by reducing malaria morbidity and mortality rates by more than 50 percent in 2010. Despite political instability, Nepal's malaria programme has successfully implemented planned interventions to eliminate the remaining active malaria foci (VDCs). MoH, with support from its EDPs, has implemented a strong malaria control programme, steadily improving the coverage and quality of indoor residual spraying, introducing long lasting insecticide-treated nets, and increasing access to rapid malaria diagnosis and powerful artemisinin-based combination treatments.

Data generated by public health care facilities in the HMIS, the Early Warning and Reporting System (EWARS) and from studies including malaria micro-stratification show a substantial decline over the last six years in clinical and laboratory confirmed *Plasmodium falciparum* and *P. vivax* cases. The findings of the micro-stratification exercise (2013) reduced the number of high and moderate risk district from 31 to 25 and identified 1,254 VDCs (out of 3,972) as presenting a risk of contracting malaria. In 2073/74 (2016), micro stratification was done to assess the risk at ward level. The result was published.

The trends of the malaria epidemiological situation between 2072/73 and 2075/76 show a slightly increasing trend up to last fiscal year but decreased in this fiscal year. (Table 5.1.1.1):

- Confirmed malaria cases increased from 1128 in 2073/74 to 1187 in 2074/75, however 1065 in 2075/76. The proportion of *P. falciparum* infections is decreased and accounted for 5.4 percent of all cases in current year.
- During 2004–2007, the annual parasite incidence (API) remained stable (0.26-0.27 per 1000 population country wide), and thereafter gradually declined to the lowest level ever recorded 0.08 in 2074/75, however due to the decreased number of risk people, in 2075/76, the API is 0.09 in 2075/76 at risk population (calculated based on denominator set after micro-stratification, 2019/HMIS).
- The trend of clinically suspected malaria cases is also decreasing, mainly due to the increased coverage of RDT, microscopic laboratory service at peripheral level and regular orientation and onsite coaching of service providers. A total of 695 probable/clinical suspected malaria cases treated by chloroquine through OPD were reported in 2075/76.
- There was a decrease in the number of indigenous *P. falciparum* as well as indigenous *P. vivax* cases. But cases being identified in new areas, especially in mountain, hilly and terain, suggest that *P. vivax* malaria remains a challenge for the elimination of malaria in Nepal. This raises the need for new country specific elimination strategies.

Table 5.1.1.1: Malaria epidemiological information (FY 2073/74–2075/76)

Items /indicators	2073/74	2074/75	2075/76
Total population at Risk	14944174	15177434	12,224,703
Slide Collection Target	150,000	150,000	150,000
Total slide examined	118165	207581	199927
Total positive cases	1128	1187	1065
Total indigenous cases	492	557	444
Total imported cases	636	630	621
Total P. falciparum (Pf) cases	148	82	57
% of Pf of total cases	13.1	6.9	5.4
Total indigenous Pf cases	52	10	7
% indigenous Pf cases	35	12	12
Total imported Pf cases	96	72	50
% imported Pf cases	65	88	88
Total P. vivax (Pv)cases	980	1105	1008
Total indigenous Pv cases	440	547	437
% indigenous Pv cases	44.9	49.5	43.3
Total imported Pv cases	540	558	571
% imported Pv cases	55.1	50.5	57.6
Annual blood examination rate	0.79	1.4	1.64
Annual parasite incidence	0.08	0.08	0.09
Annual Pf incidence	0.01	0.01	0.005
Slide positivity rate	0.95	0.57	0.53
Slide Pf positivity rate	0.13	0.04	0.03
Probable/clinical suspected malaria cases (not tested but treated by chloroquine)	3904	3282	695

Source: HMIS/DoHS

The trend of the national malariometric indicators (Table 5.1.1.1) indicates that Nepal has entered in the elimination phase. Despite district variance including on number of cases, the API and slide positivity rates (SPR) and the zero indigenous cases from districts such as Kavre and Sindhupalchok over the last four years suggests a paradigm shift. The highest number of confirmed cases were reported from Kailali district (206), followed by Mugu (173), Bajura (85), Kanchanpur (77), Banke 61) and Kapilbastu (61). In is including private sector as well, which shows substantial progress towards elimination targets, however it requires continuous attention for further improvement.

Province	Annual Blood Examination rate (ABER) of malaria at risk population			Malaria annual parasite incidence per 1000 population			Percentage of Plasmodium falciparum cases among the total malaria cases			Percentage of imported cases among positive cases of malaria			Slide positivity rate of malaria		
	2073 /74	2074 /75	2075 /76	2073 /74	2074 /75	2075 /76	2073 /74	2074 /75	2075 /76	2073 /74	2074 /75	2075 /76	2073 /74	2074 /75	2075 /76
Province 1	0.44	0.56	2.64	0.02	0.01	0.01	24.5	20.83	21.05	77.6	45.83	78.95	0.39	0.15	0.06
Province 2	0.51	0.49	1.57	0.04	0.02	0.03	19.9	6.06	17.74	28.1	68.18	85.48	0.83	0.39	0.2
Bagmati	0.42	0.55	1.17	0.03	0.02	0.02	28.9	38.46	37.04	37.8	92.31	85.19	0.63	0.27	0.13
Gandaki	0.87	0.63	0.56	0.03	0.03	0.03	10.3	25	21.88	72.4	66.67	96.88	0.32	0.54	0.48
Province 5	1.07	1.68	2.59	0.08	0.07	0.1	16.19	12.13	4.95	74.5	68.62	80.18	0.77	0.41	0.39
Karnali	0.7	1.19	0.78	0.13	0.35	0.18	5.3	0.48	0.42	74.7	21.9	17.23	1.7	2.9	2.35
Sudharpachim	1.6	4.64	1.61	0.3	0.29	0.18	8.3	4.1	3.01	50.6	53.92	61.08	1.6	0.63	1.11

Source: HMIS/DoHS

In 2073/74 and 2074/76, the confirmed malaria is slightly increased due to active surveillance, availability of RDT kits upto peripheral level and others many factors that may have contributed to the decline of clinical and the decline of the number of endemic districts (and probably of the number of active foci):

- Overall improvements in the social determinants of health (for example, less than 20% of Nepalese people now live below the poverty line against more than 40% in 2000).
- Increased access to simple diagnostic tools like (combo) RDTs.
- The availability of powerful antimalarial medicine (ACTs) in all public health facilities.
- The distribution of around 0.65 million LLINs in FY 2074/75 in endemic areas (Mass and ANC).
- The large financial support from the GFATM since 2004 has played a major role by allowing the programme and partners to scale up essential interventions and malaria control tools to the most peripheral level. Data reported by the districts via HMIS and reports received by the programme may differ for various reasons such as lack of orientation of staff who generate data and statistical officers who enter the data as per the suggestion of vector control officers at district and regional levels. The involvement of the vector control inspector (VCI), statistical officers and lab personnel from districts and regions on data quality coupled with rigorous on-site coaching and support by the central EDCD team (comprising government and contracted staff from Save the Children working at the programme management unit) have paid dividends in helping decrease errors.

Recommendations from Provincial and national reviews and actions taken in 2075/76

Problems and constraints	Action to be taken	Action taken
• Confirmation of suspected and probable malaria cases	• Malaria microscopy trainings of all untrained lab personnel • Availability of RDT at non microscopic sites • Orientation of service providers, clinicians, health workers and private practitioners • Validation of probable malaria case through cases investigation	• Increased number of malaria microscopy trainings run at VBDRTC and in other regions including lab personnel from across the country • Database created that lists untrained and trained personnel since 2004. It aims to reduce repetition before two years of basic malaria microscopy training to provide equal opportunities • Regular periodic validation of HMIS data by EDCD in coordination with DPHOs • Decentralized training centres established in mid and far west to train more lab personnel on malaria microscopy
• Low blood slide examination rates for malaria elimination programme	• Train health workers on RDT and microscopy in malaria reported districts	• Supplied RDT at community level • Trained health workers from malaria reported districts
• Orientation on malaria programme to health workers	• Run training programmes with GFATM support	• Ongoing basic and refresher trainings on malaria microscopy for lab technicians and assistants at peripheral facilities • Oriented PHD and DHO finance and store persons on malaria programme • Oriented FCHVs on malaria
• Malaria case reporting and case investigation	• Orient district and peripheral staff on case investigation and reporting	• District and peripheral level staff oriented on case investigation, surveillance, foci investigation and reporting
• Unnecessary variables in HMIS tool (for status of patients)	• EDCD to address to variables during HMIS tools revision	• Discussed with HMIS section and agreed to rectify at next revision
• Malaria cases increasing in non-endemic district	• Programme should address non-endemic districts	• Programme will be added next year to also target non-endemic districts.

5.1.2 Kala-azar

5.1.2.1 Background

Kala-azar is a vector-borne disease caused by the parasite *Leishmania donovani*, which is transmitted by the bite of female sandfly *Phlebotomus argentipes*. The disease is characterized by fever of more than two weeks with splenomegaly, anaemia, progressive weight loss and sometimes darkening of the skin. In endemic areas, children and young adults are the principal victims. The disease is fatal if not treated on time. Kala-azar and HIV/TB co-infections have emerged in recent years.

The government of Nepal is committed to the regional strategy to eliminate Kala-azar and signed the memorandum of understanding that was formalized at the World Health Assembly in 2005. In 2005, EDCC formulated a National Plan for Kala-azar elimination in Nepal. The national plan was revised in 2010 as a National Strategic Guideline on Kala-azar elimination in Nepal which recommended rK39 as a rapid diagnostic test kit and Miltefosine as the first line treatment of Kala-azar in most situations. The 2010 guideline was updated in 2014 to introduce liposomal amphotericin B and combination therapy in the national treatment guideline. The 2014 national guideline was revised again in 2019 which recommended single dose liposomal amphotericin B as the first line treatment for primary kala-azar.

5.1.2.2 Goal, objectives and strategies

Box: 5.1.2.2

Goal

- The goal of Kala-azar elimination program is to contribute to mitigation of poverty in Kala-azar endemic districts of Nepal by reducing the morbidity and mortality of the disease and assisting in the development of equitable health systems.

Target

- Reduce the incidence of Kala-azar to less than 1 case per 10,000 populations at district level.

Objectives

- Reduce the incidence of Kala-azar in endemic communities with special emphasis on poor, vulnerable and unreached populations.
- Reduce case fatality rates from Kala-azar to ZERO.
- Detect and treat Post-Kala-azar dermal leishmaniasis (PKDL) to reduce the parasite reservoir.
- Prevent and manage Kala-azar HIV–TB co-infections.

Strategies

Based on the regional strategy proposed by the South East Asia Kala-azar Technical Advisory group (RTAG) and the adjustments proposed by the Nepal expert group, Government of Nepal, MoHP has adopted the following strategies for the elimination of Kala-azar.

- Early diagnosis and complete treatment
- Integrated vector management
- Effective disease and vector surveillance
- Social mobilization and partnerships
- Improve programme management
- Clinical and implementation research

Over the last decade, there has been significant advances in the diagnosis and treatment of Kala-azar. Nepal's national programme made the rK39, dipstick test kit (a rapid and easily applicable serological test) available to PHCC level in affected districts. Likewise drugs for kala-azar such as liposomal amphotericin B, miltefosine and paromomycin are made available to all the kala-azar treatment centres. Kala-azar diagnostics and drugs are provided free of costs to the patients by EDCD.

5.1.2.3 Major activities in 2075/76

Case detection and treatment: Early case detection and complete and timely treatment is the mainstay of eliminating Kala-azar. Kala-azar related diagnostic are provided at PHCC level and diagnostics/treatment services are provided at district and above levels of health facilities while awareness, health education, identification and referral of suspected cases are also offered at health posts.

RDT scaling up: RDT is the simple test that can be used at all level of health care services. It does not need highly skilled laboratory staffs and test results expedite the initiation of treatment provided standard case definitions are followed. They are currently the best available diagnostic tool for Kala-azar diagnosis and can be used in any field setting. Therefore, in 2075/76 a diagnostic tool update of reporting tools at all PHCC level has been conducted. Recently rK39 (RDT) is available at Kala-azar affected districts from level II and above health institutions. There is provision of supply on demand to any health facility in high degree of clinical suspicion.

Use of liposomal amphotericin-Bas first line treatment regimen: The WHO Expert Committee on Leishmaniasis in 2010 and the Regional Technical Advisory Group (RTAG) for the kala-azar elimination programme in 2011 recommended Liposomal Amphotericin B (L-AmB) as the first line regimen during the attack phase in the Indian subcontinent. Taking into consideration its high efficacy, safety, ease of use and assured compliance, the results of a phase 3 trial evaluating three regimens for combination therapy showed excellent efficacy and safety across all three regimens. The combination regimens has been recommended as second line regimens for the Indian sub-continent in the attack phase. In the long term, combination regimens are the best way to protect individual drugs from developing resistance. Monotherapy with Miltefosine or Paromomycin is a fourth choice (after Amphotericin B) in the expert committee's recommendations.

L-AmB was introduced in Nepal in December 2015 after training about 60 doctors and nurses from endemic districts. The therapy should be directly observed and patients should be hospitalized for the full duration of the therapy. L-AmB needs a cold chain (<25°Celsius) for storage; and therefore should be made available only in hospitals where proper storage is ensured. The revised national kala-azar guideline, 2019 has recommended single dose liposomal amphotericin B as the first line therapy for primary kala-azar.

Indoor residual spraying in priority affected areas: In 2075/76 two rounds of selective indoor residual spraying were carried out in prioritized Kala-azar affected areas of endemic districts based on the national IRS guideline. IRS is carried out only in villages where kala-azar cases were recorded in the previous year or in areas with an outbreak in the recent past. The kala-azar programme also benefits from IRS for the prevention of malaria.

Orientation on updated national guidelines on KA Elimination Program: Medical officers, laboratory staffs and other paramedics were trained on the revised national Kala-azar guidelines and treatment protocols including the updated surveillance system on FY 2075/76.

Kala-azar national review meeting: A national kala-azar annual review meeting was conducted involving various kala-azar affected districts and the provincial teams.

National Kala-azar Technical Working Group Meeting: One event of national Kala-azar Technical Working Group Meeting was conducted in Kathmandu where various issues regarding Kala-azar were discussed.

Disease surveillance: Kala-azar tends to be under reported as most data is obtained through passive case detection especially from government hospitals. During 2075/76, active case detection was carried out in endemic and non-endemic rural/municipalities. This was done through case based and camp based approach. The sites were selected based on the number of new cases reported in the previous and running fiscal year. Community-based house to house searches were carried out by district team, local health facility staffs and FCHVs for suspected kala-azar and PKDL cases. Suspected cases were then screened clinically by physicians and rapid diagnostic kits (rK39) at health facilities by laboratory persons and other health workers. rK39 positive cases were referred to district, zonal hospitals and centre for further confirmation and management.

Multi-disciplinary Kala-azar Vector Surveillance: In recent years there has been reported cases of Kala-azar from different non-endemic districts of Nepal. Disease is observing unique features that not only new cases has been reported from non-endemic districts there has been reporting of cutaneous and mucocutaneous leishmaniasis in Western part of Nepal. As well, in previous years cases of Kala-azar has been reported from eastern part of Nepal, therefore, during FY 2075/76 vector surveillance has been conducted in other districts of Nepal.

5.1.2.4 Trend of Kala-azar cases

The number of Kala-azar cases has been decreasing significantly in recent years, however geographical expansion of the cases have been observed in recent years.

In **2073/74** a total of 231 Kala-azar cases were reported out of which 6 cases were foreign cases. Of the 225 native cases, 151 (67.11%) were from the 18 kala-azar program district and 74 from 25 non program kala-azar districts.

In **2074/75**, a total of 239 Kala-azar cases were reported from various parts of the country which is a slight increase as compared to the previous year. Of the 239 native cases, 122 cases (51 %) were from kala-azar program districts and 117 cases from 33 non program kala-azar districts. No cases were reported from Parsa in FY 74/75 although being a program district.

In **2075/76**, there has been a decrease in the number of reported cases as compared to the previous year. A total of 216 Kala-azar cases were reported out of which 3 cases were foreign cases. Out of the 213 native cases, 83 (38.9%) were from the kala-azar program district and 130 (61.1%) from 38 non program kala-azar districts. Out of all 83 cases reported from 15 kala-azar program districts, highest number of cases were reported from Surkhet (16), Jhapa (10), Morang (10) and Siraha (8) while the programme districts Bara, Parsa and Rautahat reported no cases this year.

However, there has been a rapid increase in Kala-azar cases compared to previous years among non-programme districts. 38 non-programme districts reported 130 cases in 2075/76. (**Province 1**-Dhankuta, Khotang, and Sankhuwasabha. **Bagmati Province**-Sindhuli, Ramechhap, Dolakha, Bhaktapur, Chitwan, Kathmandu, Lalitpur, and Kavre. **Gandaki Province**- Syangja and Nawalparasi East. **Province 5**- Arghakhanchi, Banke, Bardiya, Dang, Pyuthan, Rolpa, Rupandehi, Kapilbastu, and Rukum East. **Karnali Province**- Dailekh, Dolpa, Humla, Jajarkot, Kalikot, Mugu, Salyan, and Rukum

West. **Sudurpashim Province**- Achham, Doti, Baitadi, Bajura, Bajhang, Dadeldhura, Darchula, and Kanchanpur).

Similarly, in FY 75/76, 4 cases of Post Kala-azar Leishmaniasis (PKDL) has been reported from Mahottari, Sunsari, Sarlahi and Siraha. Likewise, 10 cases of Cutaneous Leishmaniasis (CL) has been reported from 8 different districts in the year 2075/76 namely- Bajura, Dang, Gorkha, Humla, Jajarkot, Kanchanpur, Palpa, Rukum West.

Table: Trend of Kala-azar Cases (FY 2073/74 to 2075/76)

Province	Districts	FY 2073/74	FY 2074/75	FY 2075/76
1	Bhojpur	6	7	1
	Jhapa	6	6	10
	Morang	21	16	10
	Okhaldhunga	2	4	3
	Sunsari	6	7	2
	Udayapur	2	1	3
2	Bara	1	1	0
	Dhanusha	15	2	3
	Mahottari	11	8	4
	Parsa	1	0	0
	Rautahat	1	2	0
	Saptari	6	4	3
	Sarlahi	24	17	1
	Siraha	15	11	8
3	Makwanpur	5	3	6
5	Palpa	16	19	6
Karnali	Surkhet	11	10	16
Sudurpaschhim	Kailali	2	4	7
Total Cases	18 Programme districts	151	122	83
	Other districts	74	117	130
	Foreign cases	6	0	3
Grand Total Cases		231	239	216

Source: EDCC/DoHS

The incidence of kala-azar at national and district level has been less than 1/10,000 population since 2013 in all the kala-azar program districts. The incidence per 10,000 population at district level in 2073/74 ranged from 0.63 in Palpa to 0.01 in Rautahat and Bara. In 2074/75 incidence ranged from 0.75 in Palpa to 0.01 in Bara district. In 2075/76, the district level incidence per 10,000 people ranged from 0.39, 0.24, 0.20, in Surkhet, Palpa and Okhaldhunga respectively to 0.01 in Sarlahi with an average incidence of 0.07 per 10,000 in the 18 programme districts and 0.07 at the national level.

Note that the kala-azar cases reported from HOs via the HMIS and case reports received by the programme sometimes vary. The HMIS usually receives aggregate data from hospitals and other health facilities while the programme proactively collects data from sentinel sites through EWARS. EDCC verifies data with the help of line listing report of all the cases.

Table: Kala-azar Cases and Incidence (2073/74 to 2075/76)

Districts	Cases			Incidence		
	2073/74	2074/75	2075/76	2073/74	2074/75	2075/76
Bhojpur	6	7	1	0.36	0.43	0.06
Jhapa	6	6	10	0.07	0.07	0.11
Morang	21	16	10	0.20	0.15	0.09
Okhaldhunga	2	4	3	0.13	0.27	0.20
Sunsari	6	7	2	0.07	0.08	0.02
Udaypur	2	1	3	0.06	0.03	0.09
Bara	1	1	0	0.01	0.01	0.00
Dhanusha	15	2	3	0.19	0.02	0.04
Mahottari	11	8	4	0.16	0.12	0.06
Parsa	1	0	0	0.01	0.00	0.00
Rautahat	1	2	0	0.01	0.03	0.00
Saptari	6	4	3	0.09	0.06	0.04
Sarlahi	24	17	1	0.28	0.20	0.01
Siraha	15	11	8	0.22	0.16	0.12
Makwanpur	5	3	6	0.11	0.07	0.13
Palpa	16	19	6	0.63	0.75	0.24
Surkhet	11	10	16	0.28	0.25	0.39
Kailali	2	4	7	0.02	0.04	0.08
Other Districts	74	117	130	0.03	0.06	0.07
Total	225	239	213	0.07	0.08	0.07

Source: EDCC/DoHS

5.1.2.5 Strengths, issues/challenges and recommendations of Kala-azar Elimination Program**Strengths**

- Availability of free of costs drugs and diagnostics for early case detection and timely treatment of kala-azar cases.
- Availability of recently revised standard national guidelines for kala-azar elimination program in Nepal.
- Use of multi-disciplinary approach to overcome the challenges for elimination of Kala-azar.
- Implementation of Health Management Information System (HMIS) and Early Warning and Reporting System (EWARS) for surveillance of Kala-azar.
- Use of different approaches of active case detection of Kala-azarsuch as camp based approach and index case-based approach.
- Effective partnerships and collaboration with academics, researchers and other stakeholders.
- Issues/Challenges
- At present disease, surveillance is mostly passive and some of the cases of private sector is missing which is merely covered by the surveillance system.
- Lack of regularly trained staffs to monitor outbreak investigation and response efforts in non-endemic districts.
- Inadequate awareness about disease among the communities.

Recommendations

- Verification of endemicity status of Kala-azarin districts consistently reporting new cases of kala-azar.
- Expand Kala-azar related strategies and activities to all districts in the country where cases are

seen or where there is probability of transmission.

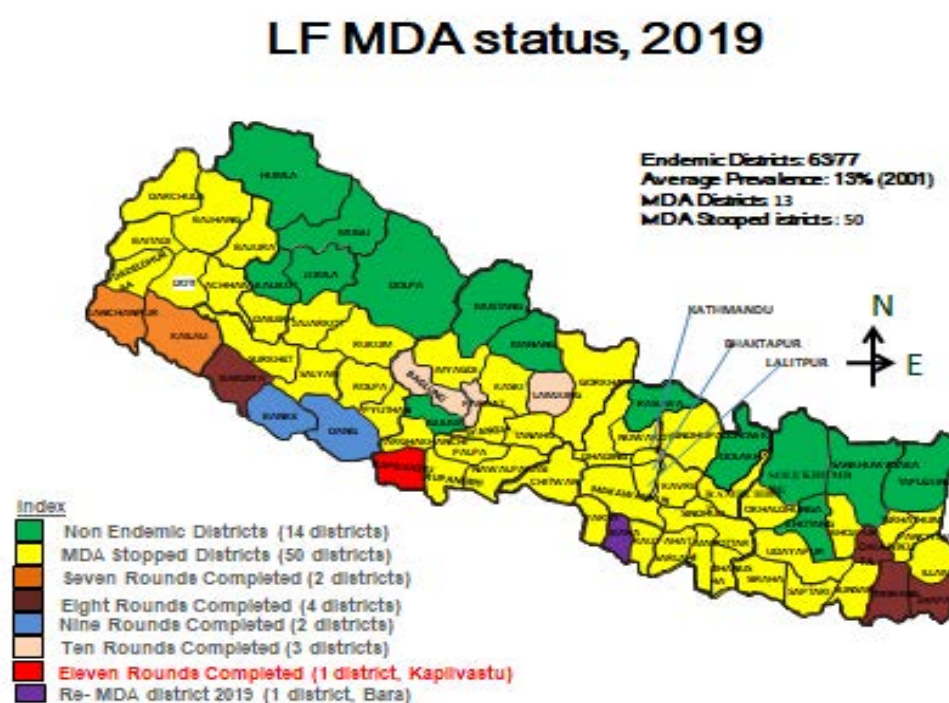
- Improve the disease and vector surveillance.
- Dissemination of educational message to public, public health professionals and policy makers related to Kala-azar.
- Improving case investigation and management of outbreaks.

5.1.3 Lymphatic Filariasis

5.1.3.1 Background

Lymphatic Filariasis (LF) is a public health problem in Nepal. Mapping of the disease in 2001 using ICT (immune-chromatography test card) revealed 13 percent average prevalence of lymphatic filariasis infection in Nepal's districts, ranging from <1 percent to 39 percent. Based on the ICT survey, morbidity reporting and geo-ecological comparability, 61(63) districts were identified as endemic for the disease (Figure 5.1.3.1). The disease has been detected from 300 feet above sea level in the Terai to 5,800 feet above sea level in the mid hills. Comparatively more cases are seen in the Terai than the hills, but hill valleys and river basins also have high disease burdens. The disease is more prevalent in rural areas, predominantly affecting poorer people. *Wuchereria bancrofti* is the only recorded parasite in Nepal, The mosquito *Culex quinquefasciatus*, an efficient vector of the disease, has been recorded in all endemic areas of the country.

Figure 5.1.3.1: Lymphatic filariasis endemicity, Nepal



Progress towards elimination

The EDCC formulated a National Plan of Action for the Elimination of Lymphatic Filariasis in Nepal (2003–2020) (Box 5.1.3.1) by establishing a National Task Force. The division initiated mass drug administration (MDA) from Parsa district in 2003, which was scaled up to all endemic districts by 2069/70 (2013). As of 2075/76, MDA has been stopped (phased out) in 50 districts, post-MDA surveillance initiated in 50 districts and morbidity management partially initiated in all endemic districts. All endemic districts have completed the recommended six rounds of MDA by 2018. The elimination programme has indirectly contributed to strengthening the system through trainings and capacity building. Since 2003, surveys have been carried out including mapping, baseline, follow up, post MDA coverage and transmission assessment surveys. The transmission assessment survey in 50 districts in 2018 found that the prevalence of infection had significantly reduced. Since

2003 more than 111 million doses of lymphatic filariasis drugs have been administered to at-risk population.

5.1.3.2 Goal, objectives, strategies and targets

Box 5.1.3.1: Goal, objectives, strategies and targets of lymphatic filariasis elimination programme

Goal — The people of Nepal no longer suffer from lymphatic filariasis

Objectives:

- To eliminate lymphatic filariasis as a public health problem by 2020
- To interrupt the transmission of lymphatic filariasis
- To reduce and prevent morbidity
- To provide deworming through albendazole to endemic communities especially to children
- To reduce mosquito vectors by the application of suitable available vector control measures (integrated vector management).

Strategies:

- Interrupt transmission by yearly mass drug administration using two drug regimens (diethylcarbamazine citrate and albendazole) for six years
- Morbidity management by self-care and support using intensive simple, effective and local hygienic techniques.

Targets:

- To scale up MDA to all endemic districts by 2014
- Achieve <1% prevalence (microfilaraemia rate) in endemic districts after six years of MDA by 2018.

5.1.3.3 Major activities in FY 2075/76

Mass drug administration

MDA was continued in 15 districts in 2075/76. 2 districts completed seven, 6 districts completed eight, 2 districts completed nine, 3 districts completed ten and 1 district completed eleven rounds and 1 district completed first rounds of re-MDA in this year. A total of 52,28,247(66.6%) of the targeted 78,49,070 people in 15 districts were treated this year. The campaign was conducted in February-March 2019. The campaign mobilized around 6,500 health workers and 10,000 trained female community health volunteers to reach the target populations and for monitoring campaign activities. The main MDA-related activities are listed in Box 5.1.3.2.

More than 4,700 adverse events (mostly mild headaches, dizziness and stomach aches) were reported after MDA. Health workers and FCHV mobilized for the campaign reported nearly 2,500 cases of morbidity due to or suspected to be due to lymphatic filariasis. More than 30,000 cases of lymphedema of the lower and upper limbs, breast swelling and hydrocele were reported from endemic districts during previous MDA campaigns.

The progress and coverage of the MDA campaign is shown in Table 5.1.3.1.

Table 5.1.3.1: Scaling-up and coverage of MDA campaigns

MDA Year	MDA districts	At risk population	Treated population	Epidemiological coverage %	Remarks
2003	1	505,000	412,923	81.8	
2004	3	1,541,200	1,258,113	81.6	
2005	5	3,008,131	2,509,306	83.4	
2006	3	2,075,812	1,729,259	83.3	
2007	21	10,906,869	8,778,196	80.5	
2009	21	10,907,690	8,690,789	80.0	
2010	30	14,162,850	11,508,311	81.3	MDA stopped in 1 district
2011	36	15,505,463	12,276,826	79.2	MDA stopped in 4 more districts
2012	46	20,017,508	13,546,889	67.7	
2013	56	21,852,201	16,116,207	73.8	
2014	41	15,874,069	10,929,305	68.9	MDA stopped in 15 more districts
2015	41	15,981,384	11,117,624	69.6	
2016	35	12,470,213	8,887,666	71.3	MDA stopped in 5 more districts
2017	30	10,827,093	7,870,784	72.7	MDA stopped in 6 more districts
2018	24	91,26,506	64,24,332	70.4	MDA stopped in 6 more districts
2019	15	78,49,070	52,28,247	66.61	MDA stopped in more 9 districts

Source: EDCD/DoHS

Box 5.1.3.2: MDA related major activities

National level activities — National task force committee meetings; interactions with the media, professionals, organizations and civil society; monitoring and supervision; procurement and supply; and advocacy and IEC/BCC activities.

Provincial level activities — Provincial level planning meetings in Biratnagar, Nepalgunj, Dhangadhi and Pokhara; Provincial coordination meetings and monitoring and supervision.

Implementation unit and local level activities — Planning meetings, training of health workers, advocacy, social mobilization, IEC/BCC, monitoring and supervision, interactions with the media, interactions with multi-sector stakeholders including newly elected local body and logistics supply.

Community level activities — Volunteers orientations, advocacy, social mobilization, IEC/BCC, implementation of MDA activities and monitoring and supervision.

Social mobilization activities — The production of revised IEC materials, checklists, reporting,

recording, and guidelines for MDA campaign; media mobilization and advertisement of MDA; coordination and collaboration with stakeholders and school health programmes and interactions in schools on the LF disease and MDA.

Monitoring — Monitoring and management of post-MDA complications and adverse events.

Transmission Assessment Survey (TAS)—Panchthar, Ilam, Jhapa, Dhankuta, Morang, Lamjung, Parbat, Baglung and Bardia performed pre-TAS and only Panchthar and Ilam Passed the survey. After completion of six round of MDA with pre-TAS passed, 10 districts (Bhojpur, Udayapur, Dailekh, Bajura, Bajhang, Achham, Doti, Darchula, Baitadi and Dadeldhura) carried out TAS I, thirteen districts (Saptari, Siraha, Okhaldhunga, Kathmandu, Lalitpur Urban, Bhaktapur, Kaski, Arghakhachi, Pyuthan, Rukum east, Rukum west, Rolpa and Salyan) carried out TAS II and fourteen districts (Dhanusha, Mahottari, Sarlahi, Rautahat, Sindhuli, Ramechhap, Sindhupalchok, Kavre, Nuwakot, Dhading, Gorkha, Tanahun, Syangjha and Palpa) completed TAS III with supported of RTI/ENVISION. All the districts passed TAS I and TAS II but 2 evaluation units (Dhanusha, Mahottari, Sarlahi, Rautahat, Sindhuli) failed the TAS III.

Morbidity management and disability prevention

Morbidity management and disability prevention is the second strategy adopted by the national elimination programme to reduce suffering in infected people living with chronic and morbid conditions including elephantiasis, lymphedema and hydrocele. This strategy includes activities and interventions ranging from home-based self-care by people living with lymphedema and elephantiasis to hospital-based management and surgical corrections of hydroceles.

The following activities were carried out in 2075/76:

- 1753 hydrocele surgeries have been performed in year 2075/076. This surgery is included in the Red Book and is regularly done in hospitals in endemic districts.
- Morbidity mapping activities done in Terhathum, Udayapur, Sunsari, Rautahat, Sindhuli, Kathmandu, Bhaktapur, Nuwakot, Tanahun, Syangjha, Arghakhachi, Surkhet, Salyan and Achham districts.
- All health workers and FCHVs in Terhathum, Udayapur, Sunsari, Rautahat, Sindhuli, Kathmandu, Bhaktapur, Nuwakot, Tanahun, Syangjha, Arghakhachi, Surkhet, Salyan and Achham districts were trained on patient self-care.

Challenges and ways forward

The major challenges that remain that need addressing to consolidate the achievements are ensuring quality MDA including achieving high coverage in urban areas and some specific communities, and adverse event management, sustaining low prevalence in MDA phased out districts, expanding morbidity management and disability prevention, and post MDA surveillance. The biggest challenge is the persistent high prevalence in some districts despite completing the recommended rounds of MDA.

The following are the major programme recommendations:

- Continue MDA for Pre TAS un-success districts, and carry out transmission assessment, periodic surveillance and follow up surveys to monitor progress towards elimination.

- Strengthen the capacity of the health system and service providers on morbidity management and disability prevention and post-MDA surveillance.
- Carry out operational research, studies and programme reviews.
- Consolidate all documents related to the programme in a dossier for the later validation and verification of elimination.

Lymphatic Filariasis Elimination Status

Status of Province 1

Districts	LF MDA Status	Survey Status	Up-coming Activity	Remarks
Taplejung	Non Endemic			
Panchthar	MDA	TAS Pass 2019	TAS II 2022	Mapped
Ilam	MDA	TAS Pass 2019	Mapping 2020	
Jhapa	MDA	Re-Pre TAS Fail 2018	Re-Pre TAS 2020	
Shankhuwasava	Non Endemic			
Terhathum	MDA Stopped	TAS I Pass 2017	TAS II 2020	Mapped
Bhojpur	MDA Stopped	TAS I Pass 2018	Mapping 2020	
Morang	MDA	Re-Pre TAS Fail 2018	Re-Pre TAS 2020	
Sunsari	MDA Stopped	TAS I Pass 2017	Mapping 2019/2020	
Dhankuta	MDA	Re-Pre TAS Fail 2018	Re-Pre TAS 2020	
Udaypur	MDA Stopped	TAS I Pass 2018	TAS II 2021	Mapped
Solukhumbu	Non Endemic			
Okhaldhunga	MDA Stopped	TAS II Pass 2019	TAS III 2022	Mapped
Khotang	Non Endemic			

Status of Province 2

Districts	LF MDA Status	Survey Status	Up-coming Activity	Remarks
Saptari	MDA Stopped	TAS II Pass 2019	TAS III 2022	Mapped
Siraha	MDA Stopped	TAS II Pass 2019	TAS III 2022	
Dhanusha	MDA Stopped	TAS III Fail 2019		
Mahottari	MDA Stopped	TAS III Fail 2019	Mapping 2020	
Sarlahi	MDA Stopped	TAS III Fail 2019		
Rautahat	MDA Stopped	TAS III Fail 2019		Mapped
Bara	MDA	TAS II Fail 2016	TAS 2020	Re-MDA, Mapped
Parsa	MDA Stopped	TAS III Pass 2018		

Epidemiology and Disease Control

Status of Bagmati Province

Districts	LF MDA Status	Survey Status	Up-coming Activity	Remarks
Dolakha	Non Endemic			
Ramechhap	MDA Stopped	TAS III Pass 2019	Mapping 2020	
Sindhuli	MDA Stopped	TAS III Fail 2020		Mapped
Sindhupalchok	MDA Stopped	TAS III Pass 2020	Mapping 2020	
Rasuwa	Non Endemic			
Nuwakot	MDA Stopped	TAS III Pass 2020		Mapped
Kavre	MDA Stopped	TAS II Pass 2016	TAS III 2019	
Dhading	MDA Stopped	TAS III Pass 2019		Mapped
Kathmandu	MDA Stopped	TAS II Pass 2019	TAS III 2022	Mapped
Lalitpur Urban	MDA Stopped	TAS II Pass 2019	TAS III 2022	
Lalitpur Rural	MDA Stopped	TAS I Pass 2017	TAS II 2020	
Bhaktapur	MDA Stopped	TAS II Pass 2019	TAS II 2022	Mapped
Chitwan	MDA Stopped	TAS III Pass 2018	Mapping 2020	
Makawanpur	MDA Stopped	TAS III Pass 2018		

Status of Gandaki province

Districts	LF MDA Status	Survey Status	Up-coming Activity	Remarks
Manang	Non Endemic			
Gorkha	MDA Stopped	TAS III Pass 2019		Mapped
Lamjung	MDA	Re-Pre TAS Fail 2018	Re-Pre-TAS 2020	Mapped
Tanahun	MDA Stopped	TAS III Pass 2019	Mapping 2020	
Mustang	Non Endemic			
Kaski	MDA Stopped	TAS II Pass 2019	Mapping 2020	
Parbat	MDA	Re-Pre TAS Fail 2018	Re-Pre-TAS 2020	
Baglung	MDA	Re-Pre TAS Fail 2018	Re-Pre-TAS 2020	
Myagdi	MDA Stopped	TAS I Pass 2017	TAS II and Mapping 2020	
Nawalpur	MDA Stopped	TAS III Pass 2018		Mapped
Syangja	MDA Stopped	TAS III Pass 2019		Mapped

			Activity	
Nawalparasi	MDA Stopped	TAS III Pass 2018		Mapped
Rupandehi	MDA Stopped	TAS III Pass 2017	Mapping 2020	
Palpa	MDA Stopped	TAS III Pass 2019		Mapped
Arghakhanchi	MDA Stopped	TAS II Pass 2019	TAS II 2022	Mapped
Pyuthan	MDA Stopped	TAS II Pass 2019	Mapping 2020	
Gulmi	Non Endemic			
Kapilbastu	MDA	Pre-Re-TAS Fail 2018	Pre-Re-TAS 2020	
Dang	MDA	Pre-TAS Fail 2019	Re-Pre TAS 2021	Mapped
Banke	MDA	Pre-TAS Fail 2019	Re-Pre TAS 2021	
Bardiya	MDA	Re-Pre-TAS Fail 2018	Re-Pre TAS 2020	
Rolpa	MDA Stopped	TAS II Pass 2019	Mapping 2020	
Rukum East	MDA Stopped	TAS II Pass 2019	TAS III 2022	

Status of Karnali Province

Districts	LF MDA Status	Survey Status	Up-coming Activity	Remarks
Surkhet	MDA Stopped	TAS I Pass 2019	Mapping, TAS II 2020	
Jajarkot	MDA Stopped	TAS I Pass 2017	Mapping, TAS II 2020	
Salyan	MDA Stopped	TAS II Pass 2019	TAS II 2022	
Rukum West	MDA Stopped	TAS II Pass 2019	TAS III 2022	
Kalikot	Non Endemic			
Mugu	Non Endemic			
Jumla	Non Endemic			
Humla	Non Endemic			
Dolpa	Non Endemic			

Status of Sudurpashchim Province

Districts	LF MDA Status	Survey Status	Up-coming Activity	Remarks
Bajhang	MDA Stopped	TAS I Pass 2018	TAS II 2021	
Bajura	MDA Stopped	TAS I Pass 2018	TAS II 2021	

Epidemiology and Disease Control

Districts	LF MDA Status	Survey Status	Up-coming Activity	Remarks
Achham	MDA Stopped	TAS I Pass 2018	TAS II 2021	Mapped
Doti	MDA Stopped	TAS I Pass 2018	Mapping 2020	
Darchula	MDA Stopped	TAS I Pass 2018	TAS II 2021	
Baitadi	MDA Stopped	TAS I Pass 2018	TAS II 2021	Mapped
Dadeldhura	MDA Stopped	TAS I Pass 2018	Mapping 2020	
Kailali	MDA	Pre-TAS I Fail 2019	Re-Pre TAS II 2019	
Kanchanpur	MDA	Pre-TAS Pass 2019	TAS I 2020	Mapped

5.1.4 Dengue

5.1.4.1 Background

Dengue is a mosquito-borne disease that is transmitted by mosquitoes (*Aedes aegypti* and *Aedes albopictus*) and occurs in most of the districts of Nepal. WHO (2009) classified dengue as: i) Dengue without warning signs, ii) Dengue with warning signs, iii) Severe Dengue. The first dengue case was reported from Chitwan district in a foreigner. The earliest cases were detected in 2005. Since 2010, dengue epidemics have continued to affect lowland districts as well as mid-hill areas. This trend of increased magnitude has since continued with number of outbreaks reported each year in many districts- Chitwan, Jhapa, Parsa (2012-2013), Jhapa, Chitwan (2016-2016), Rupandehi, Jhapa, Mahottari (2017), Kaski (2018) and Sunsari, Kaski, Chitwan (2019). The mostly affected districts are Chitwan, Kanchanpur, Kailali, Banke, Bardiya, Dang, Kapilbastu, Parsa, Rupandehi, Rautahat, Sarlahi, Saptari and Jhapa, reflecting the spread of the disease throughout the Terai plains from west to east. In 2011, 79 confirmed cases were reported from 15 districts with the highest number in Chitwan (55). During 2012 -15, the dengue cases still continued to be reported from several districts but the number fluctuated between the years. In 2019, we experienced the outbreak at Sunsari (Dharan), Chitwan (Bharatpur) and Kaski (Pokhara). *Aedes aegypti* (the mosquito-vector) was identified in five peri-urban areas of the Terai (Kailali, Dang, Chitwan, Parsa and Jhapa) during entomological surveillance by EDCD during 2006–2010, indicating the local transmission of dengue. However, recent study carried out by VBDRTC has shown that both the mosquitoes have found to be transmitting the disease in Nepal. Studies carried out in collaboration with the Walter Reed/AFRIMS Research Unit (WARUN) in 2006 by EDCD and the National Public Health Laboratory (NPHL) found that all four sub-types of the Dengue viruses (DEN-1, DEN-2, DEN-3 and DEN-4) were circulating in Nepal. Details of Nepal's Dengue Control Programme are given in Box 5.1.4.1.

5.1.4.2: Goal, Objectives and Strategy of Dengue Control Programme

Box 5.1.4.1: Nepal's Dengue Control Programme

Goal — To reduce the morbidity and mortality due to dengue fever, dengue haemorrhagic fever (DHF) and dengue shock syndrome (DSS).

Objectives:

- To develop an integrated vector management (IVM) approach for prevention and control.
- To develop capacity on diagnosis and case management of dengue fever, DHF and DSS.
- To intensify health education and IEC activities.
- To strengthen the surveillance system for prediction, early detection, preparedness and early response to dengue outbreaks.

Strategies:

- Early case detection, diagnosis, management and reporting of dengue fever
- Regular monitoring of dengue fever surveillance through the EWARS
- Mosquito vector surveillance in municipalities
- The integrated vector control approach where a combination of several approaches are directed to wards containment and source reduction

5.1.4.3: Major activities in 2075/76

- Trained physicians, nurses, paramedics and laboratory technicians on dengue case detection, diagnosis, management and reporting.
- Orientated municipality stakeholders in 34 districts.
- Supplied rapid diagnostic test kits (IgM).
- Dengue case monitoring and vector surveillance.
- Search and destruction of dengue vector larvae in 34 districts in different local levels.
- Developed IEC materials and disseminated health education messages engaging various stakeholders including the media and youth.

Achievements

- Development of national guidelines on prevention, management and control of dengue in Nepal
- Conducted ToT by international experts on dengue and created a pool of master trainers in all the provinces
- Developed the IEC materials and disseminated the awareness messages through media and other relevant means of communications.

Table 5.1.4.1: Dengue cases (2073/74–2075/76)

District	2073/74	2074/75	2075/76	District	2073/74	2074/75	2075/76
Jhapa	543	5	29	Gorkha	1	2	0
Morang	0	2	81	Syangja	1	4	1
Sunsari	0	8	3025	Kaski	1	553	21
Bhojpur	0	0	4	Baglung	4	4	1
Udaypur	0	0	1	Tanahu	0	1	1
Dhankuta	0	2	5	Parbat	0	2	2
Ilam	0	1	2	Mustang	0	1	0
Taplejung	0	1	2	Myagdi	0	1	0
Shankhuwashbha	0	0	1	Gandaki Province	24	568	26
Panchthar	0	0	2	Arghakhanchi	21	4	5
Province -1	543	19	3152	Palpa	14	7	7
Saptari	0	2	4	Nawalparasi West	37	15	11
Siraha	0	1	1	Rupandehi	677	61	55
Dhanusa	27	0	0	Kapilbastu	57	8	6
Mahottari	438	3	3	Pyuthan	12	3	2
Sarlahi	130	2	0	Rolpa	4	0	0
Bara	2	1	0	Rukum East	0	0	0
Parsa	0	2	4	Dang	13	2	2
Rautahat	12	1	0	Banke	1	6	5
Province -2	609	12	12	Gulmi	0	10	0
Kavre	0	1	1	Bardiya	0	4	3
Lalitpur	0	1	2	Province- 5	836	120	96
Bhaktapur	1	0	3	Surkhet	2	0	0
Kathmandu	1	16	6	Dailekh	1	0	0
Dhading	67	7	5	Salyan	0	1	1
Makwanpur	3	9	83	Karnali Province	3	1	1
Chitwan	23	28	23	Kailali	0	2	3
Nuwakot	0	0	1	Kanchanpur	0	14	2
Sindhuli	0	0	1	Dadeldhura	0	2	2
Dolkha	0	2	0	Achham	1	0	1

Bagmati Province	95	64	125
Darchula	0	9	4
Sudurpashim Province	1	27	12
Grand Total	2111	811	3424

Source: EDCC/DoHS

The number of reported dengue cases has significantly increased from 2111 in FY 2073/74, 811 in FY 2074/75 to 3424 in FY 2075/76. The major cause of increasing the reported case is the impact of global dengue outbreak. During FY 2075/76, 3424 dengue cases were reported from 44 districts (Table 5.1.4.1). The majority of cases have been reported from Sunsari (88%), Makawanpur (2.4%), Morang (2.3%) and Rupandehi (1.6%). As well there were 2 confirmed deaths due to Dengue — one each from Sunsari and Morang.

Note that Dengue cases reported from Hospitals, HOs and PHCCs via the Early warning and Reporting System (EWARS), HMIS/DHIS2 and case reports received by the programme sometimes vary. The HMIS usually receives aggregate data from hospitals and other health facilities while the programme proactively collects data from Hospitals through EWARS. EDCC verifies data with the help of line listing report of all cases.

5.1.5 Leprosy

5.1.5.1 Background

The establishment of the Khokana Leprosarium in the nineteenth century was the beginning of organized leprosy services in Nepal. Key leprosy control milestones since 1960 and the goal, objectives and strategies of the national Leprosy Control Programme are:

Evolution and milestones of leprosy control programme in Nepal

Year	Landmarks
1960	Leprosy survey by Government of Nepal in collaboration with WHO
1966	Pilot project to control leprosy launched with Dapsone monotherapy
1982	Introduction of multi-drug therapy (MDT) in leprosy control programme
1987	Integration of vertical leprosy control programme into general basic health services
1991	National leprosy elimination goal set
1995	Focal persons (TB and leprosy assistants [TLAs]) appointed for districts and regions
1996	All 75 districts were brought into MDT programme
1999/2000–2001/02	Two rounds of National Leprosy Elimination Campaign (NLEC) implemented
2008	Intensive efforts made for achieving elimination at the national level
2009 and 2010	Leprosy elimination achieved and declared at the national level
2011	National Leprosy Strategy (2011–2015)
2012–2013	Elimination sustained at national level and national guidelines, 2013 (2070) revised
2013–2014	Mid-term evaluation of implementation of National Leprosy Strategy (2011–2015)
2014–2015	Ministry of Health designated LCD as the Disability Focal Unit
2017	Policy, Strategy and 10 Years Action Plan on Disability Management (Prevention, Treatment and Rehabilitation) 2073–2082 developed and disseminated
2018	National Leprosy Strategy 2016–2020 (2073–2077) develop and endorsed. Revised leprosy guide line in line with national leprosy strategy and global leprosy strategy.
2019	In-depth Review of National Leprosy Programme and Envisioning Roadmap to Zero Leprosy

5.1.5.2 Goal, objectives, strategies and targets of the leprosy control programme

Vision: Leprosy free Nepal

Goal : End the consequences of leprosy including disability and stigma

Guiding principles

- Stewardship and system strengthening
- Expedite the elimination process in high prevalence districts
- Collaboration, coordination and partnership
- Community involvement
- Integration, equity and social inclusion
- Linkages with Universal Health Coverage and Sustainable Development Goals

Objectives:

1. Achieve elimination status in all districts by 2020.
2. Expand services for early detection of leprosy cases at health facility, especially in high prevalence districts through Enhancing selected diverse approaches (ISDT)
3. Initiate Post-Exposure Leprosy Prophylaxis to family members and neighbors
4. Achieve the surveillance performance indicators

Strategies

1. Expand and Enhance early case detection through selected diverse approaches (ISDT)
2. Strive to achieve the surveillance performance indicators
3. Modernize and intensify the service delivery pathways for ensuring quality services
4. Heighten the collaboration and partnership for Leprosy-Free Nepal
5. Enhance support mechanism for people infected and affected by leprosy

5.1.5.3 Activities and achievements in 2075/76

MDT service delivery — In 2075/076, 3282 new leprosy cases were detected and put under multi-drug therapy and 2221 cases were under treatment at the end of the fiscal year. During the year, 3221 patients completed the MDT regime and were released from treatment. Secondary and tertiary care services were provided to needy and leprosy-affected patients through the existing network of referral centres with partner support. MDT drugs (that are made available by the Novartis Foundation through WHO) and anti-reaction drugs were freely available. The supply of drugs to all province and local level were managed smoothly throughout the year.

Capacity building — Following capacity building activities have been conducted following capacity building programmes in 2074/075.

- 5 days Comprehensive Leprosy Training to 3 batches of health workers
- Orientation to the Health Coordinators on Leprosy Search Campaigns and Skin Camps
- Training to 10 Medical Officers of Rautahat, Bara, Parsa, Chitwan, Makwanpur, Kavre, Rupandehi and Kapilvastu
- Training on Leprosy Reactions & Cutaneous Leishmaniasis to resident dermatologists of Kathmandu

Similarly, 245 health workers, FCHVs, rural health facilitators, lab technicians, etc were oriented and trained from Lalgadh Leprosy Hospital and Service Centre. Orientations and trainings were also conducted by Anandaban Leprosy Hospital.

IEC and advocacy — In order to enhance community awareness, passive case detection, voluntary case reporting and to reduce stigma, IEC activities were regularly undertaken using electronic and print media. Posters highlighting the diagnosis, reactions, treatment and free leprosy services were reproduced and distributed for display at health facilities in all 77 districts and for raising public awareness. Leprosy messages were also broadcasted in coordination with Nepal TV and FM radio programmes highlighting the World Leprosy Day.

World Leprosy Day—World Leprosy Day which is celebrated on the last Sunday in the month of January worldwide was commemorated on 13th Magh 2075 (27th January 2019) in Nepal as the 66th World Leprosy Day by conducting various activities at national, province and district levels. On the same day a media interaction programme was arranged at DoHS in presence of the Director

General, blankets distribution programme for 55 leprosy affected people was organized at Jhapa district in coordination of Health Office: Jhapa and Health Directorate of Province 1 and at Lalagadh Leprosy Hospital and service centre. .

Reviews — Regular trimester review meetings were held at district and provincial levels where aggregated data, administrative issues and accomplishments were presented and discussed and future plans discussed. Twocentral trimester review workshops were held to assess the outcome and monitoring of the programme. TB-Leprosy Officers (TLOs) from the province health directorates presented and shared information and issues on the leprosy programme in their provinces. Province Logistic management centres' chiefs also presented the stocks and supply of MDT drugs and informed that MDT supply had been properly managed over the year.

Early case detection— An active case detection was carried out in Sarlahi district with the support from WHO, Lalagadh Leprosy Hospital and Service Centre, Province Health Directorate of Province and Social Development Ministry of Province. 2,762 health workers, 1,463 FCHVs and 49 leprosy affected people were oriented on performing house-to-house searches. The searches were then carried out. Leprosy officers, supervisors and partner personnel then supported health facilities to diagnose and manage identified cases.

Table 5.1.5.1 Summary Findings (Active Case Detection in Sarlahi District)

District	Screened Population	No. of suspect cases	No. of confirmed new cases					
			MB	PB	Total New cases	Female	Child	Grade 2 Disability
Sarlahi	1,88,129	553	7	51	58	34	16	0

Source: LCDMS/EDCD

Enhanced contact examination programme was carried out in Dhanusha where 6,083 people were screened out of the targeted 10,408 population by covering six houses surrounding 220 index cases. 19 new cases (2 MB + 17 PB) were detected among the referred 154 suspect cases in the respective health facilities. The contact examination team also sent 4 old leprosy cases as suspect. Identification, confirmation of leprosy cases and their validation and data were compiled in this whole process. The programme was conducted in association with WHO and Lalagadh Leprosy Hospital and Service Centre.

Continued medical education— A one day medical education event was run for dermatologists, residents and other medical officers of Kathmandu district in two batches orienting 80 participants in total. The events highlighted the roles of clinical specialists in leprosy control, reducing disease burden and stigma prevention and provided up-to-date information related to management of leprosy cases.

Transport support to released-from-treatment cases — The programme provided grants of NPT 1,000 to 3,221 patients released from treatment to cover their transport costs after completing MDT treatment. The treatment regularity rate of patients is increasing partly due to the provision of this incentive.

Recording, reporting, update and leprosy case validation— Recording, reporting, update and case validation was carried out in Jhapa, Morang and Dhanusa districts to verify data and records of cases in health facilities, to validate cases diagnosed by health facilities and to strengthen recording and

reporting and the release of cases from treatment.

Supervision and monitoring — regular supervisory visits were undertaken by LCDMS staff to guide health workers at peripheral health facilities and to HOs and HDs.

Coordination with partners — LCDMS organized coordination meetings among the partners working in the leprosy control and disability management sectors. Three meetings were held in this year. The meetings were attended by representatives from WHO, Leprosy Mission Nepal (LMN), Nepal Leprosy Trust (NLT), International Nepal Fellowship (INF), NLR, BIKASH Nepal, Partnership for New Life (PNL), Nepal Leprosy Fellowship (NLF), Nepal Leprosy Relief Association (NELRA), Sewa Kendra, Shanti Sewa Griha, Rehabilitation, Empowerment and Development (READ) Nepal, and IDEA Nepal to share regular updates on activities, to have common approach to celebrate World Leprosy Day and to develop programme guidelines. Similarly, coordination meetings with partners working on Disability Management and Rehabilitation sectors were also held simultaneously.

Post exposure prophylaxis—Leprosy Post-Exposure Prophylaxis (LPEP) in which the single dose Rifampicin is given to contacts of newly diagnosed leprosy patients to decrease their risk of developing leprosy, is now extended to Kailali, Dhanusa, Kapilvastu and Rupandehi districts from the initial pilot districts: Parsa, Morang and Jhapa. This programme is being implemented in government as well as partners (The Leprosy Mission Nepal, Netherland Leprosy Relief & Nepal Leprosy Trust) support.

Grant to leprosy affected persons—Every year a grant is provided to support leprosy affected residents in the Khokana and Pokhara leprosy ashrams through the Nepal Leprosy Relief Association (NELRA). The grant of about three million has been provided for leprosy affected people to provide fuel, blanket, food and incentives to approximately 154 leprosy affected people.

In-depth Review of National Leprosy Programme and Envisioning Roadmap to Zero Leprosy—

The in-depth review of National Leprosy Programme was conducted from July 7-17, 2019 with a team of 9 experts from WHO-SEARO, WHO Nepal, Global Partnership for Zero Leprosy, Bir Hospital and Anandaban Leprosy Hospital. The experts prepared the report of the leprosy control programme of Nepal quoting the challenges, opportunities and recommendations to attain zero leprosy. The team with the help of partners and stakeholders of leprosy programme also proposed a Roadmap for the achievement of Zero Leprosy in Nepal by 2030.

Priority Assistive Product List (PAPL) 2075—The list and specification of assistive products was developed in line with WHO Assistive Products List and WHO's GATE initiative. It was developed in coordination with WHO, Handicap International, Prosthetic and Orthotic Society Nepal and stakeholders working on disability management and rehabilitation. The list contains 45 essential assistive products (including mobility aids, prosthetics, orthotics and accessories) to guide national, provincial and local bodies in the service provision of standard assistive products and devices for enhancing functioning in mobility, vision, hearing, communication, cognition and environment.

Distribution of Assistive Product—A grant of 4 million was granted to National Disabled Fund (NDF) in this year for the provision and distribution of assistive products to People with Disabilities from 55 districts. As per the progress report received from NDF, 393 assistive devices were distributed to 357 people with disabilities. The devices included 57 prosthesis, 44 orthosis, 287 mobility aids and 5 Cerebral Palsy chairs. 332 patients were provided with 1380 sessions of physiotherapy services. In this grant, an additional grant of 1.9 million was added by the NDF.

1.1.1 ACTIVITIES SUPPORTED BY PARTNERS

In 2075/76, WHO supported the supply of MDT drugs, provided technical support for the leprosy control and disability management programme, assisted in supervision and monitoring, and supported capacity building, active case detection and the community awareness programme.

The partners: The Leprosy Mission Nepal, Nepal Leprosy Trust, International Nepal Fellowship, Damien Foundation, Netherland Leprosy Relief, FAIRMED Foundations supported the following activities in high endemic districts:

- Community awareness and participation programme
- Orientation of community members
- Provision of primary, secondary and tertiary care at referral centres
- Capacity building activities for government health workers
- Technical support through joint supervision and monitoring
- Prevention of disability in leprosy and rehabilitation service
- Formation, implementation and support of self-care and self-help groups operated by people affected by leprosy and people living with disabilities due to leprosy
- Support for Post-Exposure Prophylaxis Programme

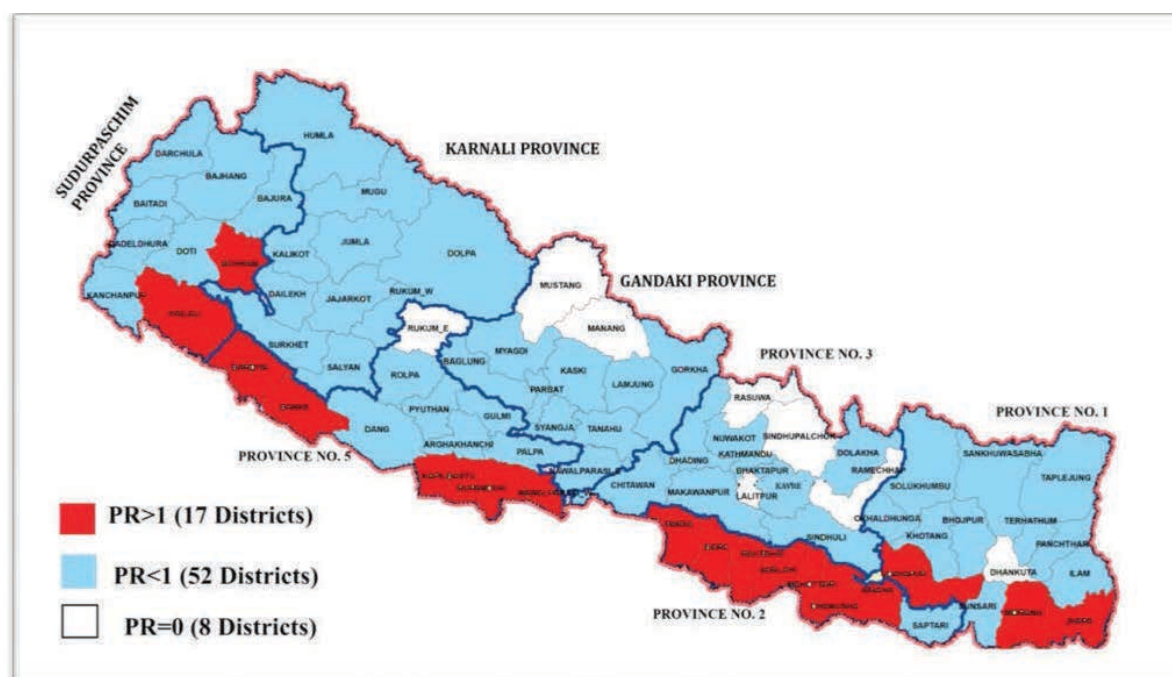
Similarly, regular coordination and cooperation was carried out with partners and stakeholders working on disability management and rehabilitation sector. The partners and stakeholders: National Federation of Disabled Nepal, National Disabled Fund, DPOs related 10 types of thematic Disabilities, Handicap International-Nepal, Army Rehab Centre, Hospital and Rehabilitation Centre of Disabled Children, Spinal Injury Rehab Centre, Professional Organizations like Nepal Physiotherapy Association, Nepal Occupational Therapy Association, Prosthetic and Orthotic Society, etc have provided their regular support and expertise to prepare draft of National Guideline on disability management & National Guideline on Disability Inclusive Health Service, conduction of trainings, Dissemination of "Study on Effectiveness of a training to government health workers and female community health volunteers on the detection and referral to rehabilitation care of selected impairments in children under 5 in Jajarkot Nepal" and provision of rehab unmet need to people affected by Storm in Bara and Parsa 2075.

Prevalence

Overall prevalence

At the end of FY 2075/76 (2018/19), 2921 leprosy cases were receiving MDT in Nepal, which makes a registered prevalence rate of 0.99 cases per 10,000 populations at the national level. This rate is below the cut-off point of 1 case per 10,000 population set by WHO to indicate the elimination of leprosy as a public health problem. This shows that Nepal's elimination status from 2009 is being sustained. The prevalence rate has same as the previous year. Out of 77 districts, 12 districts reported zero prevalence, 48 districts had a prevalence rate <1 and 17 districts had a rate of more than 1.

Figure 5.1.5.1: Leprosy Prevalence in Nepal, 2075/76 (2018/19)



Source: EDCC/HMIS

The highest number of leprosy cases under treatment was reported from Province-2 (1177 cases, 40% of total) and lowest by Gandaki Province and Karnali Province (3% each). The registered prevalence rate was the highest in Province-2 (1.93 case per 10,000 population) followed by Province-5 and lowest prevalence was reported at Gandaki Province-3 (0.40 case per 10,000 population).

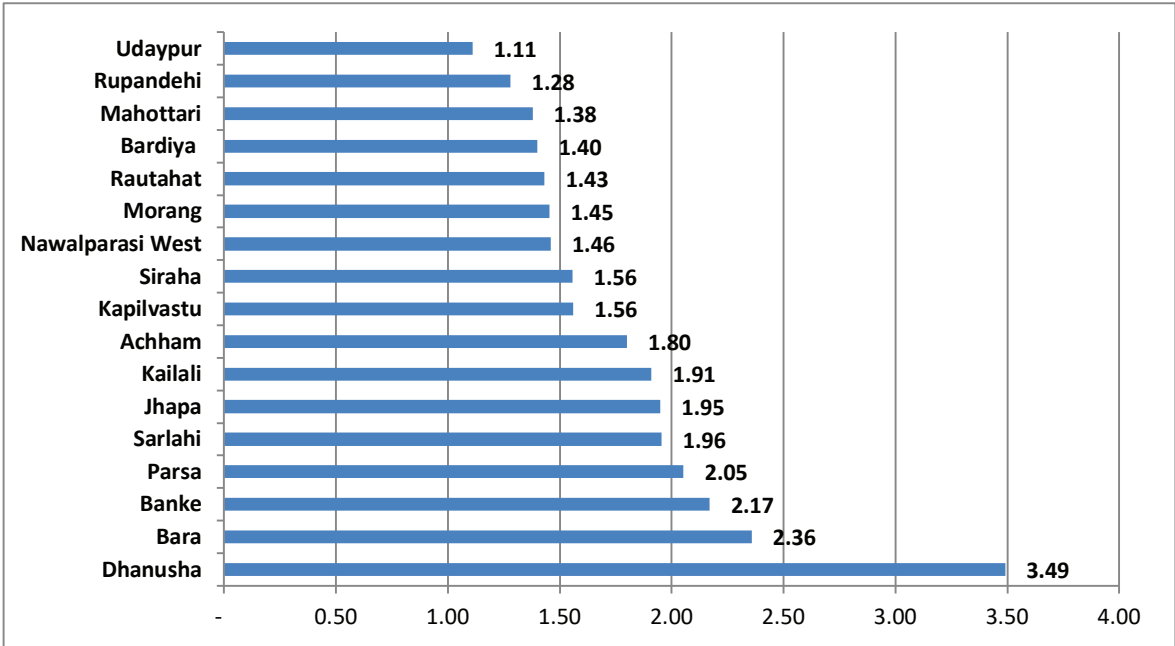
Table: 5.1.5.3 Distribution of Registered Cases and Prevalence Rate in 2075/76 (2018/2019)

Provinces	No. of registered prevalence cases at the end of the year		
	Total cases	Percentage	Prevalence rate (Per 10,000 population)
Province-1	426	14.58%	0.87
Province-2	1177	40.29%	1.93
Bagmati Province	294	10.06%	0.47
Gandaki Province	101	3.56%	0.40
Province-5	527	18.04%	1.05
Karnali Province	95	3.25%	0.54
SudurPaschim Province	301	10.30%	1.05
National	2921	100%	0.99

Source :EDCC/HMIS

The number of districts reporting a prevalence rate of more than 1 per 10,000 populations decreased to 17 from 21 in the previous year (Figure). Fifteen districts are in the Terai belt. Dhanusha district reported the highest prevalence rate of 3.49 per 10,000 population among all 17 districts with PR > 1.

Figure: 5.1.5.2 Districts with Leprosy Prevalence Rate Above 1 per 10,000 Population



NEW CASE DETECTION

The detection of new cases signifies ongoing transmission with the rate measured per 100,000 populations. A total of 3282 new leprosy cases were detected in 2075/76 with 45.22% of new cases in Province-2 (1484 cases). Meanwhile, Gandaki Province has the lowest new case detection (as shown in the figure). The new case detection rate (NCDR) per 100,000 populations for FY 2075/76 was 11.16 nationally.

Eight districts (Dhankuta, Ramechhap, Lalitpur, Sindhupalchok, Rasuwa, Manang, Mustang and Rukum East) reported no new cases this year while 17 districts had case detection rates more than 10 (Figure) of which Banke district had the highest rate (44.70) followed by Dhanusha (44.42).

Figure 5.1.5.3: Province-wise new leprosy cases, 2075/76(2018/2019)

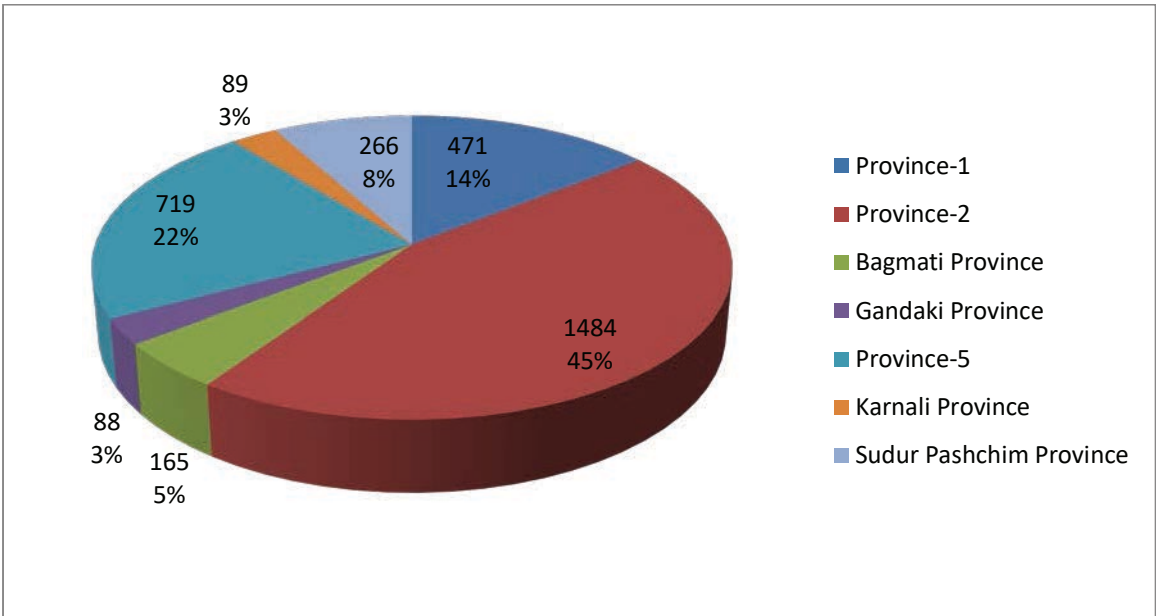
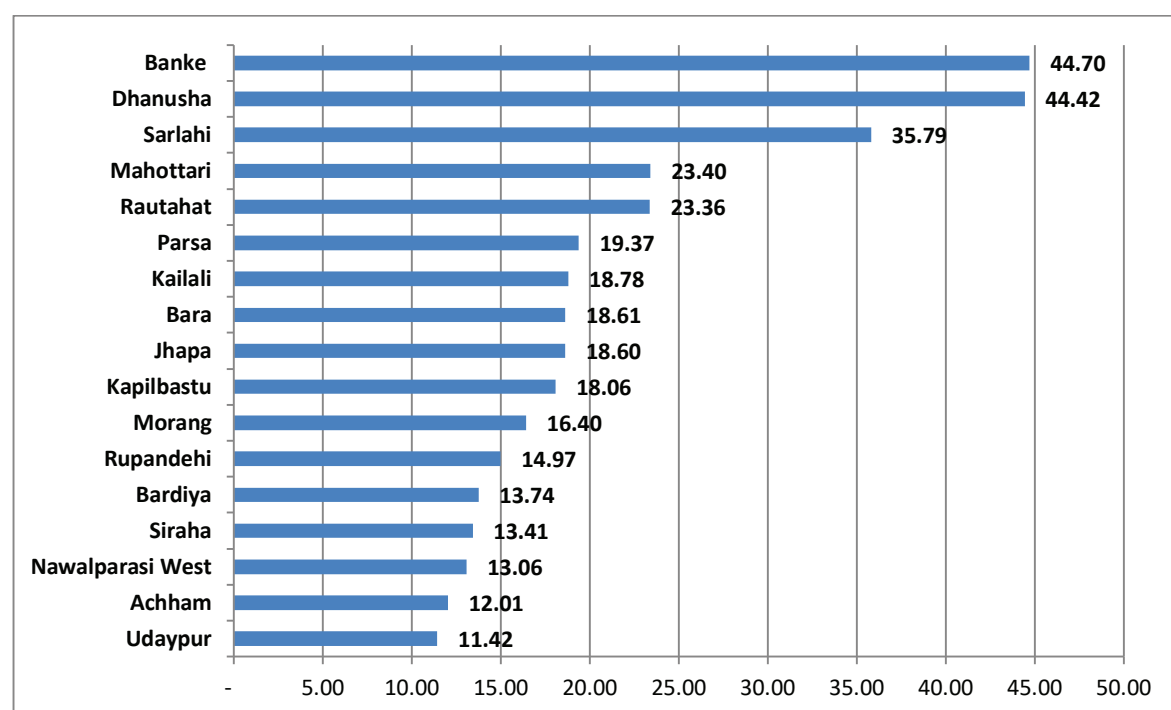


Figure 5.1.5.4: Districts with More than 10 New Case Detection Rate per 100,000 Population, 2075/76 (2018/2019)



Fifty four percent of new cases were multibacillary (MB) and the rest were paucibacillary (PB). This proportion has remained around fifty percent for the last few years. More than one third (41.93%) of the new cases were females. The female proportion has remained in the range of 30-40 percent for the last five years.

Table 5.1.5.4: Distribution of new leprosy cases 2075/76 (2018/2019)

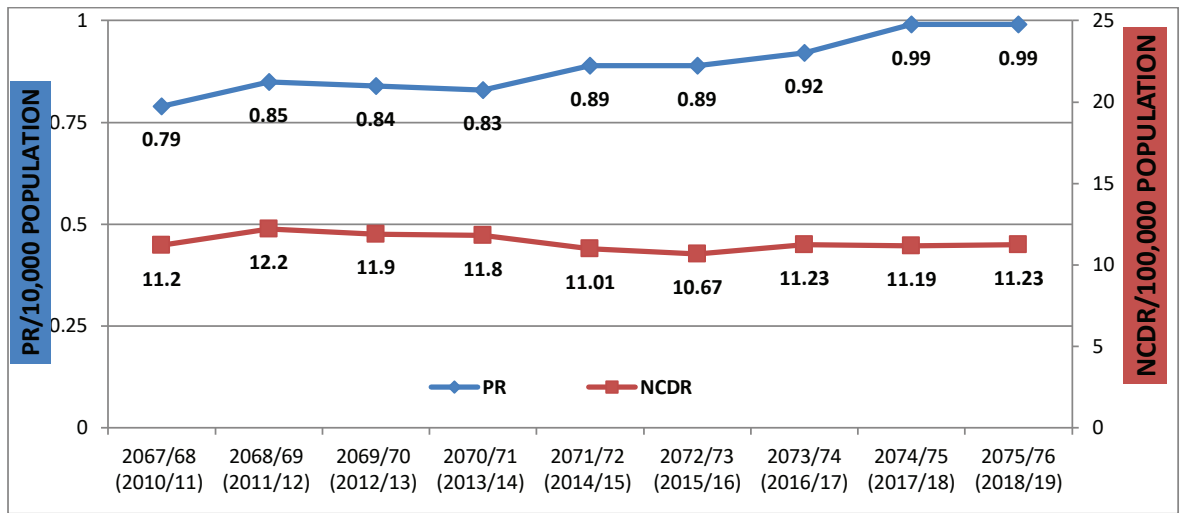
Provinces	Total New Cases	NCDR
Province-1	471	9.66
Province-2	1484	24.28
Bagmati Province	165	2.63
Gandaki Province	88	3.52
Province-5	719	14.38
Karnali Province	89	5.03
Sudur Paschim Province	266	9.28
National	3282	11.16

Source: EDCC/HMIS

TREND IN PREVALENCE, CASE DETECTION AND RELAPSE CASES

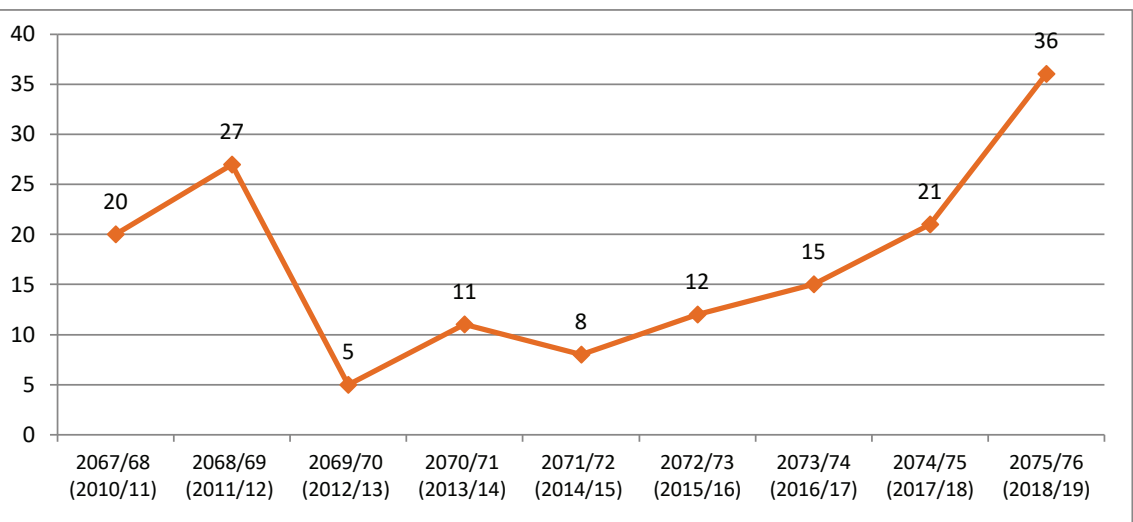
There trend of new case detection and the number of registered cases in the last eight years had remained stagnant. The prevalence decreased in 2066/67 (2009/2010) when elimination status was declared and has been under the elimination rate till date and has been risingsince then. The increase in the prevalence rate might be due to case holding, irregularity of intake of MDT and issues in recording and reporting. However, the new case detection rate has remained between 10 & 11 since the elimination. The number of relapse cases increased from 21 cases in the previous year to 36 in 2075/76 (2018/2019).

Figure 5.1.5.5: Trend in New Leprosy Case Detection Rate and Prevalence Rate from 2067/68-2075/76 (2010/11-2018/19)



Source: EDCC/HMIS

Figure 5.1.5.6: Trend in Relapse Cases from 2067/68 - 2074/75 (2010/2011-2018/19)

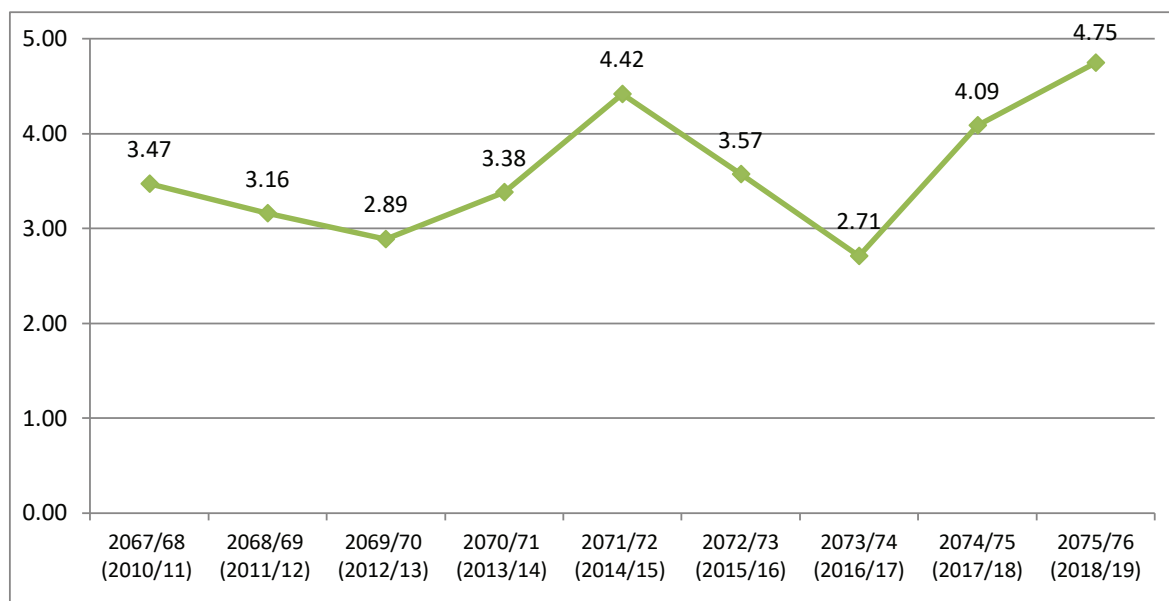


Source: EDCC/HMIS

DISABILITY CASES

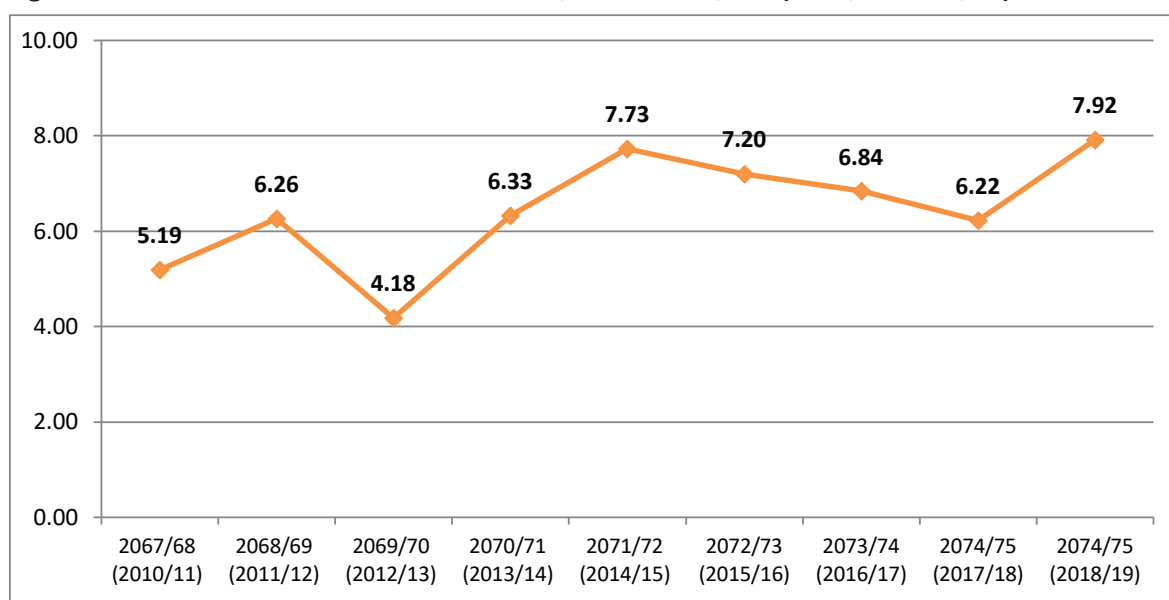
Leprosy cases that are not detected early on or in a timely and complete may results in disabilities. Early detection and timely and complete treatment is crucial for preventing disabilities. The Proportion of Grade 2 Disability (G2D) among new cases and the rate per 100,000 population are major monitoring indicators of early case detection. During 2075/76 (2018/2019), 156 cases of visible disability (G2D) were recorded with a proportion among new cases of 5.30% nationally.

Figure 5.1.5.7: Trend in Grade 2 Disability Cases from 2067/068 to 2075/076 (2010/11-2018/2019)



Source: EDCCD/HMIS

Figure 5.1.5.8: Trend in Child Cases from 2067/068 to 2075/076 (2010/11-2018/19)



Source: EDCCD/HMIS

A total of 260 new child cases were diagnosed in 2075/76 (2018/2019) resulting to 6.22% of new cases. This was a decrease from the previous year although the trend is fluctuating.

Conclusions

The elimination status was maintained at the national level as the prevalence rate remained below 1 case per 10,000 population this year although this rate was still high in 17 districts. The increased proportion of female and child cases could be a result of more early and active case detection activities. There was good coordination and partnerships with partners for the implementation of programmes.

The figures for the main indicators of leprosy control for the last nine years are summarised in Table while the main strengths, weakness and challenges of the leprosy control programme are listed.

Table 5.1.5.5: Comparison of Leprosy Indicators - 2066/67–2075/76 (2009/10 – 2018/19)

Indicators	2066/67 (2009/10)	2067/68 (2010/11)	2068/69 (2011/12)	2069/70 (2012/13)	2070/71 (2013/14)	2071/72 (2014/15)	2072/73 (2015/16)	2073/74 (2016/17)	2074/75 (2017/18)	2075/76(2018/19)
New cases	3,157	3,142	3,481	3,253	3,223	3,053	3,054	3215	3249	3282
New case detection rate	11.5	11.2	12.2	11.9	11.18	11.01	10.67	11.23	11.19	11.16
Under Treatment cases at the end	2,104	2,210	2,430	2,228	2,271	2,461	2,559	2626	2882	2921
PR/10,000 population	0.77	0.79	0.85	0.82	0.83	0.89	0.89	0.92	0.99	0.99
No. new child cases	212	163	218	136	204	236	220	220	202	260
Proportion child cases	6.71	5.19	6.26	4.24	6.33	7.73	7.20	6.84	6.22	7.92
New G2D cases	86	109	110	94	109	135	109	87	133	156
ProportionG2D cases	2.72	3.47	3.16	2.89	3.38	4.42	3.57	2.71	4.09	4.75
G2D rate/100,0000	3.1	3.9	3.9	3.5	4.0	4.9	3.8	3.3	4.1	5.30
New G2D Child cases	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	2
ProportionG2D Child cases	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.06	0.06
New female cases	1,030	892	1,100	1,004	1,143	1,100	1,169	1361	1375	1376
Proportion female cases	32.6	28.4	31.6	30.8	35.46	36.03	38.28	42.33	42.32	41.93
Released from treatment	3,844	2,979	3,190	3,374	3187	2,800	2,902	3040	2852	3221
No. Defaulters	25	31	24	43	24	38	44	57	93	142
No. relapse cases	18	20	25	14	11	8	12	15	21	36

Source: EDCC/HMIS

Table 5.1.5.6: Strengths, Weakness and Challenges for the Leprosy Control Programme

Strengths	Weaknesses	Challenges
• Commitment from political level –government's commitment to Bangkok Declaration for Leprosy • Accessible of leprosy service • Free MDT, transport service for released from treatment cases and other services for treating complications • Uninterrupted supply of MDT • Good communication and collaboration among supporting partners • Improving participation of leprosy affected people in national programme • Steering, coordination and technical committees formed and conducting meeting in regular basis • Contact examination/ surveillance of patient, family members and neighbours • Introduction of Leprosy Post-Exposure Prophylaxis in 7 of the high	• Low priority for leprosy programme at periphery • Low motivation of health workers • Very few rehabilitation activities • Inadequate training and orientation for newly recruited health workers and refresher trainings for focal persons and managers • Poor institutional set-up and inadequate human resources • Problem for reaction and complication management at periphery level • Poor result-based output, recording and reporting of contact examination activities • Poor coverage and monitoring of LPEP in implementing districts. • Under and over reporting of leprosy data in IHIMS.	• To sustain the elimination achieved at national level and elimination at district level • To maintain access and quality of services in low endemic mountain and hill districts • To strengthen surveillance, logistic, information, and job oriented capacity-building for general health workers, and an efficient referral network • To assess the magnitude of disability due to leprosy • To further reduce stigma and discrimination against affected persons and their families • Insufficient activities in low endemic districts for reducing the disease burden • To maintain access and quality service at HF level • Strengthening of index case & contact surveillance, recording and reporting system • Strict use of IHIMS data in program monitoring.

Future course of action and opportunities

- Implement the national strategy 2016-2020 within MoHP and through partners.
- Use and follow national operational guideline as per the new strategy.
- Intensify IEC activities to raise community awareness on early diagnosis and treatment, the prevention of disability, rehabilitation and social benefits.
- Strengthen early case detection by focusing on pocket areas of high endemic districts.
- Develop an intensified case search activity for the district level elimination
- Promote community participation in the National Leprosy Elimination Programme.
- Improve the access of unreached, marginalized and vulnerable groups to leprosy services.
- Strengthen the involvement of people affected by leprosy in leprosy services and programmes.
- Build the capacity of health workers for early case detection, management and community based rehabilitation.
- Carry out operational research in high endemic districts and pockets on specific issues for quality services.
- Expand chemoprophylaxis to protect contacts and cut leprosy transmission.
- Intensify vocational education and income generation activities for people affected by leprosy.
- Ensure resource mobilization, partnership and participation of local government and collaboration with new partners, institutions and individuals for leprosy services and rehabilitation.
- Strengthen the capacity of LCDMS for effectively implementing national policies and strategies.
- Strengthen surveillance in low endemic districts and areas.
- Strengthen the evidence-based (laboratory confirmed) reporting of relapse cases.
- Address cross-border issues.

Epidemiology and Disease Control

- Sustain the newly initiated programme and services e.g. satellite services, interactions with medical college hospitals, joint monitoring, training and observation in partnership approach.
- Strengthen referral hospital (efficiency, quality service in handed over Zonal hospitals) and proper referral mechanism.

5.2 Eye Care

Background

Globally, at least 2.2 billion people have a vision impairment or blindness, of whom at least 1 billion have a vision impairment that could have been prevented or has yet to be addressed. More reliable data on the met and unmet eye care needs, however, are required for planning. Also, the burden of eye conditions and vision impairment is not borne equally. The burden tends to be greater in low- and middle-income countries and underserved populations, such as women, migrants, indigenous peoples, persons with certain kinds of disability, and in rural communities. Population growth and ageing, along with behavioural and lifestyle changes, and urbanization, will dramatically increase the number of people with eye conditions, vision impairment and blindness in the coming decades.

A considerable progress was made in the field of eye care during the period of 1980 to 1990. During this period a rapid progress was made in the field of infrastructure development, service expansion, human resources development, resource mobilization and outputs in the eye care service in the country.

Nepal is one of the first countries in South Asia to launch VISION 2020: The Right to Sight a global campaign initiated by World Health Organization in November 19, 1999. After launching of Vision 2020, the programme became more focused according to the guideline and target provided by the Vision 2020. Strategic plan for eye care services in Nepal was developed by Ministry of Health/ Apex Body for Eye Health from 2002-2020. The disease focused strategies were adopted and various vertical programmes for Cataract, Trachoma, Xerophthalmia, Refractive Error and Low Vision were launched. A mid-term evaluation for this initiative was also conducted in 2010. The mid-term evaluation highlighted that Nepal has made a considerable progress in the field of eye care services in last one decade. The second long-term health plan (1997-2017) and Health Sector Strategy III stressed on the public-private partnership in health service and Ministry of Health started to allocate some fund for eye care services.

There has also been significant increase in the number of specialized human resources for eye care such as ophthalmologists, optometrists and ophthalmic Assistant. Several academic institutions are producing human resource in eye care acquiring self-sufficiency in its capacity to train its own human resource with expansion of training centers. Altogether 4 academic institutions are producing 35 Ophthalmologists per year and 2 institutions are producing 46 optometrists every year. Likewise, 7 eye care institutions are producing 360 Ophthalmic Assistant per year. In 1981 there were only seven ophthalmologists in the country. This number has now reached 350. At present there is one ophthalmologist for an estimated population of 90000. In 1981 there was not even one optometrist in Nepal. Now there are 520 optometrists in the country. The number of ophthalmic assistants has also reached 1025. The number of other directly involved health workers and nurses has also reached 450 and the number of eye care managers and equipment maintenance personnel is also increasing gradually. The number of necessary human resource for effective management of eye care service is still a challenge.

A significant development is also seen in terms of infrastructure development in this period; now almost all the districts have either primary eye care centre or eye hospital. The technology adopted in eye care practice in the country is regularly updated and of internationally accepted standards.

Trachoma was second leading cause of blindness in Nepal in 1981. In 2002, NNJS and the Ministry of Health and Population launched the National Trachoma Programme (NTP) with the objective of eliminating trachoma from all the 20 endemic districts in Nepal by 2017. A four-pronged strategy for elimination of this disease - SAFE (Surgery for trichiasis, Antibiotics to clear infection, Facial cleanliness, and Environmental improvement to limit transmission) was identified as the key strategies to be implemented to achieve this goal. After the program implementation, now trachoma has been eliminated from Nepal as a public health problem. Nepal's success in eliminating trachoma as a public health problem could serve as a model for other countries that are grappling to end trachoma as the deadline for global elimination for trachoma nears.

Nepal is also signatory to Global Eye Health Action Plan endorsed by the Sixty-sixth World Health Assembly which has opened a new opportunity to make further progress with additional efforts to prevent visual impairment and strengthen rehabilitation of the blind in communities.

In view of the need to develop/strengthen effective policies to achieve the global target of reduction of prevalence of avoidable visual impairment by 25% by 2019 from the baseline of 2010, Nepal has also operationalized the Global Action Plan in Nepal. Based on the 3 objectives of the Global Action Plan (2014-2019), various recommendations have been made to Government, WHO and International Partners to develop/strengthen effective policies to achieve the global target.

The Government of Nepal has also issued a new National Health Policy in line with the right to health guaranteed by the constitution, list of functions to be carried out by all three levels of government, relevant policies, challenges in health sector and achievements made so far in relation to providing health services to citizens.

The policy aims to develop and expand oral, eye, ENT and specialized health services to all levels. In order to achieve this, government has planned to integrate the primary eye care into the basic government healthcare system and eye care services will be further developed and expanded as per the public private partnership policy. Eye health unit will be established at Federal Ministry of Health to coordinate, cooperate and regulate the present eye care program in the country.

All Eye Hospitals Data 2019

S.No	Eye Hospital Name	OPD Outreach (Eyecarecenter + CAMP)	Nepali OPD	Other (OPD)	Total (OPD)	Surgery (Outreach)	Nepali Surgery	Other Surgery	Total (Surg ery)
1	NNJS/Hiralal Santu Devi Pradhan Eye Institute	69077	139756	5823	214656	2871	3941	149	6961
2	NNJS/Biratnagar Eye Hospital	275353	54507	245755	575615	833	10411	58571	69815
3	NNJS/Butwal Lions Eye Hospital	44123	85826	475	130424	1034	1820	25	2879
4	NNJS/ChhandaKBN Eye Hospital	0	23326	50748	74074	0	1470	6802	8272
5	NNJS/Dr.Binod Neeta Kandel Eye Hospital	13518	32727	14255	60500	943	865	663	2471
6	NNJS/Dr.Ram Prasad Pokharel Eye Hospital	0	13644	0	13644	0	667	0	667
7	NNJS/Fateh Bal Eye Hospital	32362	65806	42598	140766	201	4760	4610	9571
8	NNJS/Gaur Eye Hospital	23093	40777	52973	116843	1379	1460	4382	7221
9	NNJS/Geta Eye Hospital	0	187355	38660	226015	0	11698	19871	31569
10	NNJS/Himalaya Eye Hospital	259835	152013	0	411848	1548	4218	0	5766
11	NNJS/ R M Kedia Eye Hospital	124115	43336	53891	97227	1031	2965	8414	12410
12	NNJS/Kirtipur Eye Hospital	0	24677	0	24677	0	695	0	695
13	NNJS/Lamahi Eye Hospital	0	47650	104	47754	0	1739	7	1746
14	NNJS/Lumbini Eye Institute	268285	109367	153300	530952	6524	8786	23756	39066
15	NNJS/Mahendranagar Eye Hospital	0	21226	3746	24972	0	515	128	643
16	NNJS/Palpa Lions Lacoul Eye Hospital	0	30509	0	30509	463	1030	0	1493
17	NNJS/Rapti Eye Hospital	88578	80947	0	169525	2414	3299	0	5713
18	NNJS/Sagarmatha Choudhary Eye Hospital	226,491	96255	110297	433043	3886	14712	40422	59020
19	Birat Eye Hospital Pvt. Ltd	5369	15165	55735	76269	808	1575	10792	13175
20	Birtamode Eye Hospital	0	39964	13565	53529	0	1725	1005	2730
21	BPKLCOS	0	93221	0	93221	1789	3653	0	5442
22	BPEF-CHEERS	0	77485	0	77485	395	2141	0	2536
23	Dhangadhi Netralaya Pvt. Ltd. Dhangadhi, Kailali	0	22640	3306	25946	0	2811	353	3164
24	Dibyajyoti eye and ear care center pvt ltd	1460	2086	4987	7073	0	0	0	0
25	Kathmandu Medical college,sinamangal	1649	12646	0	14295	0	429	0	429
26	Lions Eye Hospital	693	39482	0	40175	0	559	0	559
27	Manipal Teaching Hospital, Pokhara	0	11311	212	11523	-	208	5	213
28	Mechi Drishti Eye Hospital & Research Centre	0	12658	5032	17690	0	3030	3504	6534
29	Mechi Eye Hospital	0	89668	114363	204031	0	5986	22024	28010
30	Mechi Netralaya Eye Hospital	0	13940	35871	49811	0	1174	2050	3224
31	Nepal Eye Hospital	0	107793	0	107793	0	4357	803	5160
32	Nepal Red Cross Society Surkhet Eye Hospital	0	38779	0	38779	1324	1707	0	3031
33	Reiyukai Eiko Masunaga Eye Hospital	15170	42813	0	57983	921	1038	0	1959
34	Shreekrishna Netralaya, Bhairahawa	0	6040	0	6040	0	325	1006	1331
35	Tilganga Inst. Of Ophthalmology	139139	492891	12095	644125	8368	26593	930	35891

5.3 Zoonotic disease

5.3.1 Background

The Epidemiology and Disease Control Division (EDCD) is responsible for responding to different zoonotic diseases of public health concern. Priorities zoonotic diseases in Nepal are Brucellosis, Leptospirosis, Hydatidosis, Cysticercosis, Toxoplasmosis etc. Our public health activities are focused to poisonous snake bites and dog bites. This division has been working in co-ordination, collaboration and consultation with governmental livestock, wildlife, agriculture, environment sectors, general public and other non-governmental sectors.

5.3.2 Goals and objectives of the national zoonosis control programme.

Box 5.3.1: Goals and objectives of national zoonosis control programme

Goals:

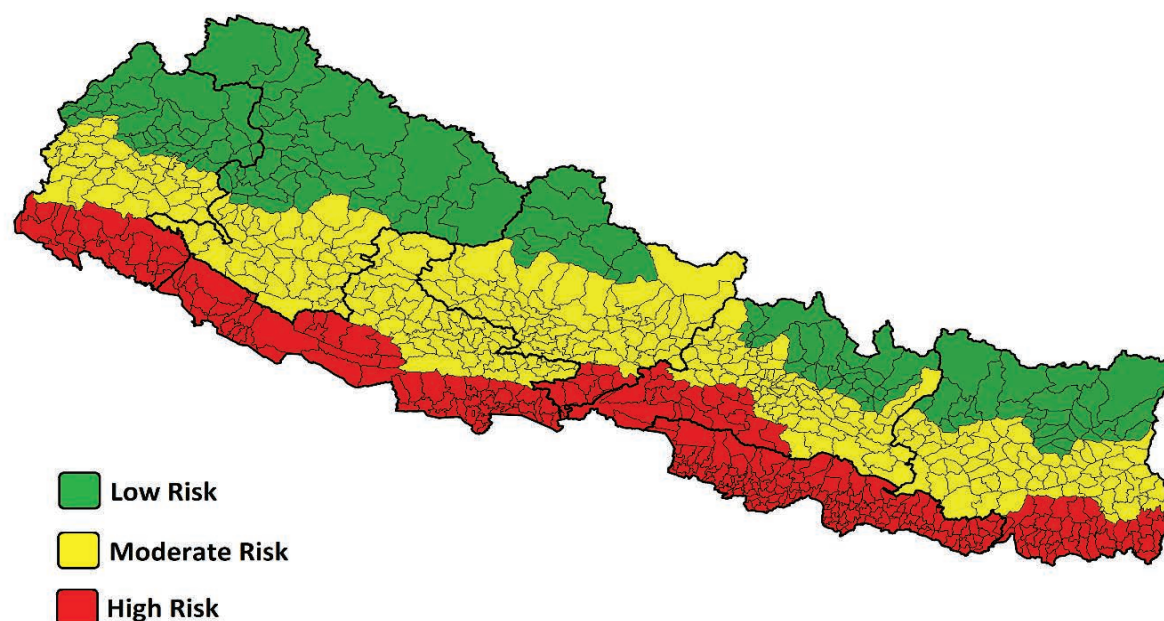
- No people dies of rabies or poisonous snake bites due to the unavailability of anti-rabies vaccine (ARV) or anti-snake venom serum or timely health care services.
- To prevent, control and manage outbreaks and epidemics of zoonosis.

Objectives:

- To strengthen the response and capacity of health care service providers for preventing and controlling zoonoses.
- To improve coordination among and between stakeholders for preventing and controlling zoonoses.
- To enhance the judicious use of ARV and ASVS in health facilities.
- To reduce the burden of zoonotic diseases (especially rabies and other priority zoonoses) through public awareness programmes.
- To provide cell culture ARV as a post-exposure treatment to all victims bitten by suspicious or rabid animals.
- To reduce the mortality rate in humans by providing ASVS and ARV.
- To train health workers on snake bite management and the effective use of ARV and immunoglobulins.
- To reduce the number of rabid and other suspicious animal bites.

Rabies-Rabies is primarily a disease of warm-blooded animals like Dogs, Jackals, Wolves, Mongoose wild cats etc. Rabies cases are almost all fatal but it is 100% preventable by vaccination, awareness about human and animal interaction. Most of the affected are children. It has been assumed that almost half of Nepal’s population are at high risk and a quarter at moderate risk of rabies. It is estimated that around 30,000 cases in pets and more than 100 human rabies cases occur each year with the highest risk are in the Terai. Latent infections have been reported in dogs and cats. Very few patients take rabies immune globulin (post-exposure prophylaxis). Almost all of human cases (99%) of rabies are result of dog bites.Vaccinating 70% of dogs break rabies transmission cycle in an area at risk. So, along with the EDCD, every dog owner and animal health authorities are more concerned to eliminate it as public health problem.

Rabies Risk Zones in Nepal



Activities and achievements in 2075/76 in Rabies control Programme

The following activities were carried out in 2075/76 for the control of rabies cases:

- Awareness programs about Rabies for school students and general public.
- Celebration of World Rabies day on 28th September and co-ordination with province and local level health officials for its effective implementations.
- Epidemiological study on the active dog bite cases.
- Surveillance about Rabies on outbreak area.
- Orientation program about the benefit of Intradermal (ID) delivery of Anti Rabies Vaccine (ARV) for health workers.
- Procurement of cell culture ARV vaccine and immunoglobulin.

In 2075/76, 35,250 cases animal bites were reported (Table 5.3.1). The number of reported animal bite cases has fluctuated in recent years but the number of rabies deaths has increased four times as compared to last year.

Table 5.3.1: Status of reported animal bites and rabies in Nepal

Fiscal year	Number of cases of dog bites	Number of cases of other animal bites	No. of cases of animal bites (dog+ Other animal)	Number of ARV vials consumed	Deaths
2070/71	31,976	2,540	34,516	195,868	10
2071/72	17,320	3,290	20,610	273,000	13
2072/73	20,133	2,494	22,627	320,139	6
2073/74	37,226	2,518	39,744	227,639	8
2074/75	33,204	2,477	35,681	281,718	32
2075/76	32,882	2,368	35,250	236,022	18

Source: HMIS/EDCD

Issues, recommendations from reviews and actions taken-Rabies

Issues	Recommendations	Action taken
The under reporting of cases and deaths from dog, Monkey, Jackal, Bear	Develop a regular reporting mechanism to medical stores and EDCD	Increased supervisory visit to reporting sites
Proper awareness about animal bites	Collaborate with different local stakeholders	Coordination with livestock
Training and Availability of ARV in all health care facilities	Provide regular supply and service at least to PHC level	Training and availability is being increased
Intra dermal vaccination not started to all sites	Training to health worker and proper supervision	Training followed by guidance to start is being expanded
Mass dog vaccination	Coordinate with animal health and local other stakeholders for at least 70% dog vaccination	Proper Coordination & collaboration not started in reality

Snake bites

Poisonous snake bites — Twenty-one of the 79 species of snakes found in Nepal are poisonous (11 pit viper species, 5 krait species, 3 cobra species and 1 each coral and Russell's viper species). Around 15,000 snake bite cases estimated annually of which about 10 percent are poisonous bites. The mortality rate is about 10 percent among poisonous bite cases. The 26 Terai districts are highly affected. In the last eight years between 1 and 131 deaths have been reported from poisonous snake bites each year. The free distribution of anti-snake venom serum (ASVS) began in 1999/2000. Indian quadrivalent ASVS is being used now. There are 85 snake bite treatment centres in the country for snakebite management in collaboration with Nepal army, Nepal Red Cross Society, community members. In addition to these, other hospitals in Kathmandu valley has been getting ASVS on basis of cases they manage.

The following activities were carried out in 2075/76 for the control and management of poisonous snake bites:

- Orientation program to Medical officers, nurses and paramedics was conducted on the proper use of Anti snake venom

- Procurement and supply of ASVS for respective centres.

In 2075/76, altogether 4,567 snake bite cases were reported at national level. A total of 696 cases were poisonous. Table 5.3.2 summarises progress against previous years' data.

Table 5.3.2: Snake bite cases and deaths, Nepal (2070/71–2075/76)

Fiscal year	Total cases	Non-poisonous	Poisonous	Cure	Deaths	% deaths
2070/71	5,143	4,145	998	988	10	1.0
2071/72	4,128	3,461	667	666	1	0.1
2072/73	3,268	2,605	663	643	20	3.0
2073/74	6,121	5,209	912	879	33	3.6
2074/75	5,606	4,812	794	362	20	2.5
2075/76	4,567	3,871	696			

Source: HMIS/EDCD

Issues, recommendations from reviews and actions taken-Snake bite management

Issues	Recommendations	Action taken
The under reporting of cases and deaths from Snake bites	Develop a regular reporting mechanism to medical stores and EDCD	Increased supervisory visit to reporting sites
Public being died in community	Coordination with local regarding quick transportation, awareness etc	Awareness about importance of co-ordination and transportation
Use of ASVS vial	Timely procurement, supply, training and treatment availability	Snake bite management training for health worker
Not included in regular health service	The snake bite treatment centres should be in collaboration with health facilities with at least trained physician	Training and orientation started up to treatment centres
ICU and ventilator	Prepare at least one equipped snake bite management centre in each province	No action is taken
Motivation, security and sustainability to provide snake bite management	All snake bite management centres should be ensured with security, motivation of HR and sustainability of service	Inclusive management by local and security personnel



S/N	Animal Bite cases	Province No. 1	Province No.2	Bagmati Province	Gandaki Province	Province No.5	Karnali Province	Sudurpashchim Province
1	Dog Bite	4838	7335	6550	3591	4781	1984	3803
2	Other rabies susceptible animal Bite	429	407	474	489	243	122	204
3	Snake bite- Non Poisonous	727	763	477	940	668	145	151
4	Snake bite Poisonous	81	195	95	91	77	20	137
5	Insects/Wasp Bite	5696	7101	6359	4364	7265	2825	3377

5.4 Tuberculosis

5.4.1 Background

Tuberculosis (TB) is a public health problem in Nepal that affects thousands of people each year and is one of the leading cause of death in the country. WHO estimates that around 42,000 (incidence rate of 151 per 100 000) people develop active TB every year in Nepal. Nearly fifty percentage of them are estimated to have infectious pulmonary disease.

During this reporting year, National Tuberculosis Programme (NTP) registered 32043 all forms of TB cases, which includes 31,397 incident TB cases (new and relapse). Among all forms of incident TB cases (new and relapse) 18,106 (58%) were bacteriologically confirmed (PBC) incident TB cases, 4112 (13%) were pulmonary clinically diagnosed (PCD) incident TB cases and 9179 (29%) were extra pulmonary incident TB cases reported during the reporting year. Out of total registered cases in NTP, there were 11667 (37%) female and 20330 (63%) male.

According to WHO Global TB Report 2018, Tuberculosis Mortality rate was 23 per 100,000 populations, which exclude HIV+TB. As per the Global TB report, 6000 to 7000 people are dying per year from TB disease. However, TB death among registered TB patients was 1,013 (3%) among 32,313 registered TB cases in FY 2074/75. TB mortality is high given that most deaths are preventable if people can access tuberculosis care for diagnosis and the correct treatment is provided. Nepal NTP has adopted the global WHO's END TB Strategy as the TB control strategy of the country.

The Directly Observed Treatment, Short Course (DOTS) has been implemented throughout the country since April 2001. The NTP has coordinated with the public sector, private sector, local government, I/NGOs, social workers, educational institutions and other sectors to expand DOTS and sustain the good progress achieved by the NTP. There are 4,382 TB treatment centres in Nepal and the NTP has adopted the global End TB Strategy and the achievement of the SDGs as the country's TB control strategy.

5.4.2 Vision, goal, objectives of the National TB Programme

Vision: TB Free Nepal

Goal

To reduce the TB incidence by 20% by the year 2021 compared to 2015 and increase case notifications by a cumulative total of 20,000 from July 2016 to July 2021, compared to the year 2015.

Objectives

Objective 1: Increase case notification through improved health facility-based diagnosis; increase diagnosis among children (from 6% at baseline, to 10% of total cases by 2021); examination of household contacts and expanded diagnosis among vulnerable groups within the health service, such as PLHIV (from 179 cases at baseline to over 1,100 cases in 2020/21), and those with diabetes mellitus (DM).

Objective 2: Maintain the treatment success rate at 90% of patients (all forms of TB) through to 2021

Objective 3: Provide DR diagnostic services for 50% of persons with presumptive DR TB by 2018 and 100% by 2021; successfully treat at least 75 % of the diagnosed DR patients

Objective 4: Further expand case finding by engaging providers for TB care from the public sector (beyond MoHP), medical colleges, NGO sector, and private sector through results-based financing (PPM) schemes, with formal engagements (signed MoUs) to notify TB cases.

Objective 5: Strengthen community systems for management, advocacy, support and rights for TB patients in order to create an enabling environment to detect & manage TB cases in 60% of all districts by 2018 and 100% by 2021

Objective 6: Contribute to health system strengthening through HR management and capacity development, financial management, infrastructures, procurements and supply management in TB

Objective 7: Develop a comprehensive TB Surveillance, Monitoring, and Evaluation system

Objectives 8: To develop a plan for continuation of NTP services in the event of natural disaster or public health emergency

Box 5.4.1: The End TB Strategy

VISION: A world free of TB

Zero deaths, disease and suffering due to TB

GOAL: End the Global TB Epidemic

MILESTONES FOR 2025:

1. 75% reduction in TB deaths (compared with 2015)
2. 50% reduction in TB incidence rate (less than 55 TB cases per 100,000 population)
3. No affected families facing catastrophic costs due to TB

TARGETS FOR 2035:

1. 95% reduction in TB deaths (compared with 2015)
2. 90% reduction in TB incidence rate (less than 10 TB cases per 100,000 population)

No affected families facing catastrophic costs due to TB

The End TB Strategy was unanimously endorsed by the World Health Assembly in 2014. Its three overarching indicators are i) the number of TB deaths per year, ii) TB incidence rate per year, and iii) the percentage of TB-affected households that experience catastrophic costs as a result of TB. These indicators have related targets for 2030 and 2035.

The main principles for implementing the strategy are:

- government stewardship and accountability, with monitoring and evaluation;
- strong coalitions with civil society organizations and communities;
- the protection and promotion of human rights, ethics and equity; and
- The adaptation of the strategy and targets at country levels, with global collaboration.

The strategy's components (three pillars) and related strategies are as follows:

1. Integrated, patient- entered care and prevention:

• Early diagnosis of TB including universal drug-susceptibility testing, and systematic screening of contacts and high-risk groups. • Treatment of all people with TB including drug-resistant TB. • Collaborative TB/HIV activities and the management of co-morbidities. • The preventive treatment of persons at high risk, and vaccination against TB.
2. Bold policies and supportive systems: • Political commitment with adequate resources for TB care and prevention. • The engagement of communities, civil society organizations, and public and private care providers. • Universal health coverage policy and regulatory frameworks for case notification, vital registration, quality and rational use of medicines, and infection control. • Social protection, poverty alleviation and actions on other determinants of TB.
3. Intensified research and innovation: • The discovery, development and rapid uptake of new tools, interventions and strategies. • Research to optimize implementation and impact and promote innovations.

5.4.3 Major activities in fiscal year 2075/76

- Provided effective chemotherapy to all patients in accordance with national treatment policies.
- Promote early diagnosis of people with infectious pulmonary TB by sputum smear examination and GeneXpert.
- Implemented active case finding interventions across high burden districts to identify missing tuberculosis cases among high risk groups through sub recipients of Global Fund grant.
- Provided continuous drugs supply to all treatment centres.
- Maintained a standard system for recording and reporting
- Monitored the result of treatment and evaluate progress of the programme
- Strengthened cooperation between NGOs, bilateral aid agencies and donors involved in the NTP.
- Coordinate and collaborate NTP activities with and HIV /AIDS programmes.
- E-TB Orientation to private practitioner to notify the TB patients diagnosed at private health facilities.
- Roll out of DR TB Tracking and Laboratory System at all the DR and GX sites.
- Linkage of DOTS centres to Microscopic centre through courier.
- Provided training to health personnel.
- Training to medical doctors for childhood TB diagnosis.

5.4.4 Progress and epidemiology of TB

Institutional coverage and estimation of TB burden

Nepal adopted the DOTS strategy in 1996 and achieved nationwide coverage in 2001. All DOTS sites are integrated in public health services or run through NTP partner organizations in public and private sectors. In 2075/76, 4,382 institutions were offering TB diagnosis and treatment DOTS-based TB control services. Among them, 4,204 are government health institutions. To increase access to treatment services, NTP has developed partnership with different organizations including private nursing homes, polyclinics, I/NGO health clinics, prisons, refugee camps, police hospitals, medical colleges and municipalities.

The burden of TB can be measured in terms of incidence (defined as the number of new and relapse

Reported case notification rate (CNR) of all forms of TB is 109/100,000 whereas CNR for incident TB cases (new and relapse) is 107/100000 population. In Fiscal Year 2075/76, a total of 32,043 cases of TB was notified and registered at NTP. There were 97.98 % incident TB cases registered (New and Relapse) among all TB cases. Among the notified TB cases, 71 % of all TB cases were pulmonary cases and out of notified pulmonary TB cases, 82% were bacteriologically confirmed. Among those bacteriologically confirmed and notified, 39% (12520) were confirmed using Xpert MTB/RIF testing.

More than three-fifths of all TB cases (20928, 65%) were reported from Province 2, Province 3 and Province 5. Around 24% of the TB cases were reported from Province 3. Kathmandu district alone holds around 38% (2930 TB cases) of the TB cases notified from the Province 3 while its contribution is around 9% in the national total. Whereas in terms of eco-terrain distribution, Terai belt reported more than half of cases (18,815, 59%). Most cases were reported in the middle age group with the highest of 48 % in 15-44 year of age. The childhood TB is around 5.5% while men were nearly 2 times more than women among the reported TB case.

Tuberculosis Case Notification Rate 2075_76

Legend

- Boundary
 - International
 - Provincial
 - District
- CNR
 - <75
 - 76 - 120
 - >120

Scale: 0 50 100 KM

Map Data (Districts and CNR):

District	CNR
CHINA	
HUMLA	38
DARCHULA	72
BAJHANG	51
BAITADI	52
BAJURA	102
MUGU	58
JUMLA	72
DOLPA	24
MUSTANG	34
MANANG	31
KASKI	83
LAMJUNG	66
GORKHA	74
RASUWA	78
SINDHU PALCHOK	61
DOLAKHA	59
SOLUKHUMBU	34
SANKHUWASABHA	43
TAPLEJUNG	29
TERATHUM	40
PANCHTHAR	23
ILAM	52
JHAPA	122
MORANG	105
SUNWARI	123
SAPTARI	76
UDAYAPUR	91
SIRHAJA	98
DHANKU	105
MAHOTTARI	117
RAUTAHAT	105
BARA	133
PARSA	135
MAKAWANPUR	155
CHITAWAN	176
NAWALPARKASI	119
KAPILBASTI	111
ROUPANDEH	122
PALECHA	137
ANGRAKHAH	124
DANG	157
BANKE	135
BARDIYA	121
SURKHET	115
SALYAN	76
ROLPA	113
RUKUM E	64
RUKUM W	96
JAJARKOT	68
DAILEKH	56
KALIKOT	47
ACHHAM	61
DOTI	86
DAMELDHURA	68
RANCHANPUR	158
KAILALI	133
INDIA	
KATHMANDU VALLEY	
KATHMANDU	136
BAKTAPUR	153
LAUTPUR	135
CHINA	

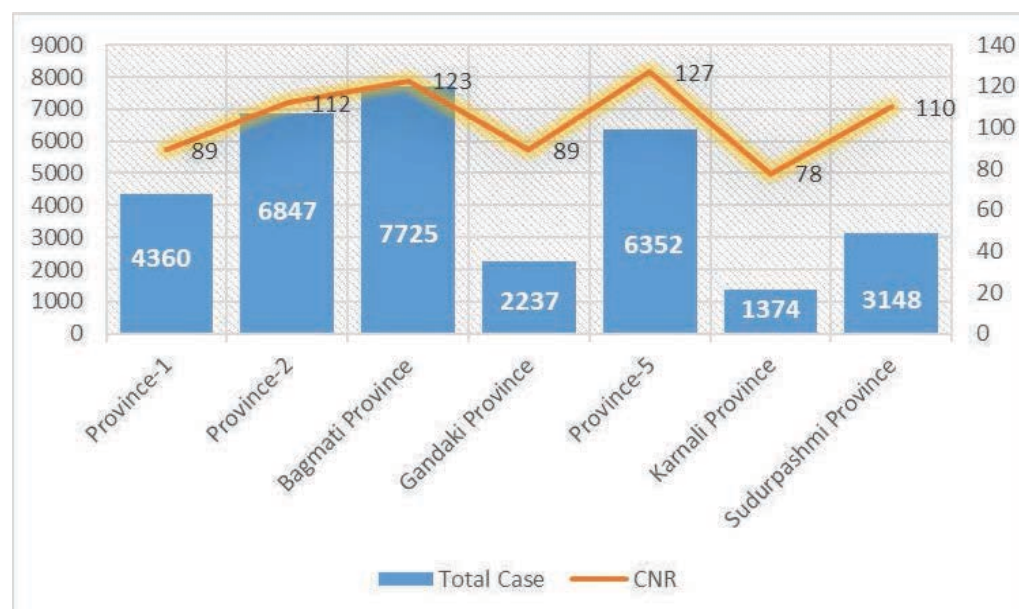
Spatial Data Source: Department of Survey, Minbhavan

Map Produced by: Pushpraj Joshi, NTCC

The National Case Notification Rate (All forms) is 109 / 100,000 population. Based on the CNR, there are 20 districts with CNR more than 120, while 24 districts had CNR between 75-120 and remaining 33 districts had below 75 CNR. Among 20 high burden districts, 14 districts are from the Terai belt while remaining 6 are from the Hilly region. Further, more than three-fifths of TB cases (66%) of the

cases were reported from Province 2, Province 3, and Province 5 respectively whereas in terms of eco-terrain distribution, Terai belt held more than half of TB cases (57%) in the reporting year.

Figure 5.4.2: Notified TB Case and Case Notification Rate (CNR) by Provinces, FY 2075/76

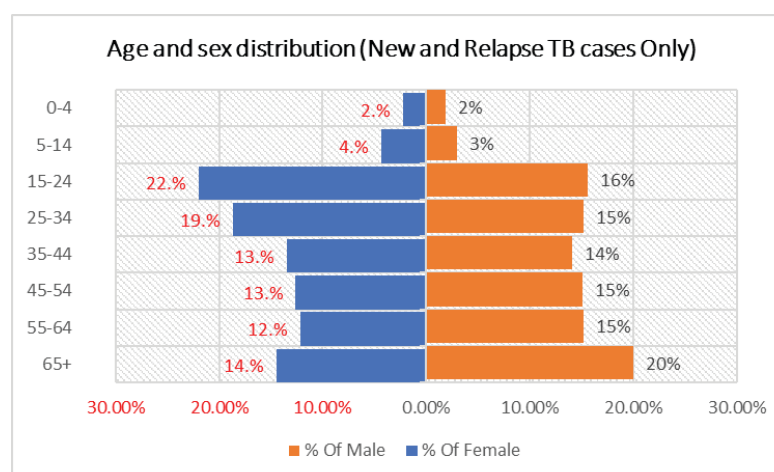


Source: NTC

Figure 5.4.2 shows the province wise case notification rate. The Province 5 had the highest CNR (127 per 100,000 population) followed by Bagmati Province, Province 2 and Sudurpaschim Pradesh (123, 112 and 110 per 100,000 population) respectively. CNR was very low at Karnali Province (78 per 100,000 population).

Distribution by age and sex

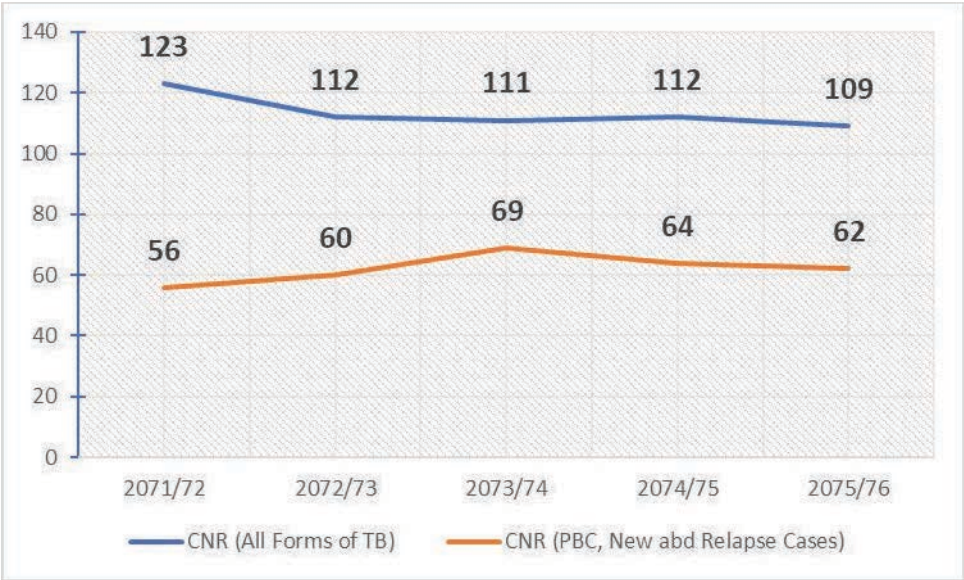
In FY 2075/76, around 5.5% of cases were registered as child TB cases while the remaining 94.5% were registered as adult TB. Among them, male TB cases were reported nearly 2 times more than female. Among the child TB cases, most of them (63%) were between (5-14) years of age group. In-country context like Nepal, where access to health services is still a big challenge and where it is estimated that nearly 20-25% of cases are being missed to be diagnosed from the community every year, the estimated TB in children should not be less than 10-15%, hence NTP requires to focus on increasing current (5.5%) proportion of child TB among all notified TB cases. The low proportion of child TB cases suggested the high existence of TB transmission that requires measures of early diagnosis and treatment of child TB. In Nepal, men were nearly twice as more reported to have TB than women which were nearly the same in the region and global context.



Annual trends

Figure 5.4.3 shows the trend of TB cases notification from 2071/72 to 2075/76. It has decreased gradually from 123 per 100,000 population in 2071/72 to 109 per 100,000 population in 2075/76.

Figure 5.4.3: TB Case Notification Rate (2071/72–2075/76)



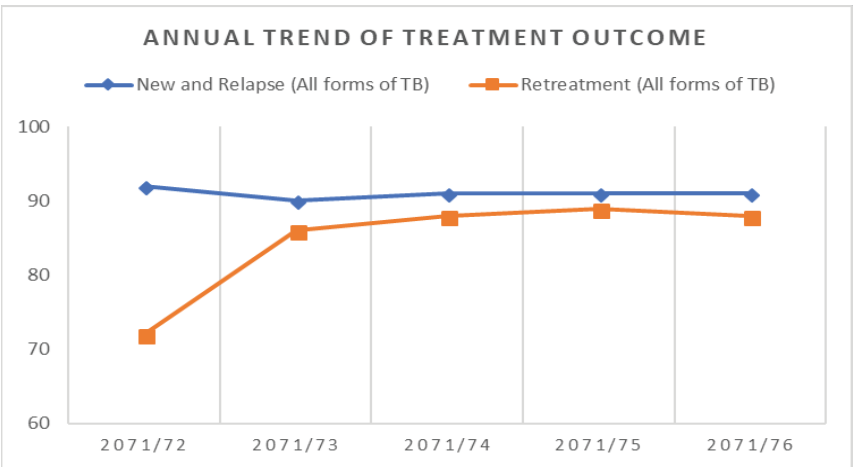
Source:NTC

Treatment outcomes

The NTP has achieved excellent treatment success rate, with or above 90 percent success rate sustained since the introduction of DOTS in 1996. Since then, NTP has always exceeded the global target of 85 percent treatment success.

The trend of TB treatment success rates for TB has been consistently above 90% since the last few years. Annual trend of TB treatment success rates at national level for newer cases (New and Relapse) is constantly high at around 91%, for this FY 2075/76 it is 91%. However, the trend of success rates among the retreatment cases (Success, Failure, Loss to Follow-up and Other previously treated) had been constantly lesser (in comparison to treatment success among newer cases).

Figure 5.4.4: TB Treatment Success Trend (FY 2071/72– FY 2075/76)



Source: NTC

Table 5.4.1 shows the treatment outcomes of the TB patients across different provinces. Among the 7 provinces, Karnali province has achieved highest treatment success rate (i.e. 94%). The treatment failure rate was constant across all the provinces. Meanwhile, around 4% of registered TB patients died at Gandaki province, province 5 and Sudurpaschim province during the course of TB treatment. Similarly, Sudurpaschim and Province-2 experienced high lost to follow up (around 4%) in comparison to other provinces.

Table 5.4.1: Province wise TB treatment outcomes (2075/76)

Province	Success %	Failure %	Died %	LFU %	Not Evaluated %
Province 1	90	1	3	3	3
Province 2	91	0	3	4	1
Bagmati Province	91	1	2	2	5
Gandaki Province	94	0	3	2	1
Province 5	90	1	4	3	2
Karnali Province	94	1	3	2	1
Sudurpashim Province	88	1	4	4	3
National Total	91	1	3	3	2

Source: NTC

Drug resistant tuberculosis (DR TB)

Drug-resistant TB (DRTB) has become a great challenge for the NTP and a major public health concern in Nepal. Innovative approaches and more funding are urgently needed for the programmatic management of drug resistance TB nationally to detect and enrol more patients on multi-drug resistant (MDR) TB treatment, and to improve outcomes.

Burden of MDR-TB

The Drug Resistance Survey (2011-12) found that burden of drug resistant forms of TB was increasing, with 9.3 percent of new patient were found resistant to at least one anti-tuberculosis drug. With the expansion of diagnostic services, case finding among new cases has remarkably increased in recent years i.e; new MDR-TB contribution in registration category has increased rapidly in the last 4 years (14.6% in 2071/72, 15.3% in 2072/73, 18.8% in 2073/74 and 32% in 2074/75). It signifies that RR/MDR-TB cases are diagnosed early and are enrolled in DR TB treatment. Likewise, the contribution of “Category II failure after first line treatment” has been declining (i.e. 30.8% in 2071/72, 28.0% in 2072/73, 24.0% in 2073/74, and 11% in 2074/75) for consecutive year suggesting that the early case diagnosis and treatment is improving treatment outcomes before the cases reach to category II failure.

There are estimated around 1500 (0.84 to 2.4) cases of DR TB annually. However, 350 to 450 MDR TB cases are notified annually. This year 635 MDR TB cases were notified. In 2075/76, a total of 392 RR/MDR TB were enrolled for treatment. TSR of RR/MDR patients was 72%. Among them, 62 cases (16%) were on treatment at DR centers of province 1, 60 cases (16%) at province 2, 89 cases (23%) at Bagmati province, 36 cases (9%) at Gandaki province, 95 cases (24 %) at province 5 and remaining 50 cases (13%) were on DR treatment at Sudurpaschim province respectively. However, there were no patients on treatment at DR centers of Karnali province during the period.

Box 5.4.2 Drug Resistant TB Types

Rifampicin resistant TB (RR-TB) is resistant to rifampicin (detected using rapid diagnostic tests), with or without resistance to other anti-TB drugs and covers any resistance to rifampicin.

Pre-extensively drug resistant TB (Pre-XDR TB) is a multi-drug resistant strain of TB that is also resistant to either one of the fluoroquinolones and all the second line injectable drugs.

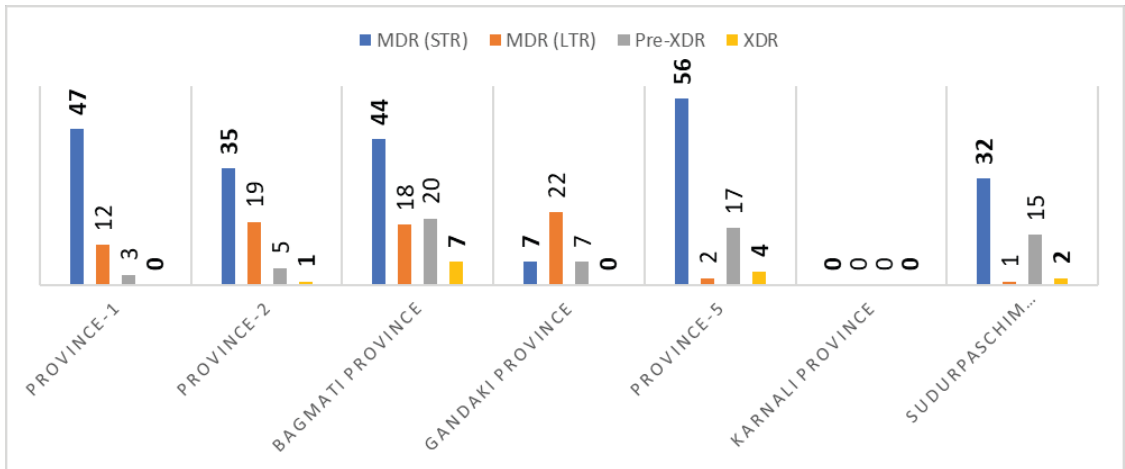
Extensively drug resistant TB (XDR TB) is a severe form of MDR-TB that is multidrug-resistant (MDR-TB) to all the fluoroquinolones and second line injectable drugs.

Case finding

The national MDR TB Treatment Guideline defines three types of MDR-TB (RR TB, Pre-XDR TB and XDR TB) cases which are further classified in six different categories. Drug resistant forms of TB are detected through GeneXpert, Culture/DST and LPA methods in Nepal. In this reporting period, 376 MDR TB cases were reported to have enroll in the DR treatment.

Figure 5.4.5 shows the burden of MDR TB across the different provinces in this fiscal year 2074/75. In terms of number of RR/MDR TB patients notified, province 2 and province 3 were found to have equal burden followed by province 5, Sudurpaschim province and province 1 respectively. Similarly, the burden of Pre-XDR and XDR TB patients was found more at province 5 followed by province 3, Gandaki province, Sudurpaschim province, and Province 1 respectively.

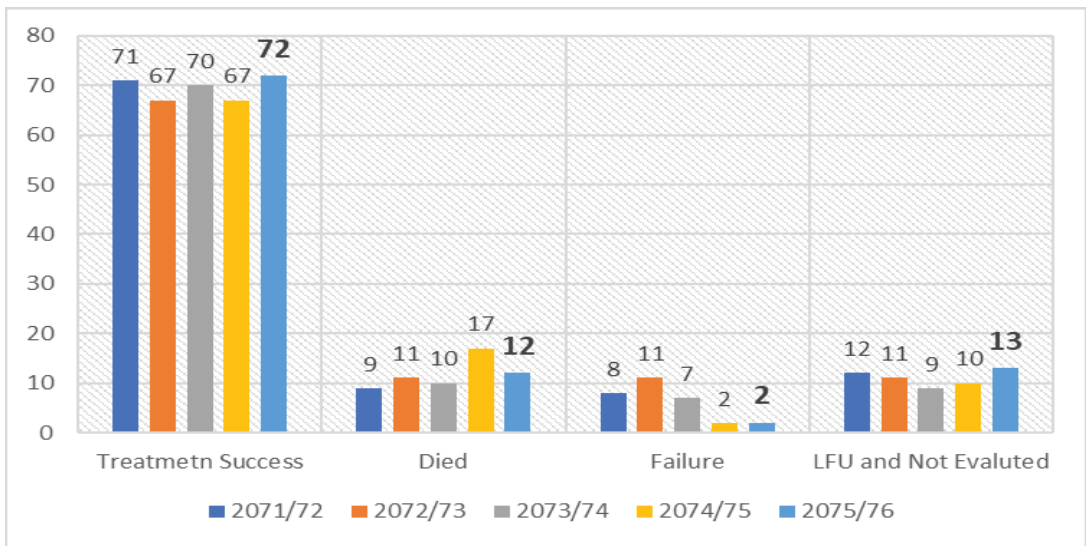
Figure 5.4.5: MDR-TB cases notified by provinces



Source: NTC

Figure 5.4.6 shows treatment outcome of DRTB case registered in NTP. The Treatment success rate of MDR TB has slightly increase to 72% in this reporting period from that of previous year. But there was a fluctuation in the treatment success rate of MDR TB. The fluctuation in treatment success rate is mainly affected by the proportion of death as well as holding of the MDR patients at treatment.

Figure 5.4.6: Percentages of Treatment outcomes of MDR TB cases



Source: NTC

NTP's laboratory network

The diagnosis and treatment monitoring of TB patients relies on sputum smear microscopy because of its low cost and ease of administration. It is also the worldwide diagnostic tool of choice worldwide. Nepal has 603 microscopy centers (MCs) that carry out sputum microscopy examinations. Most of the MCs are run by the government health facilities while few are operated by NGOs and private institutions (Table 5.4.2). There are well established networks between the microscopy centres (MCs) at PHCCs, DHOs and DPHO, the five regional TB quality control centres (RTQCCs) and with the National TB Centre (NTC). The microscopy centres send examined slides to their RTQCCs via DHOs according to the Lot Quality Assurance Sampling/System (LQAS) method. At the federal structure, NTP has already initiated coordination and communication with respective provinces to provide technical and financial support to establish provincial structure for the external quality assurance of smear microscopy slides. The overall agreement rate or the concordance of sputum slide examinations between microscopy centres and RTQCCs has been more than 95% in this reporting year 2074/75. The agreement rate has improved in recent years. The external quality assurance (EQA) for sputum microscopy is carried out provincial health directorates (previously regional health directorates) at seven provinces and at the National TB centre in Kathmandu.

Table 5.4.2: NTP laboratory network (no. of institutions) by province

Center	Province 1	Province 2	Province 3	Gandaki	Province 5	Karnali	Sudurpaschim	Total
MC	102	79	136	58	99	33	97	604
GX sites	7	10	15	4	11	4	5	56

Source: NTC

A lot quality assurance sampling/system (LQAS) has been implemented throughout Nepal. At each microscopy centre, examined slides for EQA are collected and selected according to the LQAS. Previously NTP used to collect all positive and 10 percent negative slides for EQA. In LQAS, slides are collected and selected using standard procedures to give a statistically significant sample size. LQAS is a systematic sampling technique that helps maintain good quality sputum results between microscopy centres and quality control centres. The two means of testing for MDR-TB are given in

Box 5.4.3 Means of testing for MDR-TB in use in Nepal

The GeneXpert MTB/RIF is a cartridge-based technological platform that integrates sputum processing, DNA extraction and amplification, TB and MDR-TB diagnosis. It has a similar sensitivity to culture, targets *M. tuberculosis* specifically and enables the simultaneous detection of rifampicin resistance. The Xpert MTB/RIF test is a valuable, sensitive, and specific new tool for early TB detection and for determining rifampicin resistance. While mono-resistance to rifampicin occurs in approximately 5% of rifampicin resistant strains, a high proportion of rifampicin resistance is associated with concurrent resistance to isoniazid. Thus, detecting resistance to rifampicin can be used as a marker for MDR-TB with a high level of accuracy. The use of Xpert MTB/RIF started in Nepal in 2011/2012 and there are 74 Xpert MTB/RIF centres throughout the country.

The culture of *M. tuberculosis* remains the gold standard for both diagnosis and drug susceptibility testing, and also the method of choice to monitor drug resistant TB treatment. Conventional culture methods using Lowenstein-Jensen (LJ) has the major disadvantage of being very slow. LJ cultures take eight weeks for negative results and four to six weeks after initial culture for drug susceptibility testing. National TB Reference Laboratories (NRL), NTC and GENETUP, are providing culture and drug susceptibility test (DST) services and NTP has envisioned to establish Provincial TB Reference Laboratories in all the seven provinces by 2021.

TB/HIV co-infection

In FY 2075/76, 22029 TB patients with a documented HIV test result.

Figure 5.4.7 : TB/HIV Co-infection screening and treatment status.

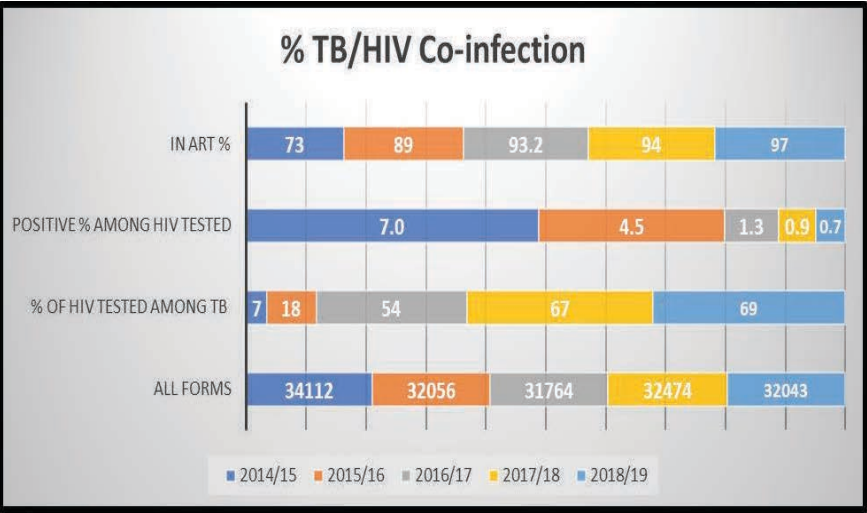


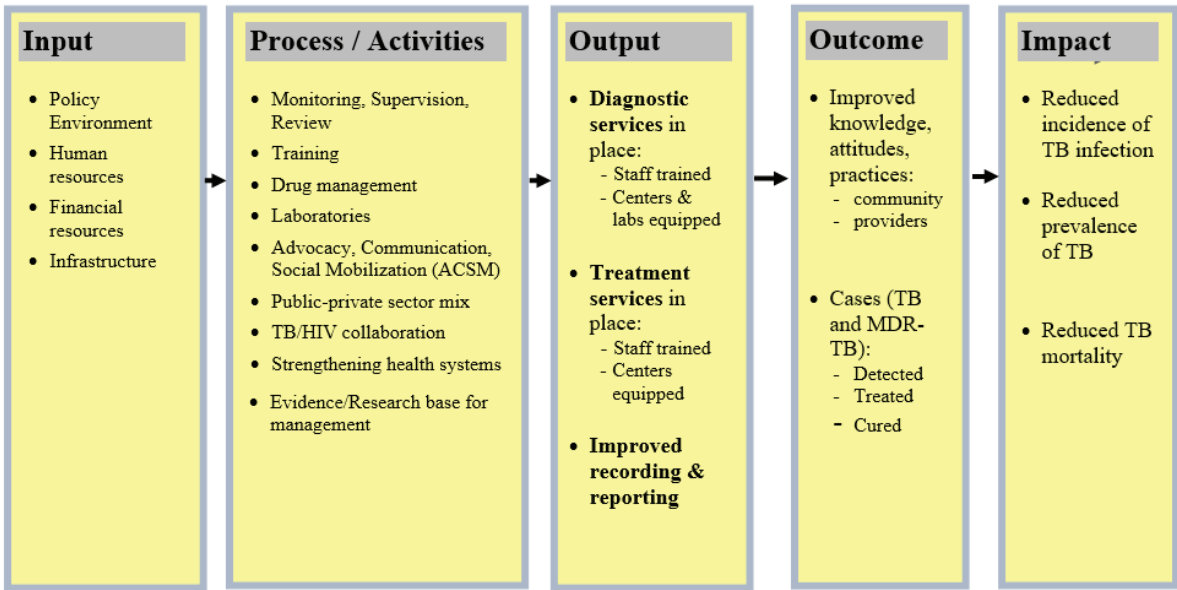
Figure 5.4.7 shows the TB /HIV co-infection status .Out of total screened for TB, 0.7% were diagnosed to have HIV. In those diagnosed with TB-HIV co-infection, 97% were enrolled in ART. As per the data received from NCASC out of total estimated 31,020 estimated PLHIV 19,702 knew their status and 15,260 were under ART.

I In FY 2074/75,total of 15,260 PLHIV were screened for TB.

Planning, Monitoring & Evaluation

National Tuberculosis Centre is responsible for formulating long and short terms strategy and plans to fight against Tuberculosis throughout the country Planning and implementation of National Tuberculosis Programme (NTP) is guided by National Strategy Plan (NSP). Currently, NTP is implementing its activities as per the strategy, objectives, and targets of NSP 2016-21. NTC also develops and revise its annual work plan based on strategic information and recommendations of Palika and Province.

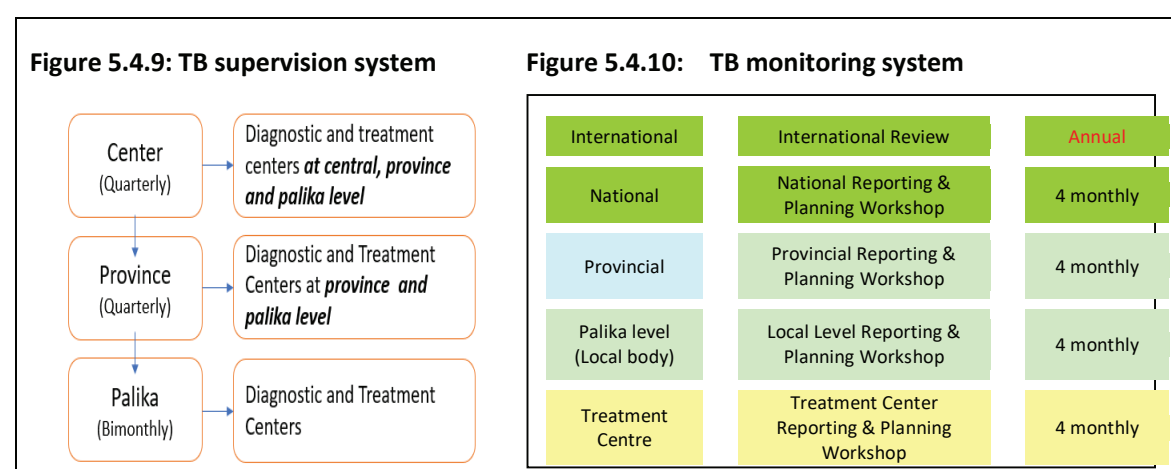
M&E Framework of NTP



Supervision and monitoring

The supervision and monitoring of TB health care services is carried out by regular visits to all levels of the programme (Figures 5.6.9 and 5.4.10). In addition, the quarterly reporting of activities is carried out at trimester planning, monitoring and evaluation (PME) workshops at all levels of the programme.

The NTP regularly monitors case notification, smear conversion, treatment outcomes and programme management reports from all levels of the programme. Data is initially analysed by TB focal persons of DOTS center and Health Coordinator of respective local level during reporting and planning workshops. Thereafter, TB focal person from the respective health office report at province level planning, monitoring and evaluation workshop. Finally, TB focal persons from provincial health directorates report at national PME workshops. These workshop take place every four months at the Local level province and national level.



Logistics supply management

The NTP's logistics management system supplies anti-TB drugs and other essentials every four months to service delivery sites based on the number of new cases notified in the previous quarter and the number of cases under treatment (Figure 5.4.11). Prior to procurement of Anti TB Drugs, forecasting and quantification is done considering all available data. NTC follows rules and regulations of PPMO to procure drugs from GoN Budget while Pooled Procurement Mechanism (PPM) is adopted to import medicines from the Global Drug Facility (GDF), Switzerland. All the drugs from procurements are received in the central NTC Store and stored by adopting proper storage methods. Drugs are supplied every 4 months to District Medical Store via Regional Medical Store (RMS) after receiving order as a result of workshops in each Region. In case of First Line Drugs buffer of 4 months is added in the order while supplying but no such buffer quantity is given in case of DR Drugs. Supply of DR drugs is done directly to DR Centers and to some DR Sub Centers.

Physical and Financial Progress status

In Fiscal year 2075/76, NTC made 72.76 percent physical progress. Financial progress was 53.56 percent (Allocated Amount 695,200,000, Expended Amount 344,225,000) at the central level. Till the date, NTC cleared 9.26 percent of financial irregularities (beruju) in the year .

5.4.5 Key Constraint & Challenges

The Nepal NTP has regularly been facing several challenges and constraints, which influence the inability to expand and sustain the vision of the programme. Following are the key challenges and constraints faced by the NTP in order to reach the intended goals and targets of the programme in the last fiscal year.

Challenges:

- Lack of focal person for TB program at Local level and Province
- Insufficient income generation program for the patient and their family members.
- Inadequate TB management training to medical doctors
- Minimum interventions for strengthening PPM component
- Lack of operational research regarding increasing retreatment cases
- Lack of sputum transportation services at all districts
- Availability of TB IEC materials at health facilities
- Difficult to coordinate with regional and provincial hospitals

Action to be taken:

- Expansion of CB-DOTS programme throughout the country
- Endorsement of PPM guideline to strengthen Public-Private Mix approach
- Strengthen the community support system programme
- Explore operational research areas on TB prevention, treatment, and care
- Develop and distribute patient centered on TB IEC materials

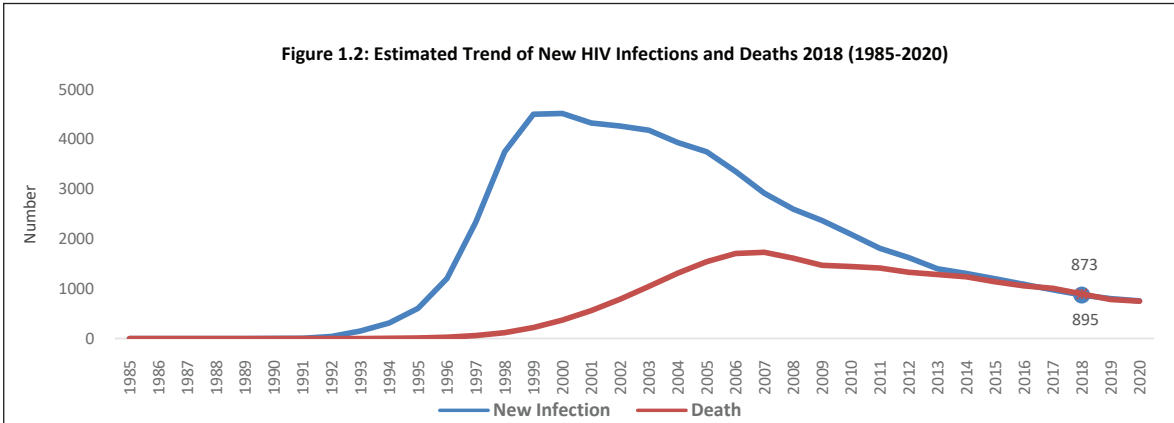
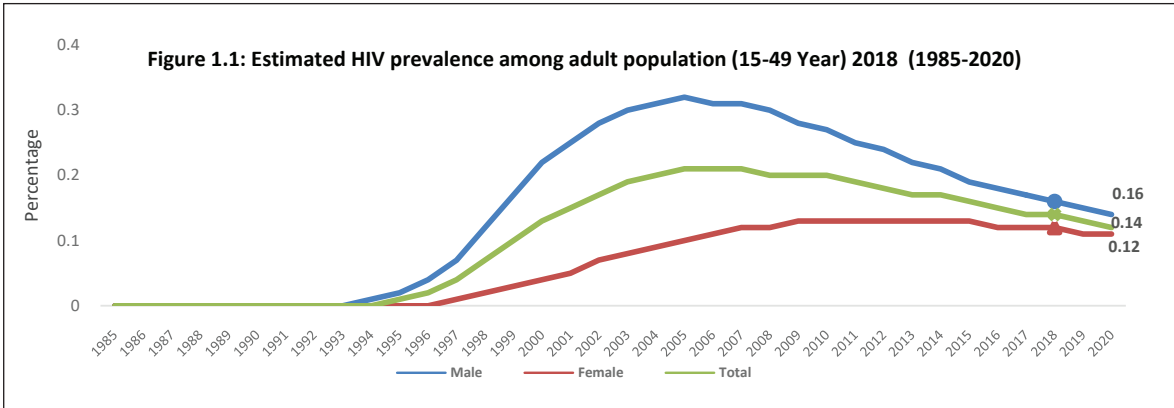
5.5 HIV/AIDS and STI

1: Background

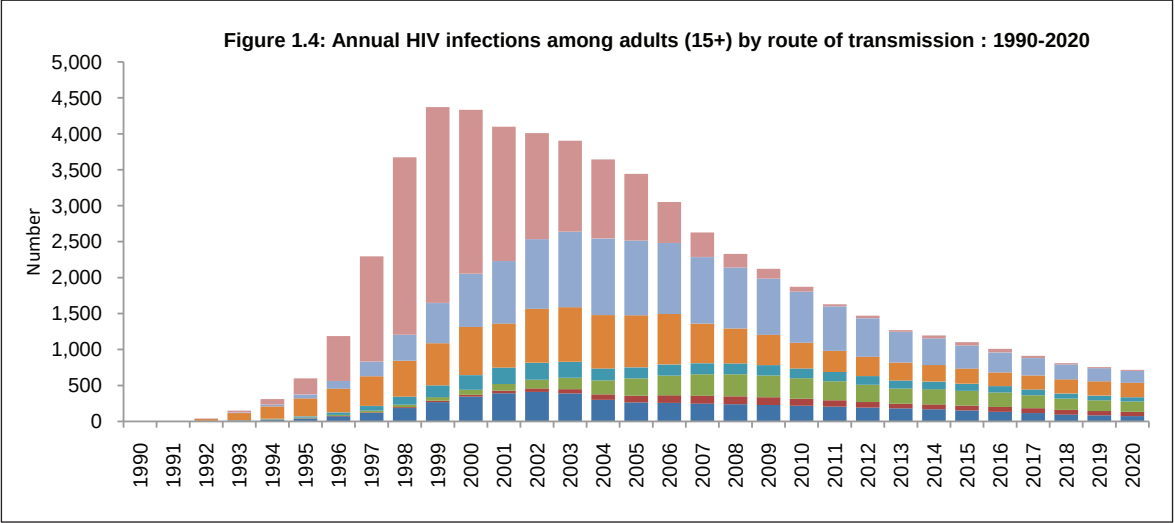
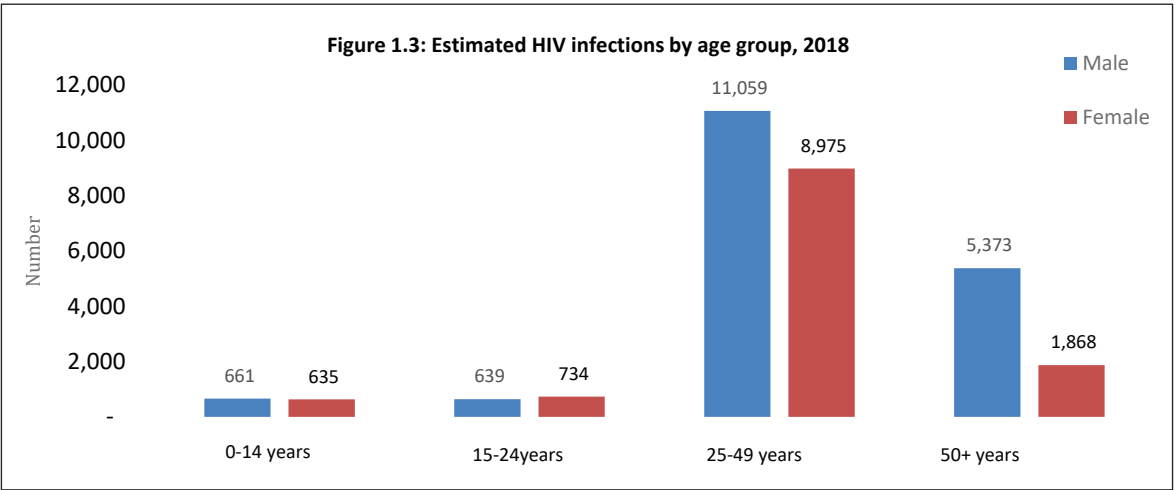
With the first case of HIV identification in 1988, Nepal started its policy response to the epidemic of HIV through its first National Policy on Acquired Immunodeficiency Syndrome (AIDS) and Sexually Transmitted Diseases (STDs) Control, 1995 (2052 BS). Taking the dynamic nature of the epidemic of HIV into consideration, Nepal revisited its first national policy on 1995 and endorsed the updated version: National Policy on Human Immunodeficiency Virus (HIV) and Sexually Transmitted Infections (STIs) in 2011. National HIV Strategic Plan 2016-2021 is launched to achieve ambitious global goals of 90-90-90. By July 2021, 90% of all people living with HIV (PLHIV) will know their HIV status, 90% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy (ART), and 90% of all people receiving antiretroviral therapy will have viral suppression.

1.1. Overview of the Epidemic

Starting from a ‘low-level epidemic’ over the period of time HIV infection in Nepal evolved itself to become a ‘concentrated epidemic’ among key populations (KPs), notably with People who Inject Drugs (PWID), Female sex workers (FSW), Men who have Sex with Men (MSM) and Transgender (TG) People in Nepal. A review of the latest epidemiological data, however, indicates that the epidemic transmission of HIV has halted in Nepal. The trend of new infections is taking a descending trajectory, reaching its peak during 2002-2003. The epidemic that peaked in 2000 with almost 4,455 new cases in a calendar year has declined to 873 in 2018 (81% decrease). This decline is further accompanied by the decreasing trend of prevalence of HIV in Nepal, as shown in the figures below.



This prevalence has dropped from 0.24% (highest level projected in 2005) to 0.14% in 2018 and is expected to maintain a plateau at 0.13% through 2020 with the current level of efforts.



Overall, the epidemic is primarily driven by sexual transmission that accounts for more than 76% of the total new HIV infections. Making up 4.3% of the total estimated PLHIV (29,944), there are about 1,296 children aged up to 14 years who are living with HIV in Nepal in 2018, while the adults aged 15 years and above account for 95.7%. With an epidemic that has existed for more than two decades, there are 7,241 infections estimated among the population aged 50 years and above (24%) among total estimated PLHIV. By sex, males account for two-thirds (59.2%) of the infections and the remaining more than one-third (40.8%) of infections are in females, out of which around 71% are in the reproductive age group of 15-49 years among total estimated PLHIV.

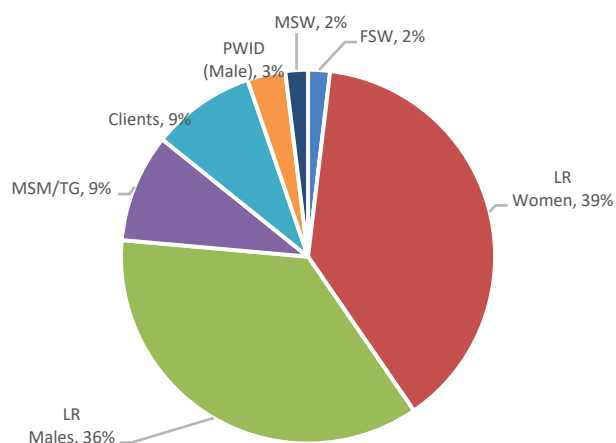
Heterosexual transmission is the major routine of transmission in the total pool of HIV infection in Nepal. The contribution from all bands of KPs is similar in the period of projection 1995-2020, only the level is varying over time.

In 2018, 95.7% of the total infection was distributed among the population having age group 15 years and above. The estimate infections among key populations are as follows: PWIDs (Male) (3%), MSWs (2%), MSM and TG (9%), FSWs (2%) and Client of FSWs (9%). These apart, low-risk males, including MLM account for 36% and low-risk females account for 39% of the remaining infections.

The estimated number of annual AIDS deaths of all ages is estimated to be around 895 for 2018.

Similarly, subnational HIV estimates of Nepal according to key population is reflected in table below.

Figure 1.5: Distribution of People Living with HIV (15 years and above), 2018. Note: LR, Low risk.



Province	PWID	MSW	MSM	FSW	Migrants	Clients
Province 1	184	65	154	74	609	401
Province 2	76	134	674	44	1063	386
Bagmati	335	254	908	201	998	917
Gandaki	76	75	117	25	846	127
Province 5	227	155	535	134	1083	548
Karnali	5	4	16	3	219	12
Sudurpaschim	27	46	243	52	1868	137

PWID: People who Inject Drugs; MSW: Male Sex Workers; MSM: Men who have Sex with Men; FSW:

Female Sex Workers

Civil societies have also played pivotal roles in the national response. Civil societies, through empowerment of KPs, have been playing instrumental roles in prevention, treatment, care and support services as well as bringing about changes in legal and policy environment through advocacy.

External Development Partners (EDPs) equally support the national response to HIV in Nepal by providing a substantial amount of resources required for combating HIV. The Global Fund to Fight AIDS, TB and Malaria (GFATM), President's Emergency Plan For AIDS Relief (PEPFAR), United States Agency for International Development (USAID), The United Nations Children's Fund (UNICEF), World Health Organization (WHO), AIDS Health Care Foundation (AHF) are the external sources that are contributing to the national HIV response.

2: Policy Environment and Progress in National HIV Response

2.1 Introduction

More than two decades of the HIV epidemic has stimulated Nepal to respond with a number of policy initiatives. These policy responses have come cross-cuttingly from the health sector as well as other development sectors aiming at creating an enabling policy environment for the containment of HIV as well as mitigation of the epidemic. Notable policy developments taken for guiding the national response to HIV are spelt out here.

The National Health Sector Strategy Implementation Plan (NHSS-IP 2016-2021)

Nepal's HIV and STI response, recognized as a priority one programme by Government of Nepal, is guided by the 'National HIV Strategic Plan 2016-2021', the Sustainable Development Goals, and the National Health Sector Strategy (2015-2020). National Health Sector Strategy Implementation Plan (NHSS-IP) operationalizes objectives of Fast-Tracking HIV response to achieve ambitious 90-90-90 targets by 2020 (by July 2021 for National HIV Strategic Plan) and ending the AIDS epidemic as a public health threat by 2030.

National HIV Strategic Plan 2016-2021

The National HIV Strategic Plan 2016-2021, the fifth national strategy with the aim of meeting the global goal of 90-90-90 by July 2021. The National HIV Strategic Plan for the period 2016–2021 is a set of evidence-informed strategies focused on building one consolidated, unified, rights-based and decentralized HIV programme with services that are integrated into the general health services of the country. It builds on lessons learned from implementation of the National AIDS Strategy 2011–2016, its mid-term review and the Nepal HIV Investment Plan 2014–2016, and it applies recommendations from the Spectrum/AIDS Epidemic Model exercise and other strategic information from studies, surveys and assessments.

National Health Sector Strategy (2015-2020)

The Ministry of Health and Population, National Centre for AIDS and STD Control is accountable for the implementation of the National HIV Strategic Plan, through the public health service infrastructure at federal, provincial and local level. Its implementation takes place in coordination with other public entities and the private sector, including services that are provided by civil society and other non-government networks and organizations. Because financing the HIV response in Nepal relies heavily on external funding that is rapidly declining, it is imperative that public-private partnerships be maintained, and evidence-informed investment choices are made.

The commitment by Nepal of both the global "UNAIDS Strategy 2016-2021," and the "Sustainable Development Goals" adopted by the UN General Assembly, include commitments to Fast-Tracking for ending the AIDS epidemic as a public health threat by 2030.

2.2 Policy related activities/highlights from FY 2075/076

With the aim of effective implementation of the national response to achieve the national goal of 90-90-90, a number of national guidelines also have been put into operation. These include "National HIV Testing and Treatment Guidelines, 2017", National Consolidated Guidelines on Strategic Information of HIV Response, 2017 (refer guidelines for national and province-level HIV indicators), Prevention of mother-to-child transmission (PMTCT) Training Manual 2017, HIV Treatment Literacy Training Manual 2017, Pediatrics Disclosure Guidelines 2017 and National Guidelines on Community-Led HIV Testing in Nepal 2017 and OST.

3: HIV Testing Services and STI Management

3.1 Introduction

Pursuant to its goal of achieving universal access to prevention, treatment care and support, HIV Testing Services (HTS) has been a strategic focus in the national response to HIV ever since Nepal started its response to HIV. The first-ever HTS began in 1995 with the approach of voluntary Client-Initiated Testing and Counseling (CITC). Moving further from its previous approach of voluntary CITC, the national HIV testing and counselling program has been later widened to include Provider-Initiated Testing and Counseling (PITC), as well as CITC as crucial components of the nation's fight against HIV. With the expansion of HIV Testing and Counseling (HTC) sites across the country, there has been parallel development. National Guidelines on HTC was formulated in 2003 and updated in 2007, 2009 and 2011 and later the separate guidelines merged as a comprehensive guideline on treating and preventing HIV in 2014. The Community-Based Testing (CBT) approach has also been initiated in key population and as suggested by National HIV Testing and Treatment Guidelines, 2017 Nepal is also moving forward to implement the Community-Led Testing (CLT) approach in order to maximize HIV testing among key populations of HIV. For this approach, National Guidelines on Community-Led HIV Testing in Nepal 2017 is also endorsed and currently, CLT services are implemented in 26 districts. Similarly, targeted intervention program among MSM and TG, PWID and FSW are in 25, 27 and 17 districts respectively.

Human resources for HTC have been trained for public health facilities as well as NGOs-run HTS sites. Along with HTS, detection and management of Sexually Transmitted Infections (STIs) have also been a strategic focus and integral part of the national response to HIV ever since Nepal started its response to HIV. Over the years, STI clinics have been operating across the country maintaining their linkage to KPs on the basis of the National STI Case Management guideline which was developed in 1995 and also revised in 2009 and 2014.

3.2 Key strategies and activities

HIV Testing Services

The National HIV Strategic Plan 2016-2021 envisions rapid scaling up of testing services by community-led/based testing in a non-duplicated manner in targeted locations in a cost-effective way to ensure maximum utilization with strong referral linkage to a higher level of treatment, care and support. The National Strategy further prioritizes that the public health system will gradually take up HIV testing services as an integral part of the government health care service.

The Government of Nepal is promoting the uptake of HIV testing among KPs through targeted communications and linkages between community outreach and HTS. Likewise, Provider-Initiated Testing and Counseling (PITC) have been taken to STI clinics, Antenatal Clinic (ANC), childbirth, malnourished clinic, postpartum, Family Planning, and TB services. Thus, in this context, the national response, over the years, has seen an expanding coverage of HTS as an entry point to:

- Early access to effective medical care (including ART, treatment of opportunistic infections (OIs), preventive therapy for tuberculosis and other OI and STIs);
- Reduction of transmission of HIV in all including mother-to-child transmission;
- Emotional care (individual, couple and family);
- Referral to social support and peer support;
- Improved coping and planning for the future;
- Normalization of HIV in society (reduction of stigma and discrimination);

- Family planning and contraceptive services; and
- Managing TB/HIV co-infection.

Detection and Management of Sexually Transmitted infections (STI)

In the context of detection and management of STI, the standardization of quality STI diagnosis and treatment up to health post and sub-health post level as a part of primary health care services has been a key strategy in the national response to HIV. This strategy further foresees standardization of syndromic approach with the referral for etiological treatment when needed.

Strengthening documented linkages (referral of follow-up mechanisms) between behavioral change communication (BCC) services and HIV testing and counseling, including the strengthening of linkage between HTS and STI services has been one of the key actions in the context of the concentrated epidemic of Nepal.

3.3 Progress and Achievement

HIV Testing Services

There are 175 HIV Testing and Counseling sites in Nepal that include 38 non-government sites and 137 government sites operating in the country also maintaining their linkages with KPs as well as with ART sites as well as PMTCT sites. The trends of programmatic data of people who were tested and counseled over the last three years is showed in Table 3.1.

Table 3.1: Service Statistics HIV Testing and Counseling for the Period of BS 2073/074-2075/076

Indicators	2073/074	2074/075	2075/076
Total tested for HIV	210,525	330,460	237,496
Total HIV Positive reported	1,854	2,152	2,298
Cumulative HIV reported cases	30,612	32,764	35,062

Source: NCASC routine programme data/ iHMIS

The HIV testing is highest in Province 3 (76,920), and lowest in Karnali province (3,100) whereas the percentage of positivity yield is highest in Gandaki Province followed by Sudurpaschim Province. The province-wise detail is also shown in Table 3.2.

Table 3.2: Province wise Service Statistics HIV Testing and Counseling in 2075/76

Provinces	Tested for HIV	Positive reported	% of positivity yield
Province 1	36,527	287	0.8%
Province 2	42,042	373	0.9%
Bagmati	76,920	583	0.8%
Gandaki	10,588	165	1.6%
Province 5	46,977	552	1.2%
Karnali	3,100	25	0.8%
Sudurpaschim	21,342	313	1.5%
Total	237,496	2,298	1.0%

Source: NCASC routine programme data/ iHMIS

3.3 Key challenges/Issues and recommendations

Issues	Recommendations
Huge data gap is found in the HIV program especially the report from many sites (major Hospitals and NGOs) are yet to be covered in the electronic iHMIS system.	Training programs focusing on major non-reporting government and private hospitals should be done by NCASC and iHMIS in order to ensure reporting to iHMIS. Furthermore, an update of indicators in HMIS reports is necessary to address current data discrepancies. In addition to this, workshops to strengthen the capacity of data entry users of iHMIS at all levels is necessary for the updated, consistent and valid data reporting in iHMIS.
The Community-Based/Led HIV testing service among key population is mainly run through NGOs and iHMIS database system does not fully cover NGO setting. The reporting from the working NGO yet to be covered in the electronic HMIS system.	All the working NGOs must be enlisted in the iHMIS system. So that, the total testing numbers could be incorporated, into national system and national figure of testing can be generated from the iHMIS system.
Low HIV testing coverage among key populations (KPs) has been a long-standing challenge in response to HIV. The problem of low coverage is most prominent for the returning labor migrants.	Effective roll-out of Community-led HIV Testing and Treatment Competence in Communities (TCC) approach with active monitoring should be in place. Provide testing facilities at transit points as well as destinations of migrant population.
Gap in HIV positivity coverage along with HIV testing coverage as per 90-90-90 target.	The number of HIV testing sites should be expanded in order to achieve 90-90-90 targets, whereas decreasing funding trend remains a challenge. Additionally, in response to loss to follow-up of HIV positive cases, referral linkage of HIV positive cases between Community Based Testing sites and HIV Testing Services should be strengthened to achieve the target for first 90.

4: Prevention of Mother to Child Transmission for elimination of vertical transmission (eVT)

4.1 Introduction

Nepal started its Prevention of Mother to Child Transmission (PMTCT) program in February 2005 with setting up three sites at 1) B. P. Koirala Institute of Health Science (BPKIHS), Dharan; 2) Maternity Hospital, Kathmandu and; 3) Bheri Zonal Hospital, Banke. In early 2007, the NCASC and UNICEF undertook an operational Review of the pilot PMTCT programme. The review made following recommendation: integration of PMTCT activities with community-based maternal and neonatal health services; increase the involvement of Female Community Health Volunteers (FCHVs) and other community-based health workers in “Prong 1: Prevent HIV infection in women of reproductive age” and “Prong 2: Prevent unintended pregnancy in HIV-positive women” activities, and referral for “Prong 3: Prevent mother-to-child transmission of HIV” and “Prong 4: Provide care, treatment and support to HIV-infected parents, infants and families” services; involve local implementing partners and civil society organisations in managing and supporting PMTCT services, and strengthen the role of the NCASC in overall programme management and governance. Community-based PMTCT programs were initiated in several districts in Nepal beginning in 2009,

based on recommendations from the 2007 PMTCT National Review and the knowledge that current facility-only based PMTCT models were not reaching the majority of pregnant HIV infected women in the county and made several important recommendations notably, train and utilize female community health volunteers (FCHV) and other community-level workers to raise awareness on HIV and PMTCT and educated pregnant mothers on the need to test for HIV in pregnancy; decentralize HIV testing of ANC mothers to lower-level health facilities; Make some antiretroviral (ARVs) available at lower-level health facilities for decentralization of PMTCT services and enable women to “take-home” ARVs for themselves and their babies to use at the time of labour and delivery, in the circumstances where they are unable to reach a PMTCT site for delivery.

Moving further in this direction, apart from the free provision of maternal ART and prophylaxis for infants, the National Guidelines on PMTCT have been developed and integrated into National HIV Testing and Treatment Guidelines in Nepal, 2017. Human resources, especially from maternal and child health care, have been trained in alignment with PMTCT services. Apart from it, HIV testing has been incorporated into maternal and child health care in the form of PITC. Tailoring to the needs of HIV-infected infants as well as HIV exposed babies; counselling and information on infant feeding have been adjusted accordingly.

4.2 Key strategies and activities

Taking Mother-to-Child Transmission (MTCT) is a potentially significant source of HIV infections in children in Nepal into consideration; National Strategy aims to eliminate new HIV transmission by July 2021. In the cognizance of existing testing coverage (58.3% against total annual estimated pregnancies in 2075/76) of PMTCT, the current National Strategy envisages the PMTCT programme to be integrated and delivered through Reproductive Health (RH) and Child Health Services. The National Strategy also foresees the integration of PMTCT into RH Programme placing it under the aegis of Family Welfare Division (FWD). The National Strategy has structured the PMTCT programme around the following comprehensive and integrated four-prong approach:

- i. Primary prevention of HIV transmission
- ii. Prevention of unintended pregnancies among women living with HIV
- iii. Prevention of HIV transmission from women living with HIV to their children, and
- iv. Provision of Treatment, Care and Support for women living with HIV and their children and families.

Pursuant to the last two elements of the four-prong approach, a package with the entailment of the following services is being provided to pregnant women:

- HIV testing and counseling during ANC, labour and delivery and postpartum
- ARV drugs to mothers infected with HIV infection
- Safer delivery practices
- Infant feeding information, counseling and support,
- Early Infant Diagnosis (EID) of all HIV exposed children at birth and within 6 weeks and
- Referrals to comprehensive treatment, care and social support for mothers and families with HIV infection.

The PMTCT service in Nepal has been integrated into maternal and neonatal health services since 2009 in the districts with CB-PMTCT services and the program has been expanded in all 77 districts of Nepal where HIV screening and counseling is done among women during ANC visit at the health facilities. With the collaboration of the health facilities at community level, the government of Nepal launched Community-Based Prevention of Mother to Children Transmission (CB-PMTCT) program

in 2009 taking PMTCT services beyond hospitals and making the services accessible to pregnant women living in remote areas. The CB-PMTCT program, drawing the leverage of community support, has found to have increased ANC coverage as well as HTC uptake among pregnant women. CB-PMTCT programme has been expanded throughout the country.

Apart from CB-PMTCT program, adhering to the key actions envisaged by the National Strategy, the country is scaling up PMTCT service synchronizing with planned ART, HTC /STI, OI services for ensuring access to a continuum of care and ART to pregnant women with HIV. Furthermore, linkages have been established between PMTCT sites and key populations targeted intervention, Family Planning, sexual and reproductive health and counseling services.

4.3 Progress and Achievement

Pursuant to its commitment to eliminate vertical transmission of HIV among children by 2021, Nepal has scaled up its PMTCT services in recent years. As a result of this scale-up of PMTCT sites, the number of women attending ANC and labour who were tested and received results has increased over the years. Despite this relative increase in uptake, the coverage for PMTCT is still low (66%) against the estimated pregnancies. The three-year trend of service statistics is shown in Table 4.1.

Indicators	2073/74	2074/75	2075/76
Tested for HIV (ANC & Labour)	382,887	439,225	440,709
HIV Positive Pregnant women	128	70	79
Total Deliveries by HIV +ve mothers	126	127	129
Mothers received ART	175	158	133
Babies received prophylaxis	112	123	130

Source: NCASC routine programme data/ iHMIS

The HIV testing among pregnant women is higher in Bagmati Province (97,461) and Province 5 (88,595). The province-wise detail is also shown in Table 4.2.

Table 4.2: Province wise Service Statistics on PMTCT in Nepal 2075/76

Provinces	Pregnant women tested for HIV	Positive pregnant women identified	Positivity Yield (%)
Province 1	69,892	15	0.021462
Province 2	60,482	14	0.023147
Bagmati	97,461	26	0.026677
Gandaki	47,229	6	0.012704
Province 5	88,595	17	0.019188
Karnali	25,243	0	0
Susurpaschim	51,807	1	0.00193
Total	440,709	79	0.00018

Source: NCASC routine programme data/ iHMIS

Aiming at the elimination of mother to child transmission, Nepal adheres to Option B+ and embarks for providing lifelong ART for all identified pregnant women and breastfeeding mothers with HIV, regardless of CD4 along with prophylaxis treatment for their infants as well. The rollout of the

lifelong treatment adds the benefits of the triple reinforcing effectiveness of the HIV response: (a) help improve maternal health (b) prevent vertical transmission, and (c) reduce sexual transmission of HIV to sexual partners.

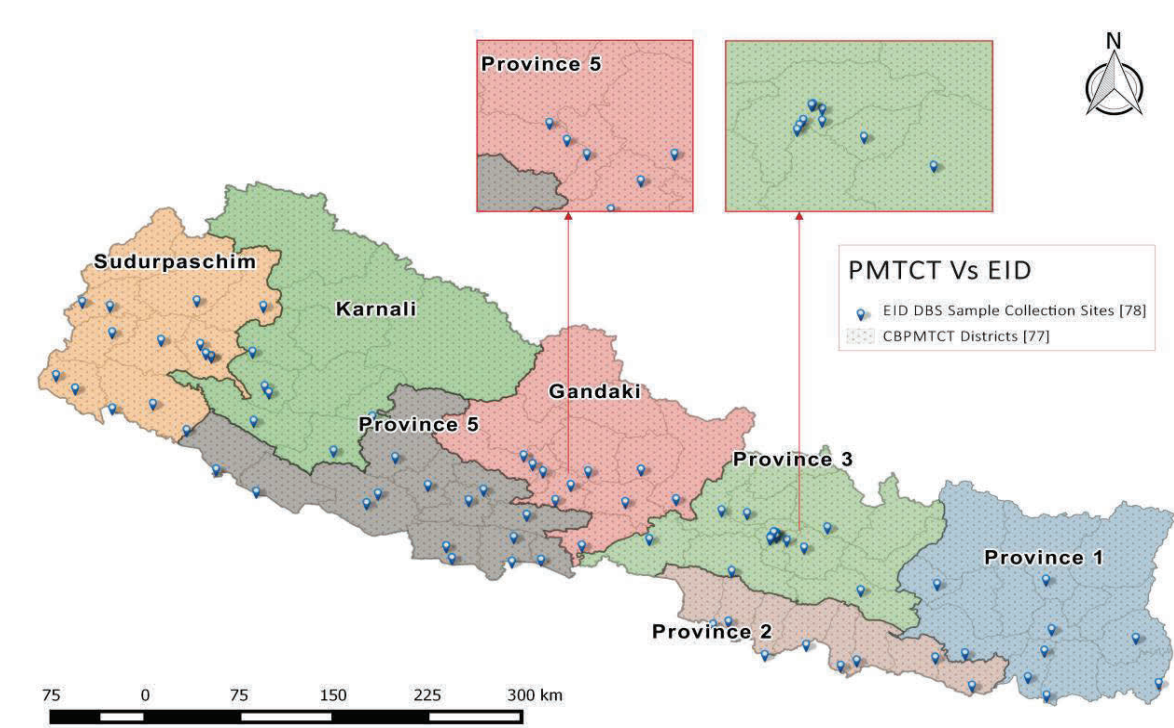
Early Infant Diagnosis (EID)

Initiatives for Early Infant Diagnosis (EID) of HIV in infants and children below 18 months of age have been taken with the goals a) of identifying infants early in order to provide them life-saving ART; and b) of facilitating early access to care and treatment in order to reduce morbidity. In this context, a Deoxyribonucleic Acid (DNA) Polymerase Chain Reaction (PCR) testing facility has been set up at National Public Health Laboratory in Kathmandu. Early Infant Diagnosis (EID) coverage has significantly increased within two months of birth (6.4% in 2014 to 42% in 2018 July) in last four years due to widely scale-up of sample collection in all ART centers and lab staff widely trained to collect the sample for EID. After the revision of National HIV Testing and Treatment Guideline in 2017, and implementation of EID testing at birth, by the end of 2017 the EID testing within 2 months of age increased. However, still, 18 % of EID cases are being reached after 2 months of age due to home delivery, diagnosis of HIV mother during the post-natal period and breastfeeding with the support of trained lab personnel at the site.

Table 4.3. EID Service Statistics in Nepal

Indicators	2073/74	2074/75	2075/76
Tested (within 2 months)	99	204	243
HIV Positive (Within 2 months)	5	12	12
Tested (within 2-18 months)	56	106	64
HIV Positive (Within 2-18 months)	9	16	12

Figure 4.1: CB PMTCT districts and EID Sites



4.4 Key challenges/Issues and recommendations

Issues	Recommendations
Availability of HIV test kits with the limited expiry date.	Ensure timely procurement and supply of test kits to service sites.
Tracking of HIV-positive mothers and exposed baby for EID.	The robust tracking system to track the HIV-positive women should be developed and implemented in all sites, and home-based blood sample for EID test of an exposed baby can be recommended.
Mainstreaming the private hospital in the national reporting system for PMTCT test.	The district should strengthen coordination with private hospitals to regularize the reporting to district.
Supportive monitoring visit at service delivery points from the Province and centre.	Frequent monitoring visit should be performed to intensify the services at birthing centre and beyond birthing centre.
Inadequate supply of HIV test kit.	Regular and consistent supply of HIV test kit should be done to all ANC sites.

5: HIV Treatment, Care and Support Services**5.1 Introduction**

With a primary aim to reduce mortality among HIV-infected patients, the government, in 2004, started giving free ARV drugs in a public hospital and that was followed by the development of first-ever national guidelines on ARV treatment. Since then, a wide array of activities has been carried out with the aim of providing Treatment, Care and Support services to People Living with HIV (PLHIV). Based on National HIV Testing and Treatment Guidelines 2017 county implemented 'test and treat' strategy from February 2017. Necessary diagnostic and treatment-related infrastructures such as CD4 machines and viral load machines have been set up in different parts of the country for supplementing ART management program. Human resources have been trained for Treatment, Care and Support in parallel with the preparation and updating of training guidelines. People Living with HIV have been empowered aiming at enhancing their supplementary roles in Treatment, Care and Support.

5.2 Progress and Achievement

By the end of 2018, out of 21,388 PLHIV, only 16,913 of them were on ART. Among the total tested (8,357) almost 91%(7,603) of PLHIV were with their viral load suppressed. The total cumulative number of PLHIV receiving ART by the end of fiscal year 2075/76 has reached the figure of 17,987 (July 2019). Over the years, there have been gradual increases in the number of people enrolling themselves on ART as well as receiving ARVs (Table 5.1).

Figure 5.1 HIV Treatment Cascade in Nepal, 2018

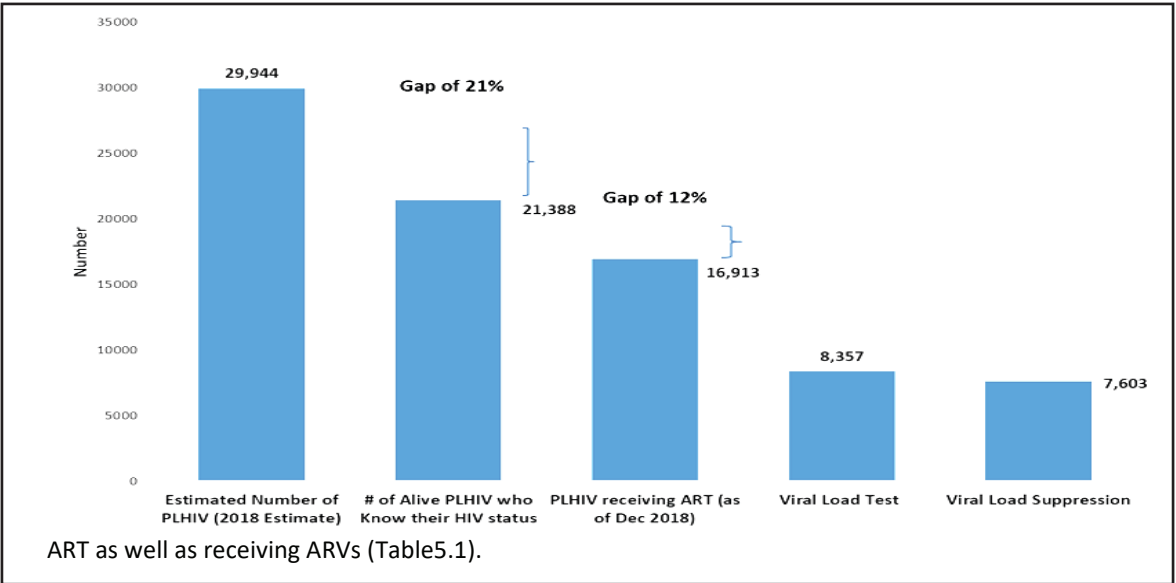
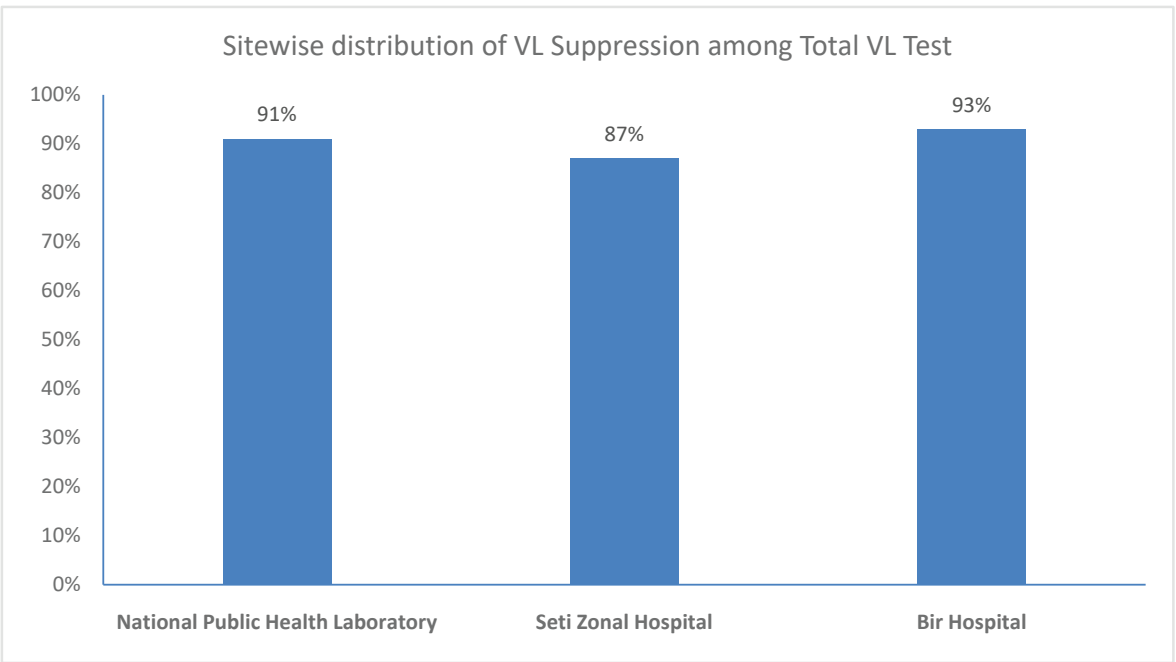
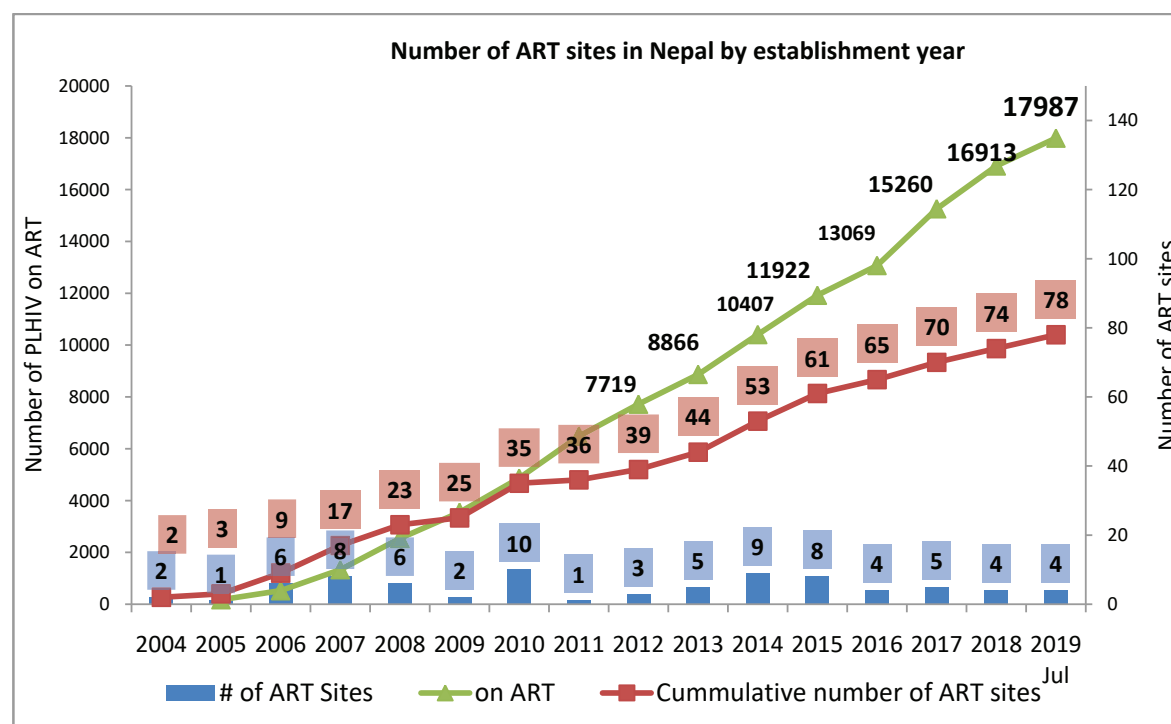


Figure 5.2 Proportion of Viral Load (VL) Suppression among Total VL Tests according to test sites.



Among total 8,357 VL tests conducted in 2018, NPHL conducted 7248 tests with 6604 (91%) suppressed results, Seti Provincial Hospital Conducted 574 with 502 (87%) suppressed results, and Bir Hospital conducted 535 with 479 (93%) suppressed results (Figure 5.2).

Out of those who are currently on ART, 93% are adults and remaining 7% are children, while male population makes 51.3%, female population 48.1%, and remaining 0.6% are of the third gender.

Figure 5.3 Trend of PLHIV on ART and Number of ART Sites

The above figure shows the trend of PLHIV on ART and establishment of new ART sites per year.

Table 5.1: ART Profile of the Period of FY2073/74-FY 2075/76

Indicators	2073/74	2074/75	2075/76
People living with HIV ever enrolled on ART (cumulative)	19,388	22,048	32,441
People living with HIV enrolled in ART (cumulative)	14,544	16,428	17,987
People lost to follow up (cumulative)	2,049	2,388	2,679
People stopped treatment	25	22	25
Total deaths (cumulative)	2,770	3,201	3,617

Source: NCASC

The number of people on ART is higher in Bagmati province (4,919) and Province 5 (3,392). The province wise details also shown in Table 5.2

Table 5.2: Province Wise People on ART FY 2075/76

Province	People on ART
Province 1	1,581
Province 2	2176
Bagmati	4919
Gandaki	2165
Province 5	3392
Karnali	515
Sudurpaschim	3239
Total	17,987

Source: NCASC

There are total 78 ART sites across 60 districts till the end of the fiscal year 2075/76 and it shows that 11% of those ever enrolled on ART died and 8% have been lost to follow-up, while 81% are alive and on treatment.

The Program data (FY 2075/76) showed that of all the patients registered on ART during the period, 91% were still actively on ART after 12 months while 85% were still actively on ART after 24 months of treatment. With the aim of supplementing the ART management program, CD4 counts testing service are available on 32 different sites. Some of the portable CD4 counting machines have been placed in the hilly districts of Nepal to provide timely CD4 count service to monitor ARV effectiveness that leads to support PLHIV to sustain quality and comfortable life. To monitor ART response and diagnosing treatment failure, viral load testing is recommended for people receiving ART.

National Public Health Laboratory Kathmandu, Seti Provincial Hospital Kailali, Sukraraj Tropical and Infectious Disease Hospital Kathmandu, Bir Hospital Kathmandu, Pokhara Academy of Health Sciences Pokhara, Koshi Hospital Biratnagar and two sites; Karnali Provincial Hospital and Bayalpata Hospital using GeneXpert Machine offer viral load test service to the people on ART treatment.

With the purpose of early diagnosing of HIV infection among children born to HIV infected mother early Deoxyribonucleic Acid (DNA) Polymerase Chain Reaction (PCR) test is done at the National Public Health Laboratory in Kathmandu. The DNA PCR test is done at birth and 6 weeks. This test is recommended for diagnosing HIV status of children below 18 months and for those whose test result is inconclusive by rapid test.

As of 2075/76, total 9,787 has received CHBC services from 52 covering districts (Table 8). In the same context, 52 districts have CCCs across the country which have been delivering their services to PLHIV (Table 5.3).

Table 5.3: Service Statistics on CHBC Services in Nepal, as of the end of FY 2075/76

Indicators	Numbers
Number of PLHIV (new and old) received CHBC services	9,787
Number of PLHIV (new) received CHBC services	4,747

Table 5.4: Service Statistics on CCC Services in Nepal as of the end of FY 2075/76

Indicators	Numbers
Number of new PLHIV receiving services from CCC	5,350
Number of PLHIV receiving Follow-up services from CCC	3,280
Number of PLHIV admitted to CCC to start ART	997
Number of PLHIV received counselling service	5,350

5.5 Key Challenges/Issues and Recommendations

Issues	Recommendation
Low access to CD4 Count and Viral Load testing services	Placement of point of care CD4 machine and implementing viral load testing by GenXpert and using DBS would enhance the accessibility of services among PLHIV.
Client duplication in the service	The robust, unique identifier system has been developed to track the individual client within and across the service sites, but it needs to be implemented at all service sites for its functioning.
Lost or incomplete medical records(Recording and Reporting)	Start an electronic record keeping system with backup capability. In addition, creating a client coding system would facilitate improved record keeping and continuity when clients are transferred in or transferred out.
Poor supply of OIs medicines as per demand	Provide consistent supply of OIs medicines that are supposed to be provided according to the program.
Inadequate financial support for the clients	The PLHIVs face financial problems to treat other comorbidities, but there is not sufficient government support to pay for medical care and treatment. So, the government should establish a mechanism to share the financial burden facing by PLHIV.
CHBC services coverage is declining over time due to limited support from donors.	The government should invest in such an essential service in coordination with NGOs.
Expansion of ART sites	Capacitating and strengthening of ART dispensing centres (ADC) sites to ART is necessary for additional support to increase PLHIV treatment coverage (Second 90).

6: Integrated Biological and Behavioral Surveillance (IBBS) Survey

Nepal has been conducting HIV and STI surveillance particularly among key populations, namely: people who inject drugs, FSW and their clients, MSM and TG, and Male Labor Migrants for more than a decade mainly to track changes in HIV and STI prevalence along with behavioral components such as condom use etc. Hepatitis-B and C screening among PWID have been started in the IBBS surveys form 2015. From this year, national-level surveillance survey is planned among people who inject drugs and male labor migrants. The table below depicts HIV prevalence according to the survey population (Table 6.1).

Table 6.1 HIV prevalence according to survey population.

Survey Population	HIV Prevalence	Survey Location
Female Sex Workers	0.7	22 Highway Districts 2018
Male Labor Migrants	0.3	Eastern Districts 2018
MSM and TG	8.2	Terai Highway 2018
Wives of Migrants	0.5	Far-West Districts 2018

Source: Integrated Bio-Behavioural Surveillance (IBBS) Survey, 2018.

6.1 HIV Co-infection

Because of the shared modes of transmission of Hepatitis B virus (HBV), Hepatitis C virus (HCV) and HIV, people at risk for HIV infection are also at risk for HBV and HCV infection. HIV-positive persons who become infected with HBV or HCV are at increased risk for developing chronic hepatitis. In addition, persons who are co-infected with HIV and hepatitis can have serious medical complications, including an increased risk for liver-related morbidity and mortality.

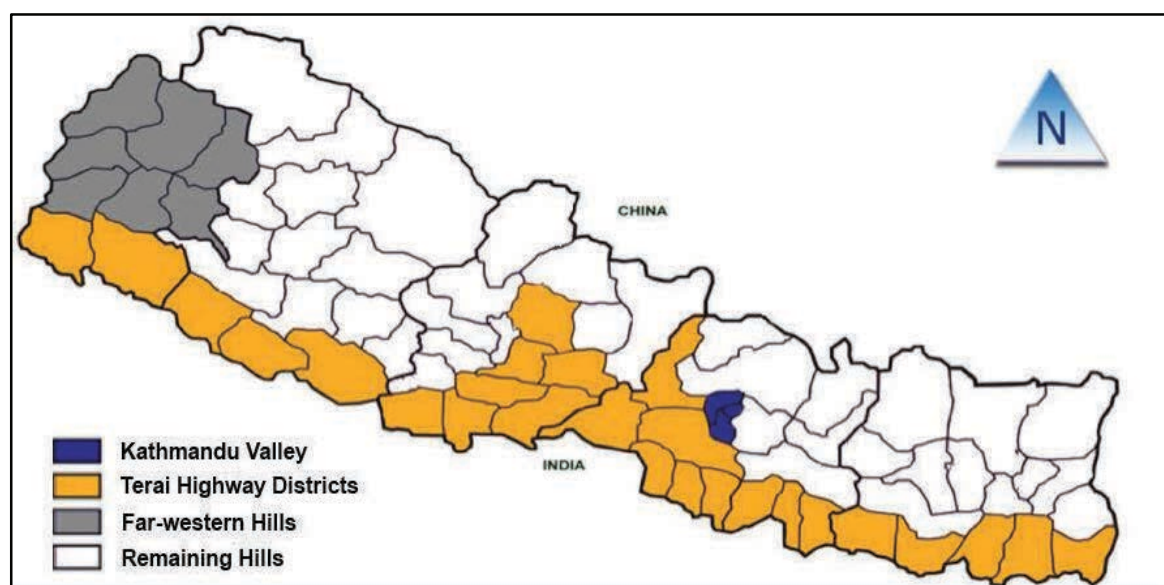
TB is the most common illness among people living with HIV. Fatal if undetected or untreated, TB is the leading cause of death among people with HIV, responsible for nearly 1 in 3 HIV-associated deaths. Early detection of TB and prompt linkage to TB treatment and ART can prevent these deaths. TB screening offered routinely at ART sites, and routine HIV testing is also offered to all patients with presumptive and diagnosed TB. TB preventive therapy should be offered to all people living with HIV who do not have active TB in Nepal. In 2018, the total proportion of PLHIV having TB among newly enrolled in HIV care in Nepal accounts for 12.8%.

Table 6.2 Hepatitis Prevalence and HIV, HBV, HCV co-infection among People who Inject Drugs in 2017

Survey Location	Hep B	Hep C	Coinfection (Hep C & HIV)
PWID-Male			
Eastern Terai	0.8	38.0	2.5
Western to Far Western Terai	2.7	24.0	3.7
Pokhara	2.6	22.0	3.8
Kathmandu Valley	1.0	21.0	7.4
PWID-Female			
Pokhara	1.3	3.0	0.6

7: Province level HIV related Services and Indicators

In the early 1990s, a national HIV surveillance system was established in Nepal to monitor the HIV epidemic and to inform evidence-based HIV prevention efforts. Since then, integrated biological and behavioral surveillance (IBBS) survey surveys have been conducted every two/three years among key populations at higher risk of HIV (PWID, MSM and TG, FSW and migrants) in identified three epidemic zones (Figure 7.1) to collect information on socio-demographics and biological markers to assess the prevalence of HIV and other sexually transmitted infections (STI), behavioural information (condom use, number of sex partners, needle sharing behaviours). The epidemic zones are based on different distributions of key populations at risk, mobility links and HIV risk behaviour (Figure 7.1).



distributions of key populations at risk, mobility links and HIV risk behaviour (Figure 7.1).

Table 7.1 Province-wise distribution of HIV services in Nepal

Organization unit/Data	No. of HTS Sites	No. of ART Sites	No. of Dispensing Sites	CBPMTCT Services	No. of OST Sites	Treatment and Care Services		CLT Implemented
Province - 1	23	9	6	14	2	6	6	3
TAPLEJUNG	1	-	1	Available	-	-	-	-
SANKHUWASABHA	1	1	-	Available	-	CCC	CHBC	-
SOLUKHUMBU	1	-	1	Available	-	-	-	-
OKHALDHUNGA	1	1	-	Available	-	-	-	-
KHOTANG	1	-	1	Available	-	-	-	-
BHOJPUR	-	-	1	Available	-	-	-	-
DHANKUTA	1	1	-	Available	-	-	-	-
TERHATHUM	1	-	1	Available	-	-	-	-
PANCHTHAR	1	-	1	Available	-	-	-	-
ILAM	1	1	-	Available	-	CCC	CHBC	-
JHAPA	5	1	-	Available	1	CCC	CHBC	Yes
MORANG	3	1	-	Available	1	CCC	CHBC	Yes
SUNSARI	4	2	-	Available	-	CCC	CHBC	Yes
UDAYAPUR	1	1	-	Available	-	CCC	CHBC	-
Province - 2	14	8	0	8	1	7	8	8
SAPTARI	1	1	-	Available	-	CCC	CHBC	Yes
SIRAHA	1	1	-	Available	-	CCC	CHBC	Yes
DHANUSA	5	1	-	Available	-	CCC	CHBC	Yes
MAHOTTARI	2	1	-	Available	-	CCC	CHBC	Yes
SARLAHI	2	1	-	Available	-	CCC	CHBC	Yes
RAUTAHAT	1	1	-	Available	-	CCC	CHBC	Yes
BARA	1	1	-	Available	-	-	CHBC	Yes

Epidemiology and Disease Control

PARSA	1	1	-	Available	-	CCC	CHBC	Yes
Bagmati Province	43	15	3	13	-	9	10	4
DOLAKHA	1	-	1	Available	-	-	-	-
SINDHUPALCHOK	3	1	-	Available	-	CCC	CHBC	-
RASUWA	1	-	1	Available	-	-	-	-
DHADING	1	1	-	Available	-	CCC	CHBC	-
NUWAKOT	4	1	-	Available	-	CCC	CHBC	-
KATHMANDU	12	6	-	Available	3	CCC	CHBC	Yes
BHAKTAPUR	2	1	-	Available	1	CCC	CHBC	-
LALITPUR	3	1	-	Available	3	CCC	CHBC	Yes
KAVREPALANCHOK	3	1	-	Available	-	CCC	CHBC	-
RAMECHHAP	1	-	1	Available	-	-	-	-
SINDHULI	1	1	-	Available	-	-	CHBC	-
MAKWANPUR	4	1	-	Available	-	CCC	CHBC	Yes
CHITAWAN	7	1	-	Available	1	CCC	CHBC	Yes
Gandaki Province	26	10	4	11	1	8	9	2
GORKHA	4	1	-	Available	-	CCC	CHBC	-
MANANG	1	-	1	Available	-	-	-	-
MUSTANG	1	-	1	Available	-	-	-	-
MYAGDI	2	1	-	Available	-	CCC	CHBC	-
KASKI	6	1	1	Available	1	CCC	CHBC	-
LAMJUNG	2	1	-	Available	-	CCC	CHBC	-
TANAHU	2	1	-	Available	-	CCC	CHBC	Yes
NAWALPARASI EAST	2	1	-	Available	-	-	CHBC	Yes
SYANGJA	2	2	-	Available	-	CCC	CHBC	-
PARBAT	1	1	-	Available	-	CCC	CHBC	-
BAGLUNG	3	1	1	Available	-	CCC	CHBC	-
Province - 5	33	14	1	12	2	11	11	6
RUKUM EAST	-	-	-	Available	-	-	-	-
ROLPA	1	1	-	Available	-	CCC	CHBC	-
PYUTHAN	1	1	-	Available	-	CCC	CHBC	-
GULMI	1	1	-	Available	-	CCC	CHBC	-
ARGHAKHANCHI	2	1	-	Available	-	CCC	CHBC	-
PALPA	4	1	-	Available	-	CCC	CHBC	-
NAWALPARASI WEST	4	1	-	Available	-	CCC	CHBC	Yes
RUPANDEHI	4	2	-	Available	-	CCC	CHBC	Yes
KAPILVASTU	5	2	1	Available	-	CCC	CHBC	Yes
DANG	6	2	-	Available	-	CCC	CHBC	Yes
BANKE	4	1	-	Available	-	CCC	CHBC	Yes
BARDIYA	1	1	-	Available	-	CCC	CHBC	Yes
Karnali Province	16	6	6	10	0	2	4	1
DOLPA	1	-	1	Available	-	-	-	-
MUGU	1	-	1	Available	-	-	-	-
HUMLA	1	-	1	Available	-	-	-	-
JUMLA	1	-	1	Available	-	-	-	-
KALIKOT	1	1	-	Available	-	-	CHBC	-

KALIKOT	1	1	-	Available	-	-	CHBC	-
DAILEKH	4	2	1	Available	-	-	-	-
PAJARKOT	1	-	1	Available	-	-	-	-
RUKUM WEST	1	1	-	Available	-	CCC	CHBC	-
SALYAN	1	1	-	Available	-	-	CHBC	-
SURKHET	4	1	-	Available	-	CCC	CHBC	Yes
Sudurpaschim Province	20	16	2	9	0	8	9	2
BAJURA	2	1	-	Available	-	CCC	CHBC	-
BAJHANG	1	1	-	Available	-	CCC	CHBC	-
DARCHULA	1	1	-	Available	-	-	CHBC	-
BAITADI	3	2	-	Available	-	CCC	CHBC	-
DADELHURA	1	1	1	Available	-	CCC	CHBC	-
DOTI	3	1	1	Available	-	CCC	CHBC	-
ACHHAM	2	4	-	Available	-	CCC	CHBC	-
KAILALI	4	3	-	Available	-	CCC	CHBC	Yes
KANCHANPUR	3	2	-	Available	-	CCC	CHBC	Yes

Note: HTS: HIV Testing Services; CCC: Community Care Centre; CHBC: Community Home-based Care; CLT: Community Led Testing.

7.1 List of Possible Indicators for Province One, Two, Three, Four, Five and Seven

The following indicators might be useful to track HIV response in a particular province considering the drivers of HIV epidemic in that province and HIV services being provided. However, the province can select indicators that are deemed necessary to track HIV response. NCASC will provide any required support to the provinces as and when needed. For detail (numerator, denominator and data source) regarding indicators, refer to 2017 National Consolidated Guidelines on Strategic Information for HIV Response in Nepal.

Impact level Indicators

- HIV incidence- Number and percentage of new HIV infections
- HIV prevalence among key population
- HCV and HBV prevalence among people who inject drugs
- HIV prevalence in young people
- Mother to child transmission of HIV (MTCT): Estimated percentage of children newly infected with HIV from MTCT

Outcome level indicators

- Percentage of sex workers reporting condom use with most recent client
- Percentage of people who inject drugs reporting having used a condom the last time they had a sexual intercourse
- Percentage of men reporting the use of condom the last time they had anal sex with a male partner
- Percentage of migrants aged 15-49 reporting the use of condom the last time they had sex with non-regular sexual partner

Output level indicators

- j) Needle and syringe distributed per person who inject drugs
- k) Percentage of individuals receiving Opioid Substitution Therapy who received treatment for at least six months
- l) Number and percentage of key population who had an HIV test in the past 12 months and know their results
- m) Percentage of key population reached by HIV prevention programmes - (BCC intervention, condom and lube distribution)
- n) Number of key population screened for HIV by trained layperson
- o) Percentage of pregnant women with known HIV status
- p) Percentage of pregnant women living with HIV who received antiretroviral therapy to eliminate vertical HIV transmission
- q) Percentage of reported congenital syphilis cases (live births and stillbirths)
- r) Number and percentage of people living with HIV who are receiving HIV care (Including ART)
- s) Percentage and number of adults and children on antiretroviral therapy among all adults and children living with HIV at the end of the reporting period
- t) Percentage of people living with HIV who are on retained on ART after 12, 24 and 36 months after initiation of antiretroviral therapy
- u) Percentage of health facilities dispensing antiretroviral therapy that experienced a stock-out of at least one required antiretroviral drug in the last 12 months
- v) Number (and percentage) of adults and children living with HIV currently receiving care and support services from outside facilities
- w) Percentage of HIV-positive patients who were screened for TB in HIV care or treatment settings
- x) Percentage of TB patients who had an HIV test result recorded in the TB register

5.6 Non Communicable Diseases

In Nepal, there has been an epidemiological transition from communicable diseases to Non Communicable Diseases (NCDs) as the major cause of illness/disease, disability and death including impoverishment from long-term treatment, care costs leading to loss of productivity that threatens household income and leads to productivity loss for individuals and their families and to the economy of the nation. The deaths due to NCDs (Cardio-Vascular Disease, diabetes, cancer and respiratory disease) have increased from 60% of all deaths in 2014 to 66% in 2018 (WHO Nepal Country profile 2018). These NCDs impose substantial costs on health services leading to poverty and hunger, which may have a direct impact on the achievement of the internationally-agreed Sustainable Development Goals 3 i.e. “Ensure Healthy Life and Promote Well Being For All At All Ages” of this goal 3.4 targeted to “reduce by one third premature mortality from NCDs through prevention and treatment and promote mental health and well being”.

Better health outcomes from NCDs can be achieved much more readily by work across different sectors and levels of government influencing public policies in sectors like agriculture, communication, education, employment, energy, environment, finance, industry, labor, sports, trade, transport, urban planning, and social and economic development than by making changes in health policy alone.

Thus PEN Implementation Plan (2016–2020) has been developed in line with the Multi-Sectoral Action Plan for prevention and control of NCDs (2014-2020).

Multi-Sectoral Action Plan (MSAP) for the Prevention and Control of NCD (2014-2020 AD)

- **Vision:** All people of Nepal enjoy the highest attainable status of health, well-being and quality of life at every age, free of preventable NCDs, avoidable disability and premature death.
- **Goal:** The goal of the multisectoral action plan is to reduce preventable morbidity, avoidable disability and premature mortality due to NCDs in Nepal.

Strategic objectives for MSAP 2014-2020 AD

- Raise the priority accorded to the prevention and control of non-communicable diseases in the national agendas and policies
- Strengthen national capacity, leadership, governance, multispectral action and partnership to accelerate country response for the prevention and control of NCDs
- Reduce modifiable risk factors for NCDs and underlying social determinants through creation of health-promoting environment
- Strengthen and orient health systems to address the prevention and control of NCDs and underlying social determinants through people centered PHC and UHC
- Promote and support national capacity for high quality research and development for the prevention and control of NCDs and mental health
- Monitor the trends and determinants of NCDs and evaluate progress in their prevention and control
- Improving basic minimum care of mental health services at the community and improving competency for case identification and initiating referral at primary care level

Targets (At the end of 2025 AD)

1. 25% relative reduction in overall mortality from CVD, cancers, diabetes, or COPD

2. 10% relative reduction in the harmful use of alcohol
3. 30% relative reduction in prevalence of current tobacco use in persons aged over 15 years
4. 50% relative reduction in the proportion of households using solid fuels as the primary source of cooking
5. 30% relative reduction in mean population intake of salt/sodium
6. 25% reduction in prevalence of raised blood pressure
7. Halt the rise in obesity and diabetes
8. 10% relative reduction in prevalence of insufficient physical activity
9. 50% of eligible people receive drug therapy and counseling (including glycemic control) to prevent heart attacks and strokes
10. 80% availability of affordable basic technologies and essential medicines, including generics, required to treat major NCDs in both public and private facilities

Nepal PEN program

The WHO PEN Protocol was developed on risk based approach.

- Those people who are under high risk with high symptoms will get medicine but
- Those people who are under low risk even symptoms present will go through life style modification and follow up.

This PEN program is feasible for low cost and resource setting and is public health (mass) based approach of NCD treatment and management.

The PEN Intervention has Four protocols:

- **Protocol I** : Prevention of heart attack, stroke and kidney disease through integrated management of diabetes and hypertension.
- **Protocol II**: Health education and Counseling on Healthy Behavior (For All)
- **Protocol III**: Management of chronic obstructive pulmonary disease (COPD) and Asthma
- **Protocol IV**: Assessment and referral of women with suspected cancer (Breast & Cervix)

Goals

- Achieve universal access to high quality diagnosis & patient-centred care
- Reduce suffering & socio-economic burden of major NCDs
- Protect poor & vulnerable populations from major NCDs
- Provide effective & affordable prevention & treatment through PHC approach
- Support early detection, community engagement and self-care

Objectives

- To timely diagnose, treat and management of NCDs.
- To prevent and control risk factors of NCDs.
- To bring uniformity in treatment of NCDs.
- To increase coordination between health facility and community.
- To increase accessibility for Universal Health Coverage (UHC).

The Nepal PEN protocol I, II and concept note was developed and endorsed in June, 2016 and the program started in two pilot districts (Ilam and Kailali) on October, 2016. In addition, Nepal PEN protocol III and IV was endorsed and the program was scaled-up in the 8 districts (Palpa, Myagdi,

Baglung, Achham, Bardiya, Surkhet, Makwanpur and Rautahat) for Fiscal Year 2073/74.

For the Fiscal Year 2074/75 PEN program was scaled up in additional 6 districts (Chitwan, Jumla, Jajarkot, Dhading, Nuwakot, and Gorkha). For Fiscal Year 2075/76 PEN program was scaled up in additional 14 districts (Jhapa, Solakhumbu, Mohattari, Parsa, Sindhuli, Bhaktapur, Kaski, Tanahun, Kapilbastu, Rolpa, Dolpa, Humla, Baitadi, Bajura).

For the Fiscal Year 2076/77 PEN Program is being scaled up in 21 districts (Morang, Terathum, Udaypur, Sarlahi, Saptari, Dhanusha, Rasuwa, Sindhupalchowk, Dolkha, Syangja, Parbat, Nawalparasi (East), Dang, Pyuthan, Arghakhanchi, Salyan, Dailekh, Surkhet, Bajhang, Darchula, Dadelhdhura)

By the end of Fiscal Year 2077/78 PEN Program will be scaled up throughout Nepal.

Major activities, achievement and target

Key Achievements (FY 2073/74)	Key Achievements (FY 2074/75)	Key Achievements (FY 2075/76)	Key Achievements (FY 2076/77)	Target (FY 2077/78)
• Concept note on PEN developed and PEN Protocol endorsed • Implementation of NepalPEN Program in 10 districts • Initial Steps in Management of NCDs at PHC level taken	• Implementation of NepalPEN Program in additional 6 districts • Update in recording and reporting tools • Protocol revision after consultation from the experts • HEARTS Tool kit also endorsed • Drugs related to PEN Program enlisted in Essential Drug List	• Development of NCD & Mental Health Section in EDCC under DoHS • Expansion of PEN Program in additional 14 Districts • Revision/update of PEN trainer's guide and Trainee's manual • Allocation of budget to each provinces and governance level for proper management of NCDs • Provincial based tot for increasing trainers at provincial level	• Expansion of PEN Program in additional 21 Districts • Development of Community Intervention Framework to tackle NCDs and piloting in 2 districts by the end of the FY. • Allocation of budget to each provinces and governance level for proper management of NCDs	• Expansion & Implementation of PEN Program throughout Nepal in all 77 districts • Implementing Community Intervention Framework Throughout Nepal • Increase the amount of budget for NCDs • Work up to integrate PEN Program Recording & Reporting Tools in HMIS & DHIS • Develop Country's as well as Province's NCDs Profile

Trend of some NCDs.

Disease	Period	Province 1	Province 2	Bagmati Province	Gandaki Province	Province 5	Karnali Province	Su. Pa. Province	Nepal
COPD	2072/73	21817	14590	60485	35978	33960	14136	20263	201229
	2073/74	24014	12848	74478	34368	28148	14652	21663	210171
	2074/75	24901	14248	83231	35503	32304	16963	24535	231685
	2075/76	33234	18805	78350	32039	38705	19833	24802	245768
Hypertension	2072/73	48047	28182	87045	56569	41449	5469	9125	275886
	2073/74	58495	29356	123897	57937	40000	7919	11739	329343
	2074/75	65126	37045	160036	64587	54161	8828	14162	403945
	2075/76	94148	47848	162187	75214	86376	14840	18827	499440
Diabetes Mellitus (DM)	2072/73	18700	5310	43906	26860	17599	977	2764	116116
	2073/74	25847	10637	74541	28128	17236	1098	3862	161349
	2074/75	32127	9436	95781	32287	22851	1972	4659	199113
	2075/76	55461	15520	90419	38903	38922	5859	6512	251596
Breast Cancer	2072/73	43	12	634	748	64	6	28	1535
	2073/74	46	16	1345	390	47	5	14	1863
	2074/75	11	29	1435	278	47	2	6	1808
	2075/76	9	54	1547	357	40	5	21	2033
Cervical Cancer	2072/73	2	4	362	710	188	1	32	1299
	2073/74	82	2	924	267	138	5	3	1421
	2074/75	362	0	1767	204	44	2	28	2407
	2075/76	391	3	2148	237	80	0	4	2863

Strength, Weakness and Challenges

Strength	Weakness	Challenges
• Accessible at community level (PHCC and HP) • Dedicated and functional National NCDs & Mental Health Unit • Comprehensive health insurance & universal health coverage including for NCDs prevention and treatment services • Framework & multi-sectoral approach	• Only focused on HF level • Mostly focused on treatment approach however the PEN is public health approach • Focused on TIP ICEBERG of risk people (Those person who visited in HF with high risk population with suspected of disease) • Inadequate recording, reporting and monitoring system • Low level of community awareness • Complex RR tools & referral chain • Several policies to modify NCD Risk Factors are in different draft stages. • No dedicated budget for NCDs, in particular for promotion, prevention, and research	• Low proportional budget allocation towards NCDs • Poor awareness and misconceptions about the burden and consequences of NCDs, among the policy makers, health professionals and the general public • Unhealthy lifestyle seeking behavior and lower value of health among the public • Shortage of medical equipment, and supplies needed for diagnostic or therapeutic care of patients with NCDs • Shortage of health workers in public health facilities

Mental Health

Mental health and substance abuse is recognize as one of health priorities and also addressed unsustainable Development Goals (SDG). Within the health goal, two targets are directly related to Mental health and substance abuse. Target 3.4 requests that countries: "By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being." Target 3.5 requests that countries: "Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol." Nepal has high burden of mental illness but there are limited interventions to address

the epidemic of mental diseases. There were different activities conducted in fiscal year 2074/75, to address the burden of mental health related issues and to raise awareness about them. The activities were focused on awareness raising, capacity building of health workers, and use of information technology to get proper information regarding mental health and rehabilitation services. Community based Mental health program has been started at 6 districts (Panchthar, Mahottari, Dolakha, Lamjung, Kapilvastu, Kanchanpur).

Non Communicable Disease and Mental Health Section under EDCCD, has been assigned as the focal unit for implementation of mental health program in Nepal and will implement mental health program from FY 2075/76.

Community Mental Health Care Package, Nepal, 2074

The package is developed for standardization and uniformity in capacity building of non-specialized mental health professionals ensuring the availability and accessibility of integrated mental health and psychosocial support services (MHPSS) within the primary health care system of the country. The package broadly defines the mental health care packages at the level of health facility and community along with the implementation mechanisms.

Aims and Objectives of Mental Health Care Package

The aim of the Mental Health Care Package is to facilitate implementation of National Mental Health Policy thereby ensuring the availability and accessibility of basic mental health and psychosocial support services for all the population of Nepal.

The general objective of this package is to facilitate integration of mental health services into the primary health care delivery system of the country.

The specific objectives include:

1. To define the mental health and psychosocial support service packages at different layers of primary health care system
2. To define the minimum standard of the MHPSS services at different layers of primary health Care system
3. To set the standard of the training packages and manuals for training and supervision of health workers and community volunteer like FCHV.

Better to include a paragraph with the analysis of the situation of Mental Health related disease based on reported cases in OPD morbidity

Strength, weakness and challenges

Strength	Weakness	Challenges
- Community Mental Health Care Package, Nepal, 2074 developed - Community mental health program at six districts - Drugs procurement and supply.	- Program coverage couldn't be achieved as targeted - Training was not topped with availability of medicine	- Recording and reporting - Clinical supervision and mentoring - Availability of psychotropic medicine around the calendar - Limited budget allocation to cover the program district - Turnover of trained health professional

5.7 Epidemiology and Disease Outbreak Management

5.7.1 Introduction

Epidemiology and Outbreak Management Section in EDCC works in the area of preparedness and response to outbreaks, epidemics and other health emergencies occurring in different parts of the country. The section aligns with the organizational objective to reduce the burden of communicable diseases and unwanted health events through preparedness and responses during outbreak and epidemic situations by using the existing health care system.

5.7.2 Major Responsibilities of Epidemiology and Outbreak Management:

- Provide support to Ministry of Health and Population (MoHP) for drafting national laws, policies, and strategies related to epidemiology and outbreak management.
- Provide support to Ministry of Health and Population (MoHP) for drafting national laws, policies and strategies related to preparedness and management of outbreaks/epidemics and other health emergency situations.
- Prepare standards, protocols and guidelines regarding epidemiology and outbreaks/epidemics management.
- Coordinate with provincial and local level for epidemics and outbreak management.
- Provide support for preparation and implementation of annual work plan at federal level related to epidemics and outbreak management.
- Coordinate and collaborate with concerned authorities at federal level for epidemics and outbreak management.
- Coordinate and provide support in conduction of information management training and other federal level programs related to epidemiology, epidemics and other emergency situation management.
- Coordinate with multisectoral authorities in minimizing the impact of natural disasters in health sector, conduct response activities and control of epidemics.
- Facilitate and coordinate in providing preventive and curative services through provincial and local level to prevent the spread of diseases after natural disasters in displaced communities.
- Monitoring and supervision of disaster preparedness and management activities in coordination with province and provide feedback to the concerned authorities accordingly.
- Carryout outbreak control and management by mobilization of Rapid Response Team (RRT) in order to control epidemic prone diseases.
- Coordinate and facilitate for management of buffer stocks of essential medicines and other logistics required for the control of outbreaks/epidemics.
- Monitoring and supervision of disease epidemics, outbreak preparedness, prevention and control activities and provide feedback accordingly.

5.7.3 Rapid Response Teams (RRTs)

The concept of Rapid Response Team (RRT) was developed in the year 2057 B.S. for the development of epidemic preparedness and response system throughout the country in order to strengthen the information management and surveillance of communicable diseases, preparedness and early identification of potential outbreaks and investigation and prompt response during the outbreaks. RRT had been formed at central, regional, district and community levels and their mobilization during outbreaks and epidemics was done accordingly. Interim RRT guideline 2075 was introduced to address the new structure in federal system of Nepal

Roles and responsibilities of RRTs are as follows:

- Preparedness plan for disease outbreaks.
- Investigation of disease outbreaks.
- Responding to disease outbreaks through awareness and IEC activities, case management, community mobilization and the coordination of stakeholders.
- The monitoring of potential diseases outbreak (malaria, kala-azar, dengue, scrub typhus, acute gastroenteritis, cholera, severe acute respiratory infections, influenza, etc.) at sentinel sites.
- The active surveillance of diseases outbreak situation.
- Risk communication, dynamic listening and rumours management.
- Coordinate with the province and local authorities for diseases outbreak management. Along with back up with human resources and logistics as per need.
- Identify the risk factors leading to the public health emergency events and recommend measures that would need to be put in place to prevent the recurrence of the disease/syndrome in future.

5.7.4 Major activities carried out in fiscal year 2075/76:

- Stock piling of emergency drugs and health logistics at strategic locations (Centres, Provinces districts, and local levels).
- Established Health desk at major Point of Entries (PoE) i.e. Tribhuvan International Airport (TIA) and at ground level PoE were strengthened.
- Multisectoral interaction programme conducted at different districts (Kaski, Chitwan, Rupandehi, Mugu, Kalikot, Mustang) for preparedness of outbreaks, epidemics and unusual health events.
- Identification of disease outbreaks and epidemic prone districts and communities based on the review of previous data.
- Different level of RRTs mobilized throughout the country for investigation of outbreaks and response activities.
- Hospital Emergency Preparedness Plans prepared and updated at different hospitals.

5.7.5 Major Outbreaks in fiscal year 2075/76**Acute Gastro-Enteritis (AGE)/Cholera:**

Outbreak of diarrhoeal diseases occurs throughout the country mostly in the monsoon season but most of them with low case morbidity is under reported. In fiscal year 2075/76, eight events of AGE outbreaks were reported to EDCCD from 8 different districts affecting 648 people in total with four mortality.

Table 5.7.4.1: Status of AGE/Cholera outbreak in fiscal year 2075/76

S.N.	District	Location	Total Cases	Deaths
1	Mugu	Soru RM-3; Purumuru	15	2
2	Mohattari	Jaleswor MN-12 Nanhi	253	1
3	Kapilbastu	Taulihawa	10	0
4	Gulmi	Musikot MN-4, Dajakot	185	1
5	Jajarkot	Rani Gaun Jail	55	0
6	Kathmandu	KMC-13, Tahachal	1*	0
7	Sindhupalchok	Balefi RM-5	120	0
8	Lalitpur	Nakhu	9	0

*Confirmed Cholera

Source: EDCCD/DoHS

Influenza Like Illness (ILI):

ILI cases are commonly seen in winter and during seasonal changes. The high risk group for severe disease includes pregnant women, children under 5 years, elderly people, immune-compromised people and those with medical morbidity eg. Heart disease, cardiovascular disease and COPD.

A total of 2 outbreaks of ILI were reported in FY 2075/76 with 3,386 cases throughout the country including 13 deaths. Circulating strains of Influenza have been found to be Influenza A (H1N1) pdm09, Influenza A H3 and Influenza B.

Table 5.7.4.2: Status of ILI outbreak in fiscal year 2075/76

S.N.	District	Location	Total cases	Deaths
1	Saptari	Kanchanrup MN, Saptari	3147	4
2	Humla	Tajakot	239	9

Source: EDCC/DoHS

Food Poisoning/Water contamination: One event of food poisoning was reported to EDCC in FY 2075/76 from Bheriganga municipality Surkhet. Thirty-three people were affected with no death. Similarly, twenty-five people were ill due to contaminated drinking water in Letang Municipality Morang in this fiscal year.

Viral Fever: In the month of Baisakh there were a viral fever outbreak in Tatopani RM Jumla and Himali RM Bajura. One hundred fifty cases were in Jumla whereas three hundred twenty cases were in Bajura. No deaths.

Issues	Actions taken	Recommendations
Outbreaks of food and water borne disease	Coordination with the Department of Water Supply and Sanitation for effective interventions Coordination with the Department of Food Technology and Quality Control (DFTQC) for food borne disease surveillance	Improve water supplies, hygiene and sanitation. Food-borne disease surveillance should be initiated (active)
Field epidemiologists to perform thorough outbreak investigation	Outbreak investigations being conducted with available health workers and support from external partners	Organization and management survey to identify gaps in technical human resources at EDCD Train and retain adequate field epidemiologists
Investigation of outbreaks	Mobilization of a comprehensive team for outbreak investigation Collaborating with WHO and other sectors/agencies	Capacity building Guideline to investigate outbreak in a more scientific way Deploying trained field epidemiologists to investigate outbreaks
The threat of emerging and re-emerging diseases	Risk Assessments done for Zika and Ebola at central level	Orientation programme at district level Enhance the capacity of response teams through regular capacity development and logistic arrangements
Strengthening of IHR core capacities	Established health desk at TIA and 8 ground crossings	Guideline for the function of PoEs and role of health workers Permanent structural arrangement at designated PoE sites
RRT structure and functioning in federalism	Interim guideline sent to provincial and local levels	Update & Revise RRT guideline according to federal structure

5.8 Surveillance and Research

Background

Disease surveillance and research section was established in August 2013 and also reformed in 2018 according to federal structure in DoHS. This section has two main activities, disease surveillance (through Early Warning and Reporting System- EWARS) and water quality surveillance.

Major responsibilities of the section are:

- Assist MoHP for preparation of disease surveillance and research related national acts, regulations and strategies
- Preparation of standards, protocols and guidelines related to disease surveillance and research activities
- Coordinate and assist provinces and local levels on disease surveillance and research activities
- Preparation of federal level annual work plan for disease surveillance and research activities
- Coordinate with federal level stakeholders for disease surveillance and research activities
- Information management for disease surveillance
- Establishment and expansion of EWARS at local and provincial level hospitals in coordination with respective level of governments
- Manage monitoring, evaluation, surveillance and research activities for disease control as well as emergency management at national level
- Conduct disease surveillance, supervision, monitoring and evaluation and provide feedback to concerned authorities in coordination with provinces

5.8.1 Early Warning and Reporting System(EWARS)

EWARS is a hospital-based sentinel surveillance system where the selected hospitals send immediate and weekly reports (including zero reports) on six priority diseases and outbreaks of any diseases. It is designed to provide timely report of selected epidemic prone, vector-borne, water and food borne diseases for the early detection of outbreaks.

It was established in 1997 first in 8 sentinel sites and expanded to 24 sites in 1998, 26 sites in 2002, 28 sites in 2003, 40 sites in 2008 and 82 sites in 2016. In May 2019, additional 36 sites (private hospitals and medical colleges across Nepal) were declared as sentinel sites by the DoHS. Thus, the total number of current sentinel sites is 118. Sentinel sites include all the central, provincial, district hospitals, medical colleges including selected private hospitals.

The main objective of EWARS is to strengthen the flow of information on outbreak prone infectious diseases and vector borne diseases from the districts and to facilitate prompt outbreak response to be carried out by rapid response teams (RRTs) at federal, provincial and local level. It is designed to provide timely report for the early detection of selected vector-borne, water and food borne diseases with outbreak potential.

Main Objectives:

- To develop a comprehensive and computerized database of infectious diseases of public health importance
- To monitor and describe trends of infectious diseases through a sentinel surveillance network of hospitals followed by public health action and research
- To receive early warning signals of diseases under surveillance and to detect outbreaks

- To initiate a concerted approach to outbreak preparedness, investigation and response through different levels of RRT
- To disseminate data/information on infectious diseases through an appropriate feedback system.

The four basic elements of surveillance that were the cornerstones of EWARS development:

- Mechanism for hospital inpatient-ward-based case detection,
- Laboratories for identifying and characterizing microbes,
- Intact information systems and
- Immediate response (information feedback and mobilization of investigative and control efforts)

Information flow mechanism and control room responsibilities:

- Sentinel sites report weekly/immediately through the DHIS2 Event capture system
- If necessary, EDCCD/Health directorate confirm the cases from NPHL/reference laboratory test
- EDCCD/Health directorate initiates for control and prevention of disease with coordination of RRTs at various levels
- Mobilization of RRT at different levels for control and prevention of disease
- If any error is found in reporting from the sentinel sites, EDCCD and health directorate provides the feedback to concern sentinel sites

A control room is functioning regularly under disease surveillance and research section of EDCCD. Main activities of control room are:

- Maintenance of quality, accuracy, timeliness and completeness of data received from EWARS sentinel sites.
- Analysis of data from EWARS sites, monitoring of disease trends and notifying concerned authorities when outbreaks are suspected or predicted.
- Publication of electronic EWARS weekly bulletin and disseminate on Sunday to all key personnel of MoHP, DoHS, provincial health authorities, all sentinel sites and other relevant stakeholders. The bulletin is also uploaded to the EDCCD's website.

'A guide to Early Warning and Reporting System' was updated and disseminated in 2019 which can be accessed at EDCCD website.

5.8.2 Water quality monitoring and surveillance

Background

The National Drinking Water Quality Standards, 2062 published by Government of Nepal under the provision of Water Resources Act, 2049 had set the target to achieve the universal access of safe drinking water. The standards had defined the responsibilities of different stakeholders to achieve the target.

As stated in the standards, Ministry of Health and Population and its line agencies are responsible to conduct water quality surveillance. MoHP has introduced the Water Quality Surveillance Guideline – 2070. According to the guideline, Water Quality Surveillance committee led by the director of EDCCD has been formed; where the chief of Disease Surveillance and Research section is working as member secretary. The guideline stated that the EDCCD is responsible to conduct the water quality surveillance through EDCCD, Ministry of Social Development at all provincial level

and all local level governments. From 2073/74, EDCD started the surveillance of WSPs in different districts. Based on the need, prepare a surveillance team at district level and conduct the regular surveillance with in district level.

Drinking water surveillance refers to the continuous and vigilant public health assessment and review of the safety and acceptability of drinking-water supplies. This surveillance contributes to the protection of public health by promoting improvement of the quality, accessibility, coverage, affordability and continuity of water supplies and is complementary to the quality control function of the drinking water supplier.

Main objectives of Water quality surveillance:

- To explore water quality surveillance methodology and process
- To implement water quality surveillance activities
- To clarify the roles and responsibilities of water quality surveillance to MoHP and other stakeholders
- To describe about methodology and steps of water quality surveillance and water safety plans
- To provide regular feedback to stakeholders about water quality surveillance and water safety plan

EDCD is a secretariat of Water Quality Surveillance Committee. The roles and responsibilities of committee are:

- Regular monitoring of drinking water quality from various sources and distribution sites
- Regular surveillance of water borne diseases and coordinate with different stakeholders for quality surveillance
- Increase capacity of human resources through training, meetings, and other programmes for the surveillance of water quality of the district
- Facilitate testing of water quality of the water distributed in the particular area if any waterborne diseases epidemic occurs in the water distributed in the particular area
- Keep record of drinking water distribution system of country on the basis of Geographical Information System (GIS) and provide feedbacks to the responsible organization

Issues and Recommendation

SN	Issues	Recommendation
1	Inadequate resources for sentinel sites operation	• Vacant post of medical recorder should be fulfilled • Create posts for medical recorder in hospitals with no/lack of sanctioned posts • Allocation of necessary budget for EWARSorientation, data verification and strengthening of infrastructures of sentinel sites
2	Limited prompt response for disease control and prevention after reporting	Disease investigation guideline should be prepared and case base investigation should be done
3	Limited feedback/support to sentinels sites	• Regular and immediate feedback/supportto sentinel sitesfrom EDCD as well as Health Directorate • Regular onsite coaching to sites
4	Retrospectives data analysis	Including retrospective data analysis and publish/disseminate its major findings
5	Inconsistency of data	Data from EWARS may not match with HMIS data

6. NURSING AND SOCIAL SECURITY

6.1 Background

The Nursing and Social Security Division was established in 2075 B.S and is responsible for delivery of quality health services through capacity development of nursing and its professionalism, including planning, coordination, supervision, monitoring and facilitation for various aspect of nursing, midwifery, school health and community nursing services and the evaluation of geriatric and gender based violence programme along with treatment and management facilities for selected diseases to impoverished Nepalese citizens at listed hospitals. The division is also responsible for development and revision of FCHVs and other health related social mobilizer's policy, strategy, standard, protocol and guideline.

6.2 Organizational Arrangements

The Nursing and Social Security Division has three sections, (Box 6.2.1). The specific functions of sections and units are given below:

Box 6.2.1: Sections under the Nursing and Social Security Division

- Nursing Capacity Development Section
- Geriatric and Gender Based Violence Management Section
- Social Health Security Section

6.2.1. Nursing Capacity Development Section:-

- Co-ordinate, collaborate and facilitate the concerned agencies for the development and implementation of policy, strategy, standard, protocol and guideline to maintain quality in nursing service.;
- Co-ordinate and facilitate the concerned agencies for the development of law, standard, protocol and guideline to produce, deploy and mobilize qualified and competent human resources in nursing profession.
- Develop capacity of nurses working in field of alternative medicine by developing Standard of practice for quality in nursing service;
- Coordinate and collaborate to develop policy, regulation, and guideline regarding Specialization in nursing care;
- Assist and help the concerned agencies in developing national health related policies, strategies, standards, protocols and guidelines etc. ;
- Conduct research related activities to develop quality in nursing education and nursing services including specialized nursing educations and care services;
- Co-ordinate and facilitate in the various study, research aimed for the enhancement of quality of community and midwifery educations and care services;
- Co-ordinate, communicate, collaborate and facilitate the concerned agencies for the development and promotion of new field /scope of nursing services like school health nurse.
- Co-ordinate and facilitate the concerned agencies for the development and promotion of community nursing care services;
- Co-ordinate and facilitate the concerned agencies for the development and promotion of

- midwifery education and its care services;
- Collaborate and coordinate with the concerned agencies in developing nursing and midwifery human resource planning, capacity building, development, management;
- Develop the protocol of public health nursing and midwifery nursing care services.

6.2.2 Geriatric and Gender Based Violence Management Section :-

- Co-ordinate, collaborate and facilitate the concerned agencies for the development of policy, strategy, standard, protocol and guideline etc. of home based nursing care;
- Co-ordinate and facilitate the concerned agencies for the development and promotion of nursing care services in the field of geriatrics and other new field of health care services;
- Co-ordinate and facilitate for delivery of quality health services to people affected from gender based violence;
- Develop the standard, protocol and guidelines for the treatment and management of gender based violence;
- Monitor and facilitate while needed of established OCMCs;
- Coordinate with all concerned agencies, stakeholder's organizations that work in the field of geriatrics and gender based violence;
- Develop the protocol, IEC materials for the delivery of quality health services with emphasis on geriatric friendly services from all type of health institutions, like public, private, profit, non-profit etc. ;and
- Provide technical support in promoting capacity of health care workers in geriatric health care and management of gender based violence.

6.2.3 Social Health Security Section:-

- Develop the policy, strategy, standard, protocol and guideline etc. regarding easy access and provision of hospital based services to the target population;
- Overall management of "Bipanna Nagrik Aushadi Programme", treatment of serious health conditions of citizens, Social Security Unit (SSU) and One-Stop Crisis Management Centre (OCMC); and
- Develop and revise and update the policy, standard for FCHVs and other health related social mobilizers.

6. 1 Nursing Capacity Development Section

6.1 Background

The Nursing and Social Security Division has three sections. The specific functions of this section are given below:

- Co-ordinate, collaborate and facilitate the concerned agencies for the development and implementation of policy, strategy, standard, protocol and guideline to maintain quality in nursing service.
- Co-ordinate and facilitate the concerned agencies for the development of law, standard, protocol and guideline to produce, deploy and mobilize qualified and competent human resources in nursing profession.
- Develop capacity of nurses working in field of alternative medicine by developing Standard of practice for quality in nursing service;
- Coordinate and collaborate to develop policy, regulation, and guideline regarding Specialization in nursing care;
- Assist and help the concerned agencies in developing national health related policies, strategies, standards, protocols and guidelines etc. ;
- Conduct research related activities to develop quality in nursing education and nursing services including specialized nursing educations and care services;
- Co-ordinate and facilitate in the various study, research aimed for the enhancement of quality of community and midwifery educations and care services;
- Co-ordinate, communicate, collaborate and facilitate the concerned agencies for the development and promotion of new field /scope of nursing services like school health nurse.
- Co-ordinate and facilitate the concerned agencies for the development and promotion of community nursing care services;
- Co-ordinate and facilitate the concerned agencies for the development and promotion of midwifery education and it's care services;
- Collaborate and coordinate with the concerned agencies in developing nursing and midwifery human resource planning, capacity building, development, management;
- Develop the protocol of public health nursing and midwifery nursing care services.

(Note: Beacuse of new section, no program is carried out in the FY 2075/76. However, program will be proposed and run smoothly in FY 2076/77)

6.2 Geriatric and Gender Based Violence

6.2.1 Background

The specific functions of this section are given below:

- Co-ordinate, collaborate and facilitate the concerned agencies for the development of policy, strategy, standard, protocol and guideline of home based nursing and other care;
- Co-ordinate and facilitate the concerned agencies for the development and promotion of nursing care services in the field of geriatrics and other new field of health care services;
- Co-ordinate and facilitate for delivery of quality health services to people affected from gender based violence;
- Develop the standard, protocol and guidelines for the treatment and management of gender based violence;
- Monitor and facilitate while needed to establish OCMCs;
- Coordinate with all concerned agencies, stakeholder's organizations that work in the field of geriatrics and gender based violence;
- Develop protocol, IEC materials for the delivery of quality health services with emphasis on geriatric friendly services from all type of health institutions; like public, private, profit, non-profit etc. ; and
- Provide technical support and guidance for promoting capacity of health care workers in geriatric health care and management of gender based violence.

A. Geriatric

Geriatric Ward Establishment Program

Background:

The MoHP has established geriatric ward in twelve referral hospitals providing geriatric services in different hospitals across the country. Other hospitals apart from the hospitals like BPKIHS, Patan, Bharatpur and Seti have not been able to drive the geriatric services as MoHP envisioned. Even the ones stated above provide services within their limited capacity and resources.

- Geriatric unit (limited bed capacity, limited space availability to adjust supportive geriatric equipment including no separate geriatric male and female ward as per the standard has been a big challenge) in hospitals providing geriatric services is insufficient to occupy all geriatric patients. High flow of senior citizens at hospitals and a huge demand for geriatric services requires an expansion of geriatric services to other wards/department in hospitals including mandatory geriatric services in private and teaching hospitals.
- Interdisciplinary approach has been a major challenge (difficult to manage surgical, medical, gynaecology, orthopaedic, ENT, ophthalmic and psychiatric patients under the same unit).
- Lack of specialized health care providers for the care of geriatric population. The country has only few consultant doctors for geriatric medicine. A key recommendation made by hospitals providing geriatric services was scarcity of trained human resources for geriatric services as a major challenge. Development of human resources: geriatric medicine/nursing by MCs; training by NHTC and specialised training by university is a must.

¹Patan hospital, Patan Academy of Health and Science, Aayurveda Teaching hospital (Kirtipur), Bharatpur hospital, Western Regional hospital, Pokhara Academy of Health and Science, Bheri hospital (Nepalgunj), Seti hospital (Dhangadhi), BP Koirala Institute of Health and Science, Lumbini hospital (Butwal).

- Services required by geriatric patient are wide-ranging (ICU/CCU, CT scan, MRI ,CTVS, device, implants, neuro surgery services) but these services are not included under geriatric services, which creates difficulty in providing holistic care (management of preventive, promotive and palliative services- example: elderly immunization).
- High demand of geriatric services in hospitals (BPKIHS, Patan, Pokhara and Bharatpur). However, due to scanty resources they receive from MoHP compared to the patients flow, only limited services can be provided to the patients.
- Revision of age criteria for geriatric services should be considered.

B. Gender Based Violence Management Program

Background:

Gender-based Violence (GBV) is a grave human right violation and public health concern which impacts the physical and mental health of the individual survivor and her children, and carries a social and economic cost to society. GBV in Nepal cuts across caste-ethnicity, religion and socioeconomic status and is prevalent in all geographical settings. The United Nations (UN) Declaration on the Elimination of Violence Against Women (1992) defined GBV as “violence that is directed against a woman because she is a woman, or violence that affects women disproportionately. It includes acts that inflict physical, mental or sexual harm or suffering, threats of such acts, coercion and other deprivations of liberty.” GBV occurs in private and public spaces. It is inextricably linked to the gender norms and unequal power relations between genders in society. Violence Against Women and Girls (VAWG) is one of the manifestations of this gender inequality.

The Government of Nepal (GoN) has taken significant steps in reforming laws and policies to combat GBV in the country. However, deeply entrenched social norms that condone Violence Against Women and Girls (VAWG) persist. The Ministry of Health and Population (MoHP) was tasked with Clause 3 of the National Action Plan Against GBV (2010), to provide integrated services to survivors of GBV by establishing hospital based One-stop Crisis Management Centres (OCMCs).

MoHP initiated the establishment of OCMCs in 2011. By the end of 2075/76, 55 OCMCs had been established in 54 districts. Fourteen more OCMCs will be established in 2076/77 and the MoHP intends to complete scale-up across the country in 2077/78. The MoHP has been incrementally providing inputs to strengthen the systems and capacity of OCMCs since their introduction, and intermittent evaluations and reviews have provided critical evidence to guide systems strengthening. OCMCs provide free hospital-based health services including identification of survivors, treatment, psychosocial counselling and medico-legal services, and coordinate with multisectoral agencies that provide survivors access to safe homes, legal protection, personal security and rehabilitation. They also refer clients for specialist health services as required. OCMCs are mandated to provide seven services to GBV survivors (see Box below). They should also inform and educate survivors about the services available from the centres and other service providers.

Services OCMCs are mandated to provide

The 'Hospital-based OCMC Operational Manual' (MoHP 2011) says that OCMCs shall provide the following seven kinds of services through multi-faceted coordination with other agencies:

- Health services – Immediate treatment of physical and mental health needs of GBV survivors with OCMCs having to stock the equipment and the free health service medicines to provide these services.
- Medico-legal examination and reporting.
- Psycho-social counselling to survivors and perpetrators.
- Legal service- counselling and support to survivors through district attorneys and legal counsellors.
- Safe homes — by directing survivors to safe shelter homes.
- Security – by working with the police and district administration offices to provide security to survivors in hospitals, safe houses, and in their communities.
- Rehabilitation – by providing further counselling, education, vocational skills training and other livelihoods support.

GBV cuts across caste-ethnicity, religion and socioeconomic status and is prevalent in all geographical settings, though in different forms and magnitude, making prevention and response crucial nationwide. The Nepal Demographic and Health Survey (NDHS, 2016) found that 22 percent of women aged 15–49 had experienced physical violence at some point since age 15, while 7 percent had experienced sexual violence. The main perpetrator of physical or sexual violence was their husband. Women's experience of spousal violence varies by ecological zone. Close to one-third of women in the Terai (32%) experienced physical, sexual or emotional violence compared to one-fifth in Hill (20%) and Mountain (19%) areas. Divorced, separated or widowed women are more likely to have experienced spousal violence (48%) than currently married women (26%). The education level of the husband affects women's risk of spousal violence. Forty-four percent of women whose husband has no education had experienced spousal violence compared to 14 percent of women whose husband had completed the school leaving certificate or higher. Reporting violence or seeking help is not common as survivors are reluctant to report incidents to the authorities for fear of stigmatisation, fuelling the violence and lack of support services. Two-thirds of women who have experienced any physical or sexual violence have not informed anyone or sought help.

6.2.2 Major Achievements in fiscal year 2075/76

MoHP data extracted in Falgun 2076 shows that the total annual number of OCMC clients has increased from 187 in 2069/70 (2011/12) (based on seven reporting facilities) to 6,992 in 2075/76 (2018/19) based on 45 reporting facilities. Women make up over 90 percent of clients. Based on 2075/76 (2018/19) data, physical assault, sexual assault and rape make up 72 percent of all cases. Rape and sexual assault together are 38 percent of all cases, and physical assault is 34 percent.

The number of cases of physical and sexual violence that are reported to any service provider in Nepal is a small proportion of actual occurrence. To estimate how well OCMCs reach women

²Ministry of Health, Nepal; New ERA; and ICF. 2017. Nepal Demographic and Health Survey 2016. Kathmandu, Nepal: Ministry of Health, Nepal.

seeking help for physical or sexual violence, we calculated the number of OCMC clients in one year as a percentage of the estimated number of women seeking help using census data and estimates of physical and sexual violence from the Nepal Demographic and Health Survey (NDHS, 2016). The crude estimation is that OCMCs served between 3–4 percent of women who sought help for physical or sexual violence in 2075/76 (2018/19). Coverage varies by province but the headline message is that coverage is extremely low and there is much more for the government to do to improve survivors' access to services.

6.2.3 Analysis of OCMC utilisation data

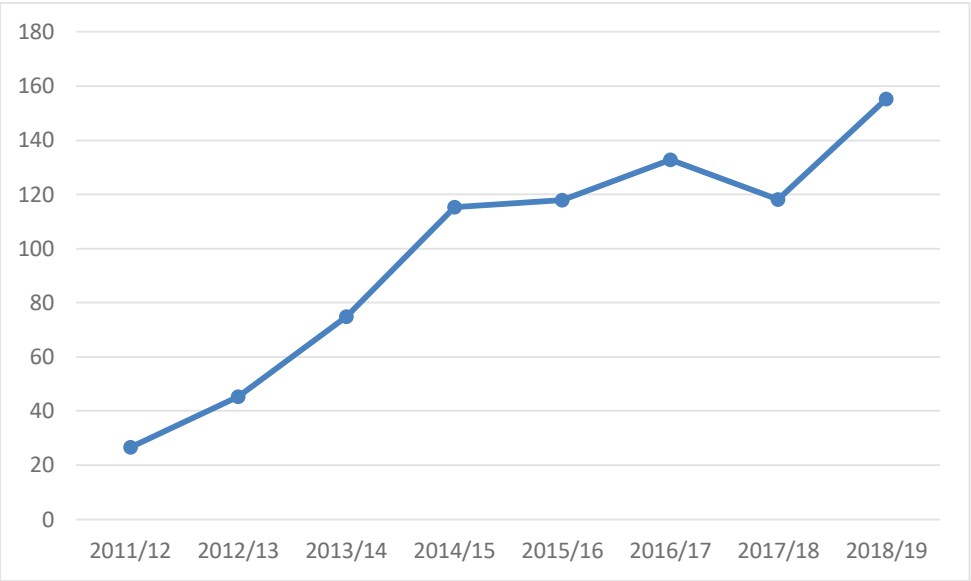
The number of OCMCs has increased from seven in 2011/12 to the planned 69 by the end of FY 2075/76 (2019/20). MoHP data extracted in March 2020 shows that the total annual number of OCMC clients has increased from 187 in 2011/12 (based on seven reporting facilities) to 6,992 in 2018/19 (based on 45 reporting facilities). (see Table 1).

Table 1: Total number of Clients by year and number of reporting hospitals		
Year	Total # clients	# hospitals reported data
2011/12	187	7
2012/13	545	12
2013/14	1,049	14
2014/15	1,730	15
2015/16	2,004	17
2016/17	2,924	22
2017/18	4,372	37
2018/19 (2075/76)	6,992	45

Source: GESI/MoHP

Women make up the overwhelming majority of OCMC clients, representing over 90 percent of clients. The average number of clients served per OCMC has increased over time (see figure 1). This reflects increasing capacity of OCMCs with the introduction of the GBV Clinical Protocol in 2015, revision of the OCMC Operational Manual in 2016 and the introduction of psychosocial counselling training in 2012/13 and medico-legal training in 2018/19.

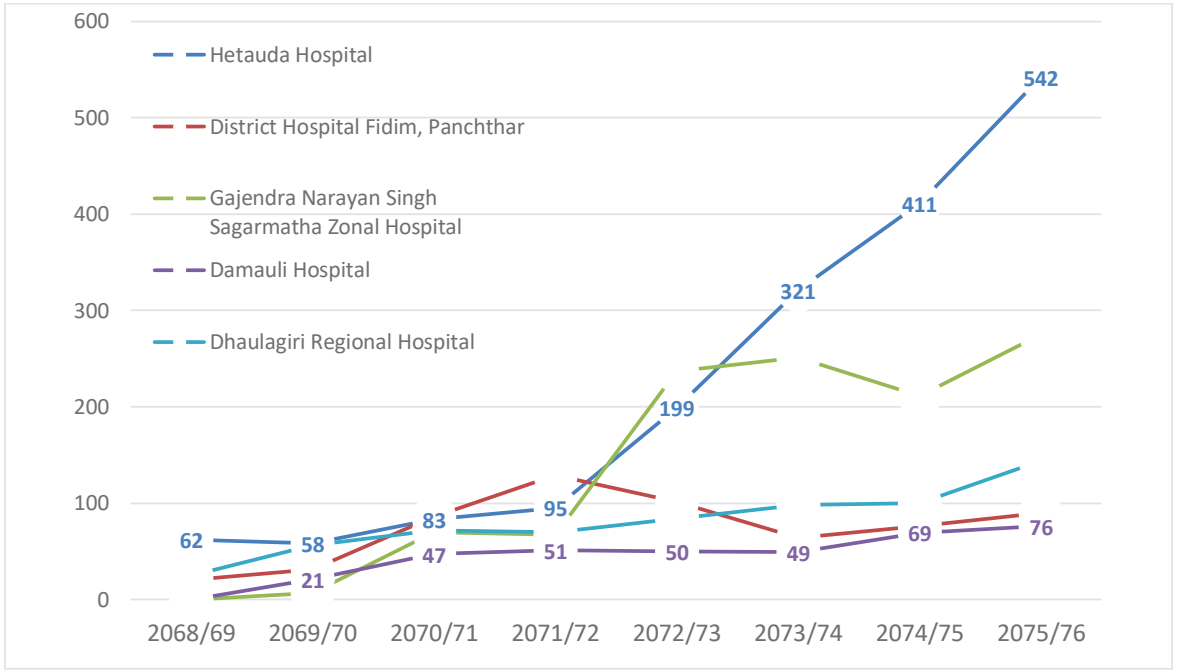
Figure 1: Average number of clients per OCMC by fiscal year 2011-12 to 2018-19



Source: GESI/MoHP

Significant diversity in the readiness and use of OCMCs is well known. Figure 2 presents annual client use at five OCMCs that have been operational since 2011/12 and reflects this diversity. Gajendra Narayan Singh hospital (Saptari district) and Hetauda hospital (Makawanpur district) both are highly populated districts compared to other 3 districts. Gajendra Narayan hospital is located in Terai and Hetauda hospital is located at hill. The variation of the cases is due to the population, socio-cultural factor, number of partners working on GBV issues and leadership and initiatives taken by the OCMC focal and hospital chief. OCMCs of Hetauda and Gajendra Narayan hospitals are very active and visible. They possess active multi-sectoral coordination with partners, focal persons are dedicated and hospital chiefs are supportive including effective coordination within the hospital. Initially, Phidim (Panchthar) was active due to similar reasons.

Figure 2: Total number of clients by year at five OCMCs operational since FY 2011/12 to 2018/19

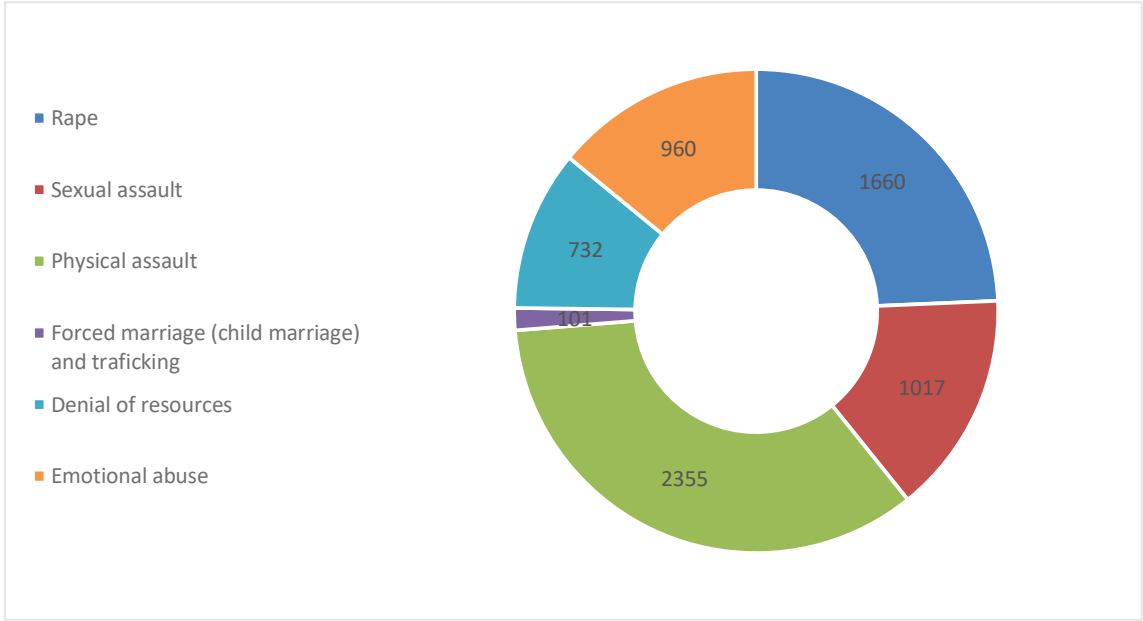


Source: GESI/MoHP

6.2.4 Type of violence

Recording of the type of violence experienced by clients was introduced during the OCMC pilot period. Using 2075/76 (2018/19) as the fullest year of reporting to date, we see that physical assault, sexual assault and rape make up 72 percent of all cases. Rape and sexual assault together are 38 percent of all cases, and physical assault is 34 percent.

Figure 3: Type of violence recorded for all OCMC cases in FY 2018/19



Source: GESI/MoHP

The heavy weighting of cases resulting from physical and sexual violence rather than emotional abuse is not surprising: prevailing social norms legitimise male control and acceptability of husbands using violence against wives, and 66 percent of women aged 15–49 that have ever experienced any type of physical or sexual violence have never sought help or told anyone . Survivor accounts suggest it is only when violence is severe and injuries require medical attention that medical help is sought. Moreover, that decision itself is often made by neighbours, family and the police, rather than the survivor herself. The barriers to accessing care are discussed further below.

6.2.5 Enabling Factors

The performance of the 55 OCMCs has been varied. Experiences show that the following good practices enable the successful operation of OCMCs:

- Hospital leadership commitment to OCMCs is a key enabling factor for their success. Supportive leaders provide resources to OCMCs, generate commitment to GBV across the hospital, motivate staff and improve the quality of care. Where hospital chiefs are uninterested in GBV or see this as a social problem beyond the responsibility of the hospital this is a critical barrier to their effectiveness.
- Coordination — Good coordination between and hospital centres leading to the effective referral of GBV cases to OCMCs, and between concerned personnel and agencies (hospital departments, counsellors, safe homes, police offices, legal aid committees, public lawyers, NGOs and rehabilitation centres).
- Quality of care — The orientation and training of stakeholders and staff; the provision of 24 hour a day services; the maintenance of client confidentiality and security; and police, safe homes, rehabilitation centres and attorneys seriously treating cases referred to them by
- through the dissemination of information about OCMC services and GBV issues through FM radio, brochures and other media.
- Follow OCMCs.
- Awareness rising — The running of sensitisation campaigns against GBV in local communities -up — The regular monitoring and follow-up of survivors.

6.2.6 Issues and Constraints

- Leadership and governance: There are two strategic governance issues that are impacting the functioning of OCMCs. First, federalism has changed the governance environment for OCMCs with important implications for oversight authority, funding and coordination. The changed context means that while the ‘district hospital’ remains a valid location to provide and coordinate multisectoral services that are available at this level (e.g. police investigation, legal services, safe home), a mechanism is required to enable all local governments within the orbit of OCMCs to participate in governance functions.

The second strategic issue relates to institutional reforms in the Ministry of Women, Children and Senior Citizens (MoWCSC) and the removal of their service delivery role. MoWCSC funding for safe homes and rehabilitation services has stopped.

- Federal hospitals receive funding direct from MoHP, while the conditional grant funds for others are sent via the province and have suffered from (OCMCs) uneven distribution of budget..

³NDHS 2016 found that 29 percent of women and 23 percent of men believe that a husband is justified in beating his wife in at least one of five specified situations.

- Coordination on a case-by-case basis seems to be the norm. The police are the strongest. Critical gaps in safe home and rehabilitation services have left many OCMCs without shelter accommodation and rehabilitation care to which they can refer clients. The care of children, women with disabilities and the mentally ill is a particular challenge.
- Human resource availability: This year, many doctors and staff nurses who have received GBV- and OCMC-related training have been transferred to facilities without an OCMC, as part of the staff adjustment process. This situation, and the general fluidity of staff, especially contract staff, has serious implications for capacity loss and inefficiency.
- Staff capacity and development: Standards and guidelines and related training on the Clinical Protocol (2015) and OCMC Operational Manual (2016), medico-legal training of doctors to undertake forensic examinations of rape victims and to prepare medico-legal records that stand up in court, and psychosocial counselling training of nurses have been critical investments.
- Medical Officers and OCMC staff stressed the need for effective capacity enhancement of service providers and other stakeholders including clinical medico-legal training and GBV and psychosocial counselling training. High staff turnover in hospitals coupled with inadequate handover arrangements are also believed to have had a negative impact including accessing services (especially forensic and counselling) by GBV survivors from OCMC.
- A number of OCMCs suffer from inadequate space (lacks dedicated rooms as specified by the OCMC operational guidelines) making it difficult to maintain privacy while providing services.
- Referral and rehabilitation of homeless/helpless patients suffering from mental anguish was one of the biggest challenge shared by almost all the OCMCs.

⁴Ministry of Health and Population. 2015. Gender Based Violence Clinical Protocol; Ministry of Health and Population. 2016. One Stop Crisis Management Centre Operational Manual.

6.3 Social Health Security

6.3.1 Background

The Social Health Security Section was established in 2075 B.S and is responsible for free treatment and management facilities for eight selected diseases to impoverished Nepalese citizens at listed hospitals under this scheme. The section is also answerable for development and revision of FCHVs and other health related volunteer’s policy, strategy, standard, protocol and guideline. The specific functions of this section (Box 6.3.1) are given below:

Box 6.3.1: Social Health Security Section

- Develop the policy, strategy, standard, protocol and guideline etc. regarding easy access and provision of hospital based services to the target population;
- Overall management of “Bipanna Nagrik Aaushadi Programme”, treatment of serious health conditions of citizens, SSU and OCMC; and
- Develop, revise and update the policy, standard for FCHVs and other health related volunteers.

6.3.1 Bipanna Nagrik Aaushadi Upchar Programme

6.3.1.1 Background

The goal and objective of this section (Box 6.3.1.1) are given below:

Box 6.3.1.1: Goal and objectives of the Programme

Goal — Managed the provision of free treatment to impoverished citizens.

- **Objectives** —
 - i) notified the different types of hospitals for free medication and treatment
 - ii) Develop, revise and update the policy, standard, guideline and protocol for “Bipanna Nagrik Aaushadi Programme”.

Major ongoing activities

The Impoverished Citizens Service Scheme of Social Health Security Section provides the following funding for impoverished Nepalese citizens to treat serious health conditions:

- Free treatment up to NPR 100,000 per patient via listed hospitals for severe diseases including cancer, heart disease, traumatic head injuries, traumatic spinal injuries, Alzheimers disease, Parkinson’s and sickle cell anaemia diseases;
- Medication costs up to NPR 100,000 for post-renal transplant cases;
- Free dialysis services;
- Pre transplant (HLA & cross match) test support upto 50,000; and
- Renal transplantation costs up to NPR 400,000 per patient; and
- Free medical treatment for certain severe kidney disease upto 100,000.

The following activities were conducted on a regular or ad-hoc basis in FY 2075/76 alongside the above-mentioned regular functions.

- Fifty three thousand three hundred thirty (53,330) number of patients were managed in the provision of free treatment to impoverished citizens services scheme. Top most number of patients from Cancer (37,121), followed by Heart disease (6828), Kidney (5297), Traumatic Spinal Injury (1547), Sickle Cell Anaemia (1026), Traumatic Head Injury (761) and from Parkinsons diseases (377) and these disease rank 2nd, 3rd, 4th, 5th and 6th in number of patients subsequently, whereas number of patients from Alzheimer’s diseases were 121 which was lowest in number under the provision of free treatment to impoverished citizens services scheme. Details are in (Table 6.3.1.1).
- Number of patients received post kidney transplant medications support were 317.

Table 6.3.1.1: Total number of impoverished patients (both new and old) provided with treatment support for serious diseases, 2075/76

S.N.	Name of Hospitals/particular	Kidney				Heart	Cancer	Parkinson's	Traumatic Head Injury	Traumatic Spinal Injury	Alzheimer's	Sickle Cell Anemia	Total
		Kidney Haemodialysis	Kidney Peritoneal dialysis	Kidney Treatment	Kidney Transplant								
1	National academy of health sciences, Bir hospital, Kathmandu	66	0	188	14	0	2534	3	4	3	0	0	2812
2	Tribhuvan university, teaching hospitalm Maharaigunj	124	11	19	55	0	502	7	9	209	1	0	937
3	Patan academy of health science, patan hospital	99	0	138	0	93	1681	24	2	80	69	0	2186
4	B.P. Koirala institute of health science, Dharan	148	9	25	0	621	423	129	0	188	30	0	1573
5	Propkar Maternity Womens Hospital, Thapathali	0	0	0	0	0	16	0	0	0	0	0	16
6	Sahid Gangalal N. Heart centre, Bansbari	0	0	0	0	2709	0	0	0	0	0	0	2709
7	Civil service Hospital, Minbhawan	0	0	0	0	0	2275	0	0	0	0	95	2370
8	Manmohan Cardio Thoracic , Vascular &TC	0	0	0	0	879	0	0	0	0	0	0	879
9	B.P. Koirala Memoriyal Cancer Hospital, Bharatpur	0	0	0	0	0	15554	0	0		0	0	15554
10	Sahid Dharma Bhakta Transplant Centre, Bhaktapur	197	63	0	183	0	0	0	0	0	0	0	443
11	Pokhara Academy of Health Science, Pokhara	104	0	0	0	0	0	0		0	0	0	104
12	Narayani hospital,Birgunj	38	0	0	0	0	0	0	0	0	0	0	38
13	Rapti Academy of Health Science, Dang	33	0	0	0	0	0	0	0	0	0	89	122
14	Mechi Hospital, Bhadrapur, Jhapa	41	0	0	0	0	0	0	0	0	0	0	41
15	Koshi Hospital, Morang	34	0	0	0	0	174	0	0	0	0	0	208

S.N.	Name of Hospitals/particular	Kidney				Heart	Cancer	Parkinson's	Traumatic Head Injury	Traumatic Spinal Injury	Alzheimer's	Sickle Cell Anemia	Total
		Kidney Haemodialysis	Kidney Peritoneal dialysis	Kidney Treatment	Kidney Transplant								
36	Charak Memoriyal Hospital Pvt, Kaski pokhara	48	10	0	0	0	0	0	0	0	0	0	58
37	Himal Hopsital Pvt, Gyaneswar, Ktm	34	0	0	0	0	0	0	0	0	0	0	34
38	Vayoda Hospital Pvt, Balkhu	30	0	0	0	5	0	0	0	0	0	0	35
39	Kathmandu Cancer Center, Tathali, Bhaktapur	0	0	0	0	0	652	0	0	0	0	0	652
40	Venus hospital pvt.ltd, Baneshwor, Kathmandu	43	0	0	0	0	0	0	0	0	0	0	43
41	National Trama Center, Mahabauddha, Ktm	0	0	0	0	0	0	0	141	361	0	0	502
42	Nobel Medical College Teaching Hospital,Biratnagar	85	10	0	0	895	0	202	320	83	15	0	1610
43	Nepal Cancer Hospital & rearch center, Lalitpur	0	0	0	0	0	3038	0	0	0	0	0	3038
44	Grandi International Hospital Pvt, Dhapasi	42	0	0	0	0	0	0	0	0	0	0	42
45	Crimson Hospital , Manigram Rupandehi	46	0	0	0	79	0	0	43	9	0	0	177
46	Greencity Hospital pvt. Ltd, Dhapasi, Kathmandu	53	0	0	0	0	0	0	0	0	0	0	53
47	OM hospital and Research Center	48	0	0	0	0	0		0	0	0	0	48
48	Neuro Cardio Multispeciality Hospital, Biratnagar	0	0	0	0	43	0	0	121	2	0	0	166
49	Purna Tung Birta city Hospital, Jhapa	34	0	0	0	0	0	0	0	0	0	0	34
50	Janaki Health Care and Research Center Pvt.Ltd	39	0	0	0	0	0	0	0	0	0	0	39
51	Dhulikhel Hospital, Kavre	14	0	0	0	10	122	0	0	30	0	0	176
52	OM shahi Pathivara Hospital, Jhapa	66	0	0	0	0	0	0	0	0	0	0	66
53	Kist Medical College, Teaching Hospital, Lalitpur	57	0	0	0	0	0	0	0	0	0	0	57
54	Lake city and critical	38	0	0	0	0	0	0	0	0	0	0	38

S.N.	Name of Hospitals/particular	Kidney				Heart	Cancer	Parkinson's	Traumatic Head Injury	Traumatic Spinal Injury	Alzheimer's	Sickle Cell Anemia	Total
		Kidney Haemodialysis	Kidney Peritoneal dialysis	Kidney Treatment	Kidney Transplant								
16	Janakpur Hospital, Janakpur	44	0	0	0	0	0	0	0	0	0	0	44
17	Bheri Hosppital, Banke	12	0	0	0	0	0	0	0	0	0	167	179
18	Seti onal hospital, kailali	62	0	0	0	0	0	0	0	0	0	270	332
19	Nepal Medical College Jorpati	126	18	0	0	0	0	0	0	0	0	0	144
20	Gandaki Medical College, Pokhara	41	7	0	0	0	0	0	0	0	0	0	48
21	Universal College of Medical Sciences, Bhairahawa	104	0	0	0	0	0	0	0	0	0	0	104
22	Chitwal Medical College Teaching Hospital, Chitwan	88	0	0	0	322	50	0	32	16	4	0	512
23	College Of Medical Sciences, Chitwan	99	0	0	0	16	0	12	42	33	2	0	204
24	Nepalgunj Medical College, Banke	95	0	0	0	0	0	0	0	0	0	0	95
25	Manipal Medical college, Teaching Hospital pokhara	37	20	0	0	90	127	0	12	6	0	0	292
26	Bhaktapur Cancer Hospital, Bhaktapur	0	0	0	0	0	8829	0	0	0	0	0	8829
27	National Kidney Centre, Banasthali	645	12	0	0	0	0	0	0	0	0	0	657
28	Golden Hospital pvt.Ltd, Biratnagar	45	0	0	0	0	0	0	35	4	0	0	84
29	B&B Hospital, Gwarko	17	0	0	0	0	45	0	0	0	0	0	62
30	Aarogya health pratisthan, Pulchowk	246	61	0	0	0	0	0	0	0	0	0	307
31	National dialysis center, Bashundara	148	0	0	0	0	0	0	0	0	0	0	148
32	Cancer care nepal, Jawalakhel	0	0	0	0	0	727	0	0	0	0	0	727
33	Siddharatha City Hospital Pvt, Butwal	48	0	0	0	0	0	0	0	0	0	0	48
34	Alka Hospital Pvt, Jawalakhel	50	0	0	0	0	0	0	0	0	0	0	50
35	Gautam Buddha Samudayek Heart Hospital, Butwal, Rupandehi	267	0	0	0	1066	0	0	0	0	0	0	1333

S.N.	Name of Hospitals/particular	Kidney				Heart	Cancer	Parkinson's	Traumatic Head Injury	Traumatic Spinal Injury	Alzheimer's	Sickle Cell Anemia	Total
		Kidney Haemodialysis	Kidney Peritoneal dialysis	Kidney Treatment	Kidney Transplant								
	care Hospital, pokhara												
55	Spinal Injury Rehabilitation Centre	0	0	0	0	0	0	0	0	463	0	0	463
56	Bharatpur Hospital, Bharatpur	67	0	0	0	0	0	0	0	60	0	0	127
57	Blue Cross Hospital Pvt. Ltd.	30	0	0	0	0	0	0	0	0	0	0	30
58	Shree Birendra Hospital, Chauni, Ktm	108	0	0	0	0	0	0	0	0	0	0	108
59	National City Hospital Pvt.Ltd., Bharatpur	0	0	0	0	0	162	0	0	0	0	0	162
60	Nepal Police Hospital, Ktm	33	0	0	0	0	0	0	0	0	0	0	33
61	Ghodagodhi Hospital Pvt. Ltd.	0	0	0	0	0	0	0	0	0	0	405	405
62	Kanti Children Hospital, Ktm	0	0	94	0	0	139	0	0	0	0	0	233
63	Sumeru Community Hospital Pvt. Ltd.	31	0	472	0	0	0	0	0	0	0	0	503
64	Rapti Hospital, Tulsipur	17	0	0	0	0	0	0	0	0	0	0	17
65	Dhaulagiri Hospital, Baglung	6	0	0	0	0	0	0	0	0	0	0	6
66	Surkhet Provincial Hospital, Surkhet	23	0	0	0	0	0	0	0	0	0	0	23
67	National Medical College, Birgunj	79	0	0	0	0	0	0	0	0	0	0	79
68	Sushil Koirala Cancer Hospital, Banke	0	0	0	0	0	71	0	0	0	0	0	71
69	Gajendra Narayan Singh Hospital, Rajbiraj	11	0	0	0	0	0	0	0	0	0	0	11
Total		4140	221	936	252	6828	37121	377	761	1547	121	1026	53330

Source: NSSD, DoHS

Table 6.3.1.2: Issues, challenges and recommendations — Bipanna Nagrik Aushadi Upchar Programme

Issues and challenges	General recommendations
Insufficient budget/ fund for impoverished Nepalese citizens to treat serious health conditions.	Provide adequate funds or incorporate this programme with health insurance.
The monitoring of public and private health facilities.	Establish a task force that supervise regularly to the public and private health facilities.

6.3.2 FCHV Programme

6.3.2.1 Background

The government initiated the Female Community Health Volunteer (FCHV) Programme in 2045/46 (1988/1989) in 27 districts and expanded it to all 77 districts thereafter. Initially one FCHV was appointed per ward and followed by a population-based approach that was introduced in 28 districts in 2050 (1993/94). There are currently 51,420 FCHVs working in Nepal. The goal and objectives of the programme are listed in Box 6.3.2.1

Box 6.3.2.1: Goal and objectives of the FCHV Programme

Goal — Improve the health of local community peoples by promoting public health. This includes imparting knowledge and skills for empowering women, increasing awareness on health related issues and involving local institutions in promoting health care.

Objectives — i) Mobilise a pool of motivated volunteers to connect health programmes with communities and to provide community-based health services, ii) activate women to tackle common health problems by imparting relevant knowledge and skills; iii) increase community participation in improving health, iv) develop FCHVs as health motivators and v) increase the demand of health care services among community people.

FCHVs are selected by health mothers' groups. FCHVs are provided with 9 days basic training and 9 days refresher training following which they receive medicine kit boxes, manuals, flipcharts, ward registers, IEC materials, and an FCHV bag, signboard and identity card. Family planning devices (pills and condoms only), iron tablets, vitamin A capsules, and ORS are supplied to them through health facilities.

The major role of FCHVs is to advocate healthy behaviour among mothers and community people to promote safe motherhood, child health, family planning and other community based health issues and service delivery. FCHVs distribute condoms and pills, ORS packets and vitamin A capsules, treat pneumonia cases, refer serious cases to health institution and motivate and educate local people on healthy behaviour related activities. They also distribute iron tablets to pregnant women.

The government is committed to increase the morale and participation of FCHVs for community health. Policies, strategies and guidelines have been developed and updated accordingly to strengthen the programme. The FCHV programme strategy was revised in 2067 (2010) to promote a strengthened national programme. In fiscal year 2064/65 MoH established FCHV funds of NPR 50,000 in each VDC mainly to promote income generation activities. FCHVs are recognised for having played a major role in reducing maternal and child mortality and general fertility through community-based health programmes.

6.3.2.2 Major activities in 2075/76

- Dress allowance for FCHVs increased from NPR 7,500 to NPR 10,000.
- Since 2071/72 the government has allocated budget for farewell to FCHVs over 60 years of age as recommended by health mothers' groups.
- The training, orientation and mobilization of FCHVs for national health programmes.
- Biannual FCHV review meeting was held and FCHV Day celebrated on 5th December.

6.3.2.3 Major achievements in 2075/76

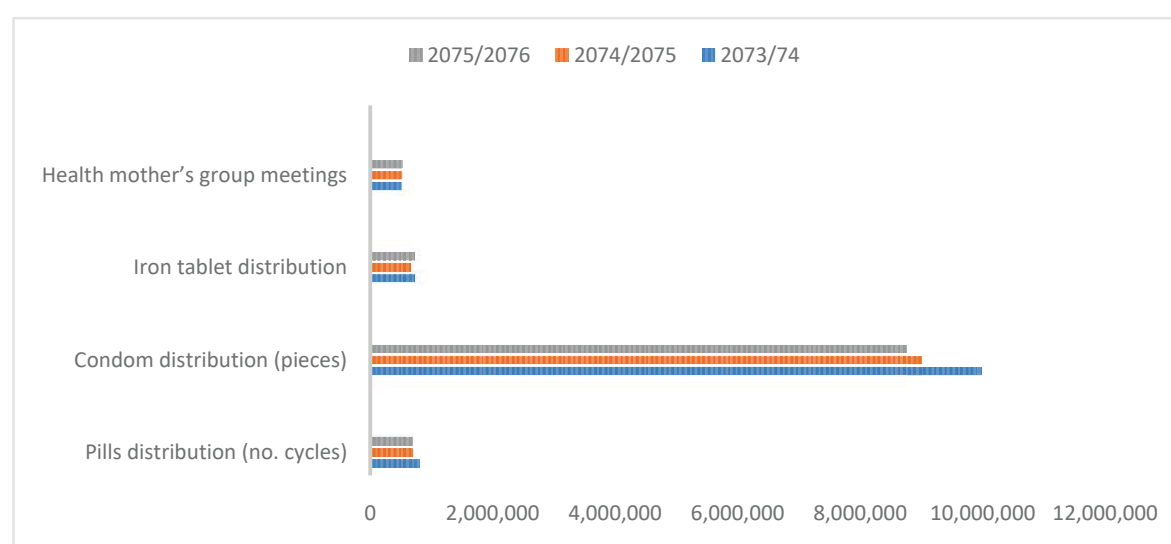
1. Progress reports, which provide the basis for the following analysis, that in fiscal year 2075/76, the number of mothers participating in health mother's group meetings were increased, despite of that FCHVs distributed fewer pills, condoms in comparisons to fiscal year 2074/75. However, FCHVs distributed more iron tablet in comparisons to fiscal year 2074/75. (Table 6.3.2.1 and Figure 6.3.2.1)

Table 6.3.2.1: Trend of services provided by FCHVs

Services	2073/2074	2074/2075	2075/2076
Pills distribution (no. cycles)	808,138	697,852	692,010
Condom distribution (pieces)	9,983,379	9,006,248	8,759,624
Iron tablet distribution	717,267	664,162	718,285
Health mother's group meetings	506,909	517,285	520,101

Source: IHMIS/DoHS

Figure 6.3.2.1: FCHV contribution on selected health services in FY 2073/74–2075/76 (,000)



Source: HMIS/DoHS

2. In 2075/76 they initiated baby to mother skin-to-skin contact after delivery in 85,223 cases, applied chlorhexidine to the umbilicus after delivery for 74,977 cases and ensured the taking of misoprostol for prevent PPH in 16,561cases (Table 6.3.2.2).

Table 6.3.2.2: Support provided byFCHVs for home deliveries, 2075/76

Province	Initiating skin-to-skin contact after birth	Chlorhexidine applied on umbilicus	Ensured misoprostol tablets taken
Province 1	13,735	13,243	3,873
Province 2	40,780	34,726	4,243
Bagmati Province	6,922	5,275	2,612
Gandaki Province	2,851	2,796	772
Province 5	10,823	9,199	2,243
Karnali Province	6,231	6,185	2,047
Sudurpashchim Province	3,881	3,553	771
National	85,223	74,977	16,561

Source: HMIS/DoHS

Support for home deliveries

FCHVs supported in home deliveries too. In 2075/76 (Table 6.3.2.3), FCHVs visit-newborn & PP Mothers- ≤24 hours of Birth, on 3rd day of Birth and on 7th day of Birth were 75,522, 84,009 and 84,202 respectively.

Table 6.3.2.3: FCHVs support for home deliveries

Province	Home Delivery-visit-newborn& PP Mothers- ≤24 hours of Birth	Home Delivery-visit-newborn& PP Mothers- 3rd day of Birth	Home Delivery-visit-newborn& PP Mothers-7th day of Birth
Province 1	10,887	13,048	13,154
Province 2	37,400	37,572	37,767
Bagmati Province	6,025	6,173	6,221
GandakiProvince	2,605	3,176	3,741
Province 5	8,478	12,967	12,301
Karnali Province	6,074	5,778	5,289
Sudurpashchim Province	4,053	5,295	5,729
National	75,522	84,009	84,202

Source: HMIS/DoHS

Nutrition services provided by FCHVs at the Household level

Nutrition services were provided by FCHVs in 2075/76 (Table 6.3.2.4). Breast Feeding<1 hour of Birth and distribution of PP Vit A were 89897 and 161499 respectively.

Table 6.3.2.4: Nutrition service provided by FCHVs at the Household level

Province	Breast Feeding<1 hour of Birth	Distribution of PP Vit A
Province 1	14,672	31,484
Province 2	43,158	63,323.2
Bagmati Province	7,613	18,610
Gandaki Province	3,065	8,232
Province 5	10,322	20,232
Karnali Province	6,787	11,116
Sudurpashchim Province	4,280	8,502
Nepal	89,897	161,499

Source: HMIS/DoHS

IMAM services provided by FCHVs at the Household level

IMAM services were provided by FCHVs in 2075/76 (Table 6.3.2.5). Screening of children through MUAC and categorized their nutritional status as follows, 9,334 are SAM, 86,475 are MAM while 247 screened as oedema where as 2,935,281 are normal children by FCHVs.

Table 6.3.2.5: IMAM service provided by FCHVs at the Household level

Province	MUAC-Screening-Red-SAM	MUAC-Screening-Yellow-MAM	MUAC-Screening-Oedema	MUAC-Screening-Green-Normal
Province 1	591	6,201	27	239,311
Province 2	3,059	20,358	127	541,516
Bagmati Province	688	6,276	10	828,528
Gandaki Province	118	417	0	86,832
Province 5	559	2,394	2	189,443
Karnali Province	1,656	17,244	25	393,687
Sudurpashchim Province	725	8,320	29	110,890
Nepal	9,334	86,475	247	2,935,281

Source: HMIS/DoHS

6.3.4 Issues and constraints

Table 6.3.4.1: Issues and constraints — FCHVs

Issues and constraints	Recommendations	Responsibility
Low utilization of FCHV Fund	Strictly implement guidelines and audit FCHV fund every year	NSSD, DHOs, HFs, Health Section of local level, rural municipalities, municipalities, sub-metro and metro municipalities
FCHV are not interested in farewell programmes	Rethink the farewell package Implement revised FCHV strategy (1 st amendment_2076)	NSSD, DHOs, Health Section of local level, rural, municipalities, sub-metro and metro municipalities
Decreasing work performance of FCHV	Motivate FCHV through FCHV Review meeting and orientation for FCHV on related program	NSSD, DHOs, HFs, Health Section of local level, rural, municipalities, sub-metro and metro municipalities

CURATIVE SERVICE

A. Background

Curative Service Division (CSD) is one of five divisions under Department of Health Services (DoHS). After the restructuring and institutional reform of Ministry of Health and Population supporting institutionalizing federal system within ministry, it has developed Terms of Reference (ToR) of different Institution to facilitate the process. In this context since the beginning of fiscal year 2075/76 Curative Service Division was established within Department of Health Services. Previously, Curative Service Division was under Ministry, but now in the changing context that dissolved and established as CSD under DoHS. Although the functions and responsibilities are not same as previous CSD of Ministry.

According to the institutional framework of the DoHS and MoHP, the health post (from an institutional perspective) is the first contact point for curative services. Each level above the HP is a referral point in a network from HP to PHCC, on to District, zonal and sub-regional, regional hospitals and finally to specialized tertiary hospitals. This referral hierarchy has been designed to ensure that the majority of population will receive minor to specialized treatment in places accessible to them and at a price they can afford. Inversely, the system works as a supporting mechanism for lower levels by providing logistic, financial, supervisory and technical support from the center to the periphery.

The major responsibility of CSD is to provide the basic health service free of cost guaranteed by Constitution of Nepal (article 35). CSD regulate and co-ordinate to establish, operate and upgrade of specialized tertiary hospitals. CSD also co-ordinate and provide eye, ENT and oral health services.

The overall purpose of this Division is to look after Curative Health Services activities through its three different sections, namely

1. Hospital Services Monitoring and Strengthening Section,
2. Basic Health and Emergency Management Section and
3. Eye, ENT and oral Health Section.

B. Sections under Curative Service Division and their key functions

1. Hospital Service Monitoring and Strengthening Section

- To assist MoHP by law, policy, guidance, quality standard, protocol formulation regarding hospital strengthen,
- To assist MoHP for Development of co-operation between private and public health institution for effective health care service by formulating law, policy, strategy and criteria,
- To facilitate the registration, renewal and regulation of the specialized and tertiary level hospitals,
- To assist MoHP for development of national policy, strategies and guidelines regarding registration upgrade and monitoring of private and non-governmental hospitals, nursing homes, clinics, polyclinics,
- Continuous supervision and monitoring of the hospitals for optimum quality service ,
- Management of radiation used in health care sector as per national and international standard,
- To facilitate for the development and institutionalization of the telemedicine service system,

- To assist MoHP for the development of health tourism by formulating law, policy, strategies, criteria, protocols,
- To co-ordinate for development and management of national level study, research and training centre,
- Formulate standard treatment protocol (STP),
- Develop a drug list and revise according to need,
- Studying and monitoring of drugs used in different hospital pharmacy and health facilities,
- Formulation of standard on anti-microbial resistance and
- Preparation of training materials of rational use of drug and conduct training for health workers of various level.

2. Basic Health and Emergency Management Section

- Define and effective management of Basic Health Services according to constitutional system and provide it at free of cost,
- Determining the scope and criteria of basic health services,
- Supervision, monitoring and evaluation of the quality of basic health services,
- Evaluation of the effectiveness of basic health services and co-ordinate to all levels of federal structure for continuous improvement by providing feedback,
- Modification and extension of basic health care services based on the emergence of diseases, availability of financial resources and local needs,
- Conduct study and research about basic health service,
- To facilitate for formation of laws, policy, rules, criteria, protocols and guidelines to make emergency health care service effective,
- To facilitate for formation of laws, policy, rules, criteria, protocols and guidelines regarding referral system and
- To assist MoHP for the implementation, monitoring and regulation of emergency service and referral service.

3. Eye, ENT and Oral Health Section

- To facilitate for formulation of national policy, rules, standard, protocols and guidelines related to Eye health,
- To facilitate for formulation of national policy, rules, standard, protocols and guidelines related to ENT services,
- To facilitate for formulation of national policy, rules, standard, protocols and guidelines related to oral health services,
- Evaluation of the effectiveness of Eye, ENT and oral health and co-ordinate to all levels of federal structure for continuous improvement by providing feedback,
- Facilitation and Co-ordination for integration with eye health, ENT and oral health services to national health service system and
- Study, research related to eye, ENT and oral health services.

C. Minimum Service Standards for Hospitals

- Minimum Service Standards (MSS) for hospitals is the service readiness and availability of tool for optimal requirement of the hospitals to provide minimum services that are expected from them. This tool entails for preparation of service provision and elements of service utilization that are deterministic towards functionality of hospital to enable working environment for providers and provide resources for quality health service provision. MSS for hospitals reflect the optimally needed minimum criteria for services to be provide but in itself is not an “ideal” list of the maximum standards. This checklist of MSS is different than a program specific quality improvement tool as it will outline the equipment, supplies, furniture, human resource required for carrying out service but not detail out the standards operating

procedures of any service.

- The results of Nepal Health Facility Survey 2015 showed that among the health facilities that were assessed only 13 percent of them had all seven basic equipment items- adult weighing scale, child weighing scale, infant weighing scale, thermometer, stethoscope, blood pressure apparatus and a light source for service provision. The availability of all supplies and equipment's defined for standard precaution control was as low as 0.2%, all basic laboratory services in 12% and only 3% facilities had client feedback mechanism in place. This was an alarming situation. During that period, minimum service standards was rolled out in 83 district level hospitals and was evident to contribute in quality of services provided by hospitals with instances of improved governance, management, clinical and support services. This encouraged MoHP to put on its efforts on setting the minimum service standards for hospitals secondary and tertiary levels and at the same time contextual revision of MSS for district hospitals to set MSS for primary level hospitals. The revision and development of the tool took into series of steps beginning with formulation of Technical Working Group and selection of subject experts and technical coordinator and consultative workshops and meetings (Figure: Process of MSS revision and development). The key guiding documents are Constitution of Nepal 2072, National Health Policy 2014, Policy on Quality Assurance in Health Care Services, 2064, Public Health Service Act 2075, Nepal Integrated Health Infrastructure Development Standards 2073/74, Nepal Health Sector Strategy 2015-2020 and Guideline on Health Institution Establishment, Operation and Upgrading Standards, 2070 but not limited to them.
- Thus prepared MSS is a comprehensive tool for optimal preparation of the hospitals for the minimum services that are needed to be provided by these health facilities and has potential to bring a positive change. The health sector needs are dynamic and revision of the services and standards in due course is anticipated. The revision of MSS for hospitals is planned to be done every 2-3 years (completion of cycle of MSS in all targeted government hospitals) to incorporate the learning and adapt the documents to the emerging context.
- The MSS tool has been organized in three major sections: Governance and Management, Clinical Service Management and Hospital Support Service Management. It has been prepared in the form of checklist that thrives for the preparedness and utilization that are fundamental to establish services towards quality. For primary hospitals with general services, there are total 645 set of standards with total score of 759, out of which- 105 standards for measuring governance and management and has weightage of 20%, 416 standards for measuring clinical service management and has weightage of 60%, and 124 standards for measuring support service management and has weightage of 20%. Governance and management section includes the minimum standards for six subsections, clinical Service management has thirteen sub sections and hospital support service management has eleven subsections.
- After assessment of all the sections of the standards, for overall scoring, each section is then weighed. The section of the governance and management (Section I) is weighed in 20%, that of clinical service management (Section II) is weighed in 60% and that of hospital support service management (Section III) is weighed in 20%. The sum of these weighed percentage of the subsections give the overall MSS score of the hospitals and based on it colour code will be provided. This MSS Score for hospitals measure the existing situation and enables to identify the gap areas that are to be addressed through the development of the actions plan that demands both technical and financial inputs and managerial commitments. The overall process is guided by its implementation guideline that describes on sequences of self-assessment and follow up workshops and gap identification for action plan development and striving for optimal MSS Score.

Curative Service

- Ministry of Health and Population strives to implement MSS in hospitals for establishing enabling environment at service delivery point through preparedness and availability for quality service provision to the users. Not being an exhaustive list of facilities and services, hospitals are encouraged to strive for betterment and go beyond the defined set of minimum standards whenever their resources support.
- Minimum Service Standards (MSS) for hospitals were previously lead by Curative Service Division, Ministry of Health and Population. Now in changing context, as per ToR of Division the programme will run by Curative Service Division, DoHS. Following is the progress data regarding Minimum Service Standards (MSS) score of 84 district level hospitals of F/Y 2075/76.

C.1: Minimum Service Standards(MSS)Score of Hospitals in Fiscal Year 2075/76

SN	Cluster	Hospital	a. Workshop 1	b. Workshop 2	c. Workshop 3	d. Follow up 1	e. Follow up 2	f. Follow up 3	g. Follow up 4	h. Follow up 5
1	C1	Gaur Hospital (Rautahat)	27%	34%	47%	46%	51%	45%	44%	48%
2		Jaleshwor District Hospital (Mahottari)	28%	42%	45%	35%	62%	39%	47%	68%
3		Kalaiya Hospital (Bara)	27%	53%	63%	65%	67%	77%	62%	64%
4		Malangwa Hospital (Sarlahi)	29%	27%	43%	26%	32%	30%	51%	0%
5	C2	Jiri Hospital (Dolkha)	75%	86%	90%	79%	88%	81%	0%	0%
6		Ramechhap District Hospital	54%	69%	73%	66%	77%	71%	0%	0%
7		Sindhuli District Hospital	62%	81%	85%	80%	82%	96%	0%	0%
8	C3	Bardibas Hospital, Mahottari	34%	59%	71%	52%	47%	45%	0%	0%
9		Chandranigapur Hospital (Rautahat)	31%	61%	77%	41%	67%	0%	0%	0%
10		Pokhariya Hospital (Parsa)	47%	40%	62%	62%	48%	55%	0%	0%
11	C4	Dhading Hospital	69%	87%	93%	89%	0%	0%	0%	0%
12		Rasuwa District Hospital	37%	54%	70%	68%	0%	0%	0%	0%
13		Trishuli Hospital (Nuwakot)	72%	77%	79%	68%	0%	0%	0%	0%
14	C5	Bagauda Hospital (Chitwan)	41%	57%	65%	50%	0%	0%	0%	0%
15		BakulahrRatnanagar Hospital (Chitwan)	52%	55%	71%	76%	0%	0%	0%	0%
16		Hetauda Hospital	49%	70%	72%	67%	0%	0%	0%	0%
17	C6	Chautara Hospital (Sindhupalchowk)	45%	76%	82%	66%	0%	0%	0%	0%
18		Methinkot Hospital	61%	63%	73%	61%	0%	0%	0%	0%
19	E1	Ilam District Hospital	60%	72%	75%	55%	59%	61%	73%	72%
20		Panchthar District Hospital	47%	62%	72%	57%	59%	60%	68%	79%
21		Taplejung District Hospital	36%	53%	69%	51%	75%	75%	75%	72%
22	E2	Bhojpur District Hospital	48%	55%	84%	60%	63%	66%	0%	0%
23		Sankhuwasabha District Hospital	52%	65%	78%	68%	70%	81%	0%	0%

24		Terhathum District Hospital	42%	61%	61%	77%	72%	74%	0%	0%
25	E3	Gaighat Hospital, Udayapur	57%	72%	85%	65%	62%	0%	0%	0%
26		Katari Hospital (Udayapur)	40%	60%	67%	53%	73%	0%	0%	0%
27		Khotang District Hospital	40%	75%	87%	60%	63%	70%	0%	0%
28	E4	Phaplu Hospital, Solukhumbu	60%	66%	82%	75%	0%	0%	0%	0%
29		Rumjatar Hospital, Okhaldhunga	48%	64%	75%	80%	0%	0%	0%	0%
30	E5	Dhankuta District Hospital	76%	89%	94%	90%	0%	0%	0%	0%
31		Inaruwa Hospital, Sunsari	40%	59%	69%	51%	0%	0%	0%	0%
32		Rangeli Hospital, Morang	40%	76%	82%	61%	0%	0%	0%	0%
33	E6	Bhardaha Hospital (Saptari)	42%	60%	69%	57%	0%	0%	0%	0%
34		Lahan District Hospital (Siraha)	59%	69%	81%	68%	0%	0%	0%	0%
35		Siraha District Hospital (Siraha)	41%	76%	81%	51%	0%	0%	0%	0%
36	E7	Damak Hospital, Jhapa	48%	0%	0%	0%	0%	0%	0%	0%
37		Mangalbare Hospital, Morang	49%	0%	0%	0%	0%	0%	0%	0%
38	F1	Achham District Hospital	45%	60%	75%	72%	70%	88%	90%	89%
39		Bajura District Hospital	47%	45%	70%	56%	53%	67%	65%	67%
40		Doti District Hospital	45%	75%	76%	53%	47%	59%	68%	73%
41	F2	Baitadi District Hospital	48%	72%	74%	70%	61%	65%	0%	0%
42		Bajhang District Hospital	53%	77%	83%	87%	84%	81%	80%	0%
43		Darchula District Hospital	35%	57%	67%	73%	75%	75%	82%	0%
44		Gokuleshwor Hospital	39%	59%	68%	70%	58%	66%	82%	0%
45	F3	Jogbudha Hospital (Dadeldhura)	50%	73%	77%	82%	0%	0%	0%	0%
46		Malakhet Hospital	28%	39%	51%	49%	0%	0%	0%	0%
47		Tikapur Hospital (Kailali)	48%	84%	88%	82%	0%	0%	0%	0%
48	M1	Pyuthan District Hospital	48%	61%	69%	64%	59%	76%	72%	64%
49		Rolpa District Hospital	43%	59%	63%	67%	67%	66%	73%	70%
50		Rukum District Hospital	56%	52%	75%	43%	50%	32%	57%	71%
51		Salyan District Hospital	49%	72%	78%	57%	64%	67%	78%	75%
52	M2	Dailekh District Hospital	60%	73%	71%	69%	82%	87%	91%	0%
53		Dullu Hospital	38%	42%	65%	69%	72%	58%	65%	0%
54		Gulariya District Hospital, Bardiya	58%	81%	85%	76%	73%	80%	88%	0%
55		Mehelkuna Hospital, Surkhet	36%	47%	55%	59%	48%	62%	76%	0%
56	M3	Kalikot District Hospital	35%	71%	89%	80%	65%	67%	0%	0%
57		Mugu District Hospital	24%	40%	75%	59%	47%	0%	0%	0%

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58	M4	Dolpa District Hospital	69%	0%	59%	73%	0%	0%	0%	0%
59	M5	Humla District Hospital	39%	0%	52%	65%	0%	0%	0%	0%
60	M6	Jajarkot District Hospital	38%	48%	68%	58%	0%	0%	0%	0%
61	M7	Lamahi Hospital, Dang	42%	0%	0%	0%	0%	0%	0%	0%
62	W1	Argakhanchi District Hospital	58%	76%	85%	76%	59%	59%	68%	0%
63		Bhim Hospital, Rupandehi (Bhairawa)	59%	69%	63%	59%	60%	76%	78%	0%
64		Tamghas District Hospital (Gulmi)	57%	72%	78%	69%	73%	69%	71%	0%
65		Taulihawa District Hospital (Kapilvastu)	46%	57%	74%	53%	57%	76%	78%	74%
66	W2	Mustang District Hospital	58%	64%	72%	52%	58%	61%	0%	0%
67		Myagdi District Hospital	75%	89%	91%	85%	82%	84%	0%	0%
68		Parbat District Hospital	53%	84%	91%	59%	56%	64%	0%	0%
69	W3	Bandipur Hospital	45%	52%	55%	66%	69%	72%	0%	0%
70		Damauli Hospital	44%	78%	69%	71%	72%	75%	0%	0%
71	W4	Gorkha District Hospital	71%	75%	78%	80%	0%	0%	0%	0%
72		Manang District Hospital	39%	57%	65%	62%	0%	0%	0%	0%
73	W5	Pipara Hospital, Kapilvastu	50%	51%	55%	54%	0%	0%	0%	0%
74		Prithivi Chandra Hospital, NawalParasi	61%	57%	74%	60%	0%	0%	0%	0%
75		Shivaraj Hospital (Kapilvastu)	52%	60%	75%	79%	0%	0%	0%	0%
76	W6	Palpa District Hospital	47%	65%	71%	60%	0%	0%	0%	0%
77		Rampur Hospital, Palpa	59%	73%	68%	73%	0%	0%	0%	0%
78		Syangja District Hospital	59%	74%	78%	75%	0%	0%	0%	0%
79	W7	Chapakot Hospital, Syangja	29%	42%	0%	0%	0%	0%	0%	0%
80		Chisapani Hospital, Bardaghat, Nawalparasi	38%	0%	0%	0%	0%	0%	0%	0%
81		MatriSishuMiteri Hospital, Batalichaur, Kaski	69%	90%	0%	0%	0%	0%	0%	0%
82		Sisuwa Hospital, Kaski	41%	65%	0%	0%	0%	0%	0%	0%
83		Sundar Bazar Hospital, Lamjung	38%	63%	0%	0%	0%	0%	0%	0%
Average score			48%	64%	73%	65%	64%	67%	71%	72%
Total number of hospital where the events was conducted			83	77	75	75	45	41	25	13

Source: CSD, DoHS

7.1 Inpatients/OPD Services

Background

The Government of Nepal is committed to improving the health status of rural and urban people by delivering high-quality health services. The policy aims to provide prompt diagnosis and treatment, and to refer cases from PHCCs and health posts to hospitals. Diagnostic services and referral mechanisms have been established at different levels to support early diagnosis of health problems.

In December 2006 the government began providing essential health care services (emergency and inpatient services) free of charge to destitute, poor, disabled, senior citizens, FCHVs, victims of gender violence and others in up to 25-bed district hospitals and PHCCs and for all citizens at health posts in October 2007. The Interim Constitution of Nepal, 2007 said that every citizen has the right to basic health services free of costs as provided by the law.

The overall objective of DoHS on curative services is to reduce morbidity, mortality by ensuring the early diagnosis of diseases and providing appropriate and prompt treatment. The main strategies to achieve this are listed in Box 7.1.1

Box 7.1.1: Curative service strategies

- To make curative health services available in an integrated way in rural areas through health posts and PHCCs.
- To establish hospitals on the basis of population density and patient load with at least one hospital per district.
- To establish zonal and regional hospitals to provide specialized services related to paediatrics, gynaecology, general surgery, general medicine, eye care, dermatology, orthopaedics and psychiatry.
- To equip central hospitals with sophisticated diagnostic and other facilities to provide specialised and super-specialty services.
Specialist curative care services will be extended to remote areas, as and when required, through mobile teams.
- To extend referral systems to provide rural people with access to services from modern well equipped hospitals.
- To strengthen diagnostic services such as laboratories and X-ray services at hospitals.
- To extend service provision through more outreach clinics and by considering the relocation of existing facilities.
- To provide basic curative services free in up to 25 bed hospitals.
- To promote private medical colleges, hospitals, nursing homes and hospitals run by INGOs, NGOs and private practitioners to complement public health care provision.

Major Activities and Achievements in the fiscal year 2075/76

Curative health services were provided at all health facilities including outpatient, emergency and inpatient care and free health services. Inpatient services were provided at all levels of hospitals including INGO and NGO run hospitals, private medical college hospitals, nursing homes and private hospitals. Medical camps were organised mainly in remote areas.

1. Hospital reporting

Five hundred and sixty Eight hospitals were listed in the HMIS under DoHS in 2075/76, of which 125 (6.5%) were public hospitals and 1796 (93.49%) non-public hospitals (Table 1).

- Nearly 88 percent of public and 34.1 percent of non-public hospitals submission of monthly reports (Table 1);
- The HMIS received all 12 monthly progress reports from 77.6 percent of public hospitals and 14.4 percent of non-public hospitals respectively (Table 2);
- half (7) out of the 13 tertiary level hospitals submitted all 12 monthly progress reports, with secondary A hospitals having 56 out of 60 achievement, 93.3 % report submission all 12 month progress report and secondary BI hospitals 100% (7 out of 7)report submitted all 12 month progress report only 87.9% report submitted among all report (Table 3).

Table 1: Hospital reporting status, FY 2075/76

Province	No. of Hospital			Submission of Monthly Report					
				Non Public		Public		Total	
	Non Public	Public	Total	No.	%	No.	%	No.	%
1 Province 1	96	19	115	587	51.0	228	100.0	815	59.1
2 Province 2	148	13	161	475	26.9	152	97.4	627	32.6
3 Bagmati Province	1301	35	1336	4759	30.5	271	64.5	5030	31.4
4 Gandaki Province	65	16	81	476	61.0	176	91.7	652	67.1
5 Province 5	111	17	128	466	35.0	192	94.1	658	42.8
6 Karnali Province	43	12	55	350	70.9	144	100.0	494	77.4
7 Sudurpashchim Province	32	13	45	215	56.0	155	99.4	370	68.5
Total	1796	125	1921	7328	34.1	1318	87.87	8646	37.6

Source: HMIS, DoHS

Table 2: Hospital submitting all 12 monthly progress reports, FY 2075/76

Province	No. of Hospital			Hospital Reporting 12 months a year					
				Non Public		Public		Total	
	Non Public	Public	Total	No.	%	No.	%	No.	%
1 Province 1	96	19	115	35	36.5	19	100.0	54	47.0
2 Province 2	148	13	161	21	14.2	11	84.6	32	19.9
3 Bagmati Province	1301	35	1336	140	10.8	15	42.9	155	11.6
4 Gandaki Province	65	16	81	23	35.4	12	75.0	35	43.2
5 Province 5	111	17	128	22	19.8	16	94.1	38	29.7
6 Karnali Province	43	12	55	14	32.6	12	100.0	26	47.3
7 Sudurpashchim Province	32	13	45	4	12.5	12	92.3	16	35.6
Total	1796	125	1921	259	14.4	97	77.6	356	18.5

Source: HMIS, DoHS

Table 3: Status of different levels of hospitals submitting all 12 monthly reports, FY 2075/76

Type of Hospital	No. of Hospital	12 months reporting		No. of Reports		
		No.	%	Expected	Received	%
ACADEMY	6	5	83.3	72	61	84.7
GENERAL HOSPITAL	6	0	0.0	72	21	29.2
LABORATORY	1	0	0.0	12	0	0.0
OTHER HEALTH FACILITY	1	0	0.0	12	0	0.0
PRIMARY HOSPITAL	27	21	77.8	324	303	93.5
SECONDARY A HOSPITAL	60	56	93.3	720	715	99.3
SECONDARY B HOSPITAL	7	7	100.0	84	84	100.0
SPECIALIZED HOSPITAL	4	1	25.0	48	12	25.0
TERTIARY HOSPITAL	13	7	53.8	156	122	78.2
Total	125	97	77.6	1500	1318	87.9

Source: HMIS, DoHS

2. Inpatient services

Inpatient services are provided through inpatient departments at public and non-public hospitals. Note that the following findings should be interpreted with caution because of incomplete progress reporting (see above).

3. Bed Occupancy Rates, FY 2075/76

- Federal -level government hospitals that submitted all 12 monthly reports ranged from bed occupancy rate 20.0 percent in Karnali Academy of Health Science to 218.0 percent in Koshi Hospital, Biratnagar, 11 federal level hospital no reporting (Figure 1);
- Province level hospitals ranged from (110.0%) in Humla District Hospital to 0.03 percent in Lumbini provincial Hospital due to incomplete report and 5 provincial hospital has no report (Figure 2).
- Primary level hospitals ranged from 69.3 percent at Bhardaha hospital, Saptari to 0.92 percent at Lamahi Hospital, Dang Due to incomplete report (Figure 3).

Figure 1: Bed occupancy rate (in %) of Federal -level public hospitals, FY 2075/76

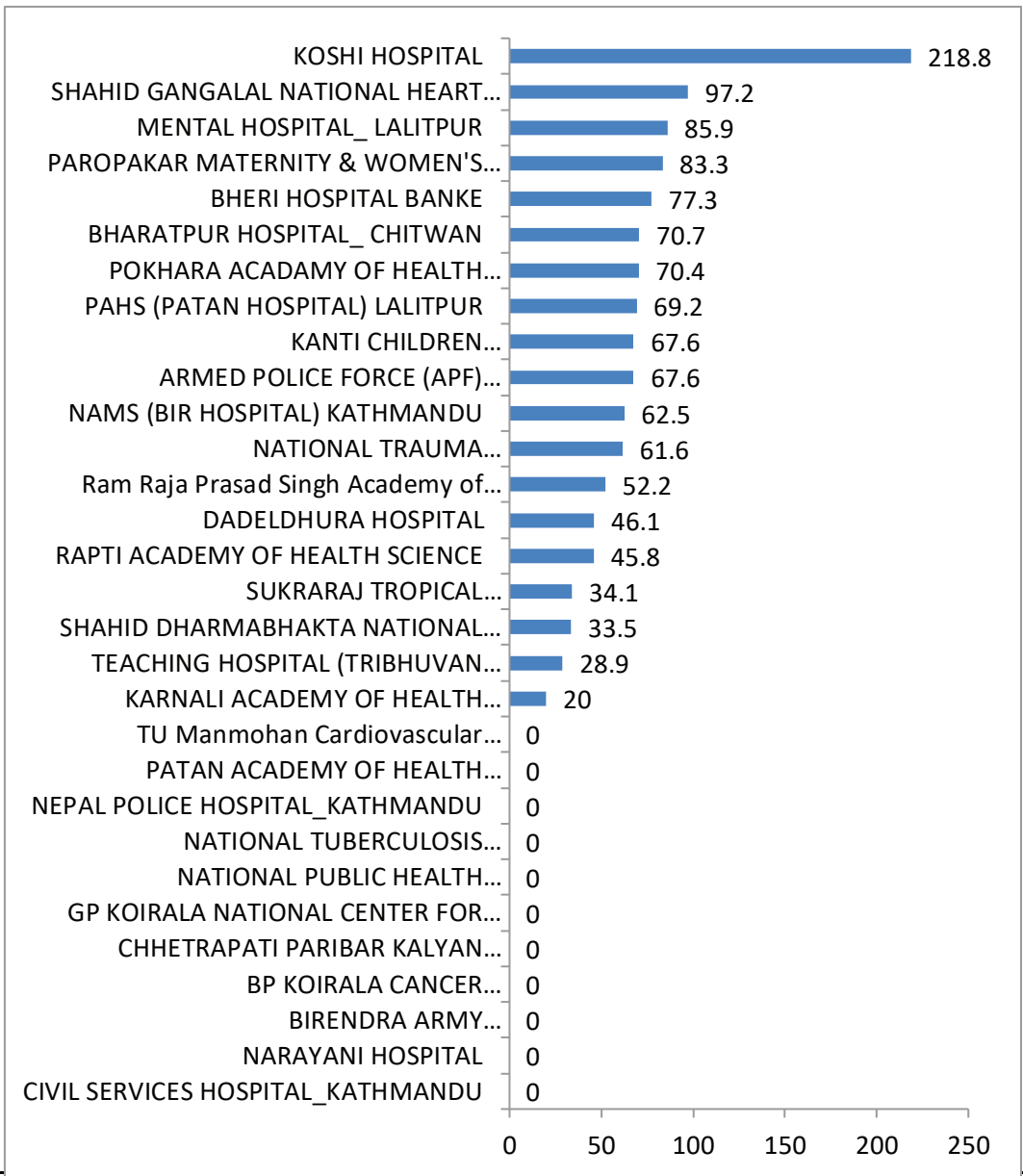
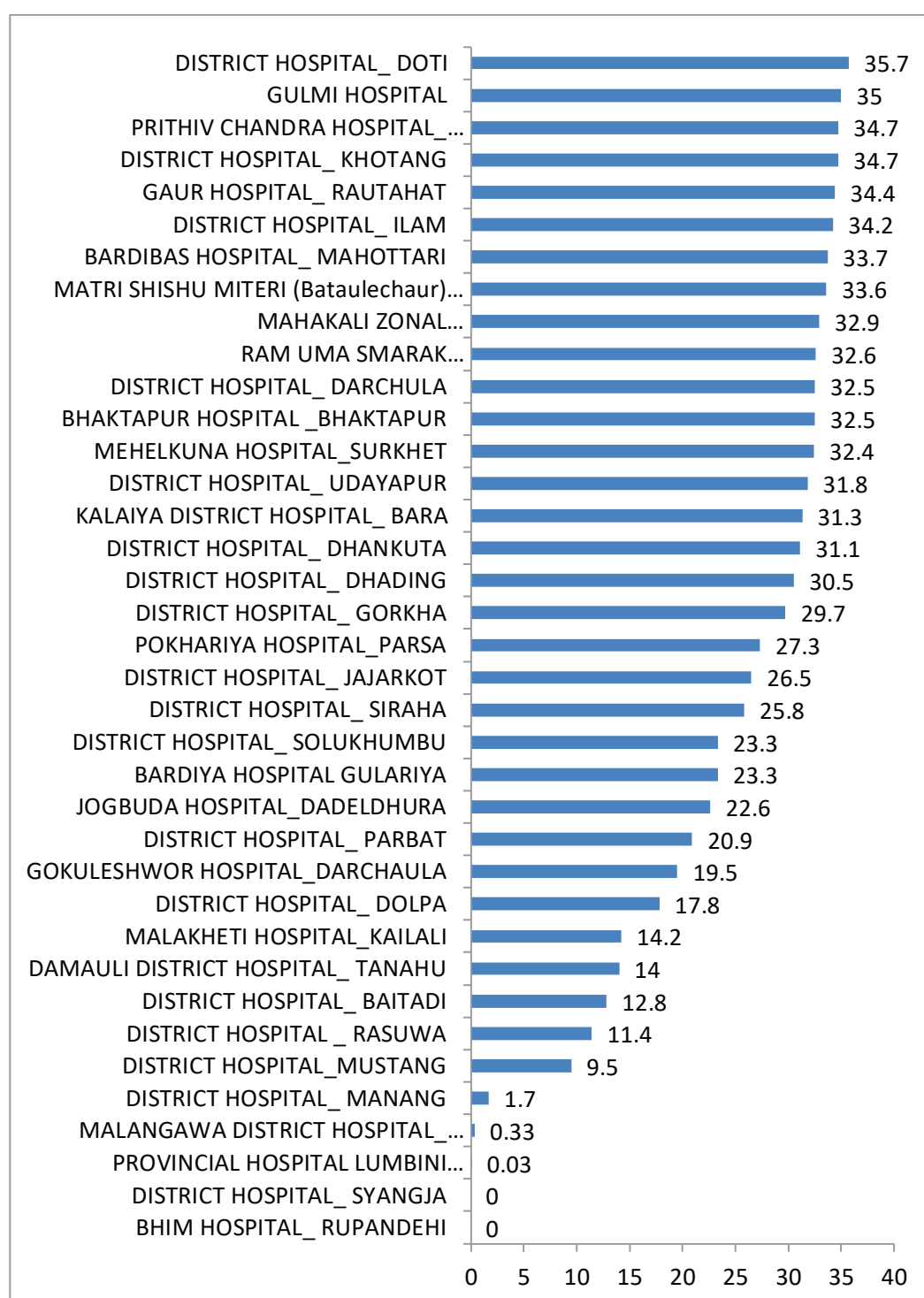


Figure 2: Bed occupancy for Provincial hospitals, FY 2075/76

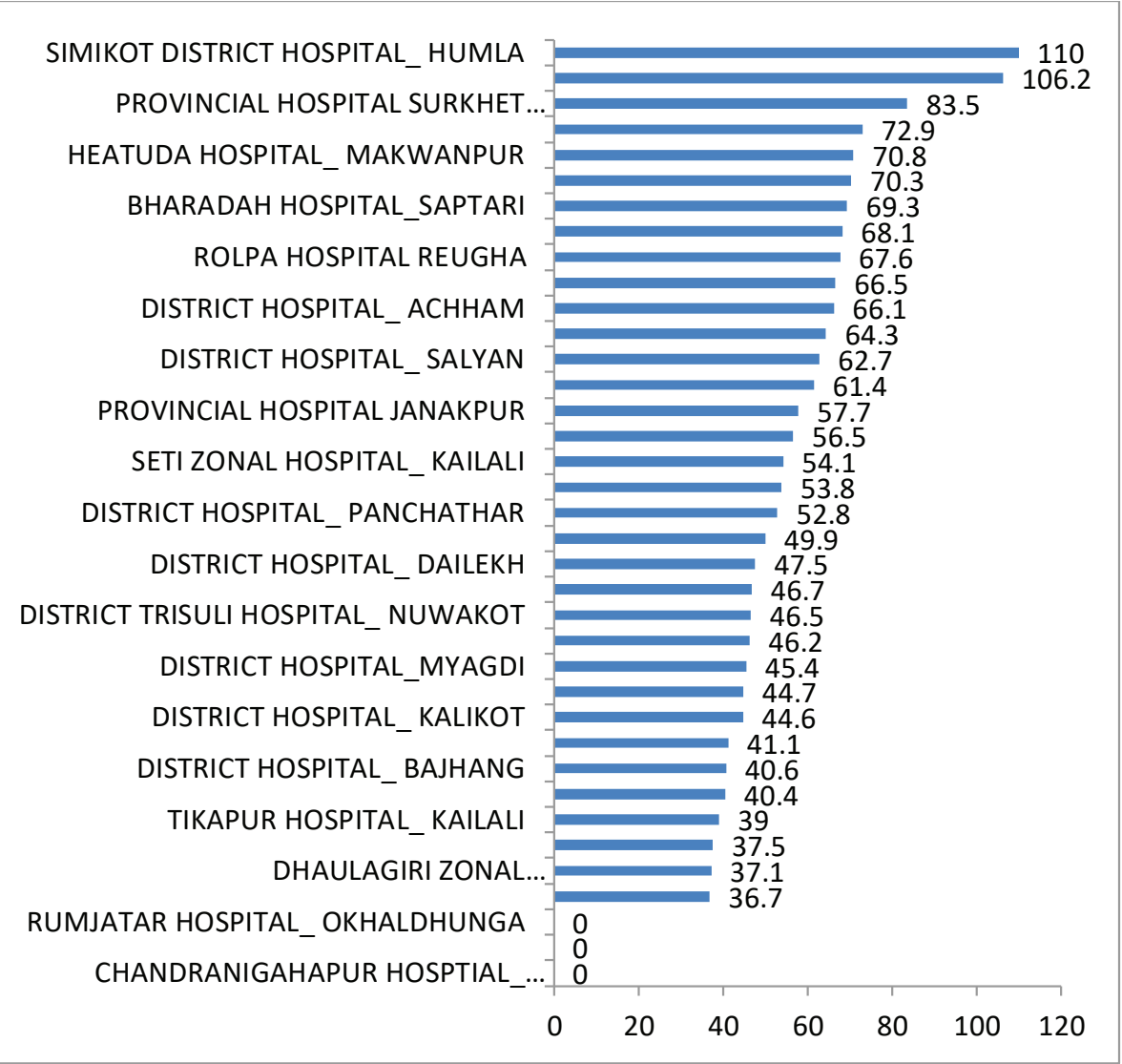
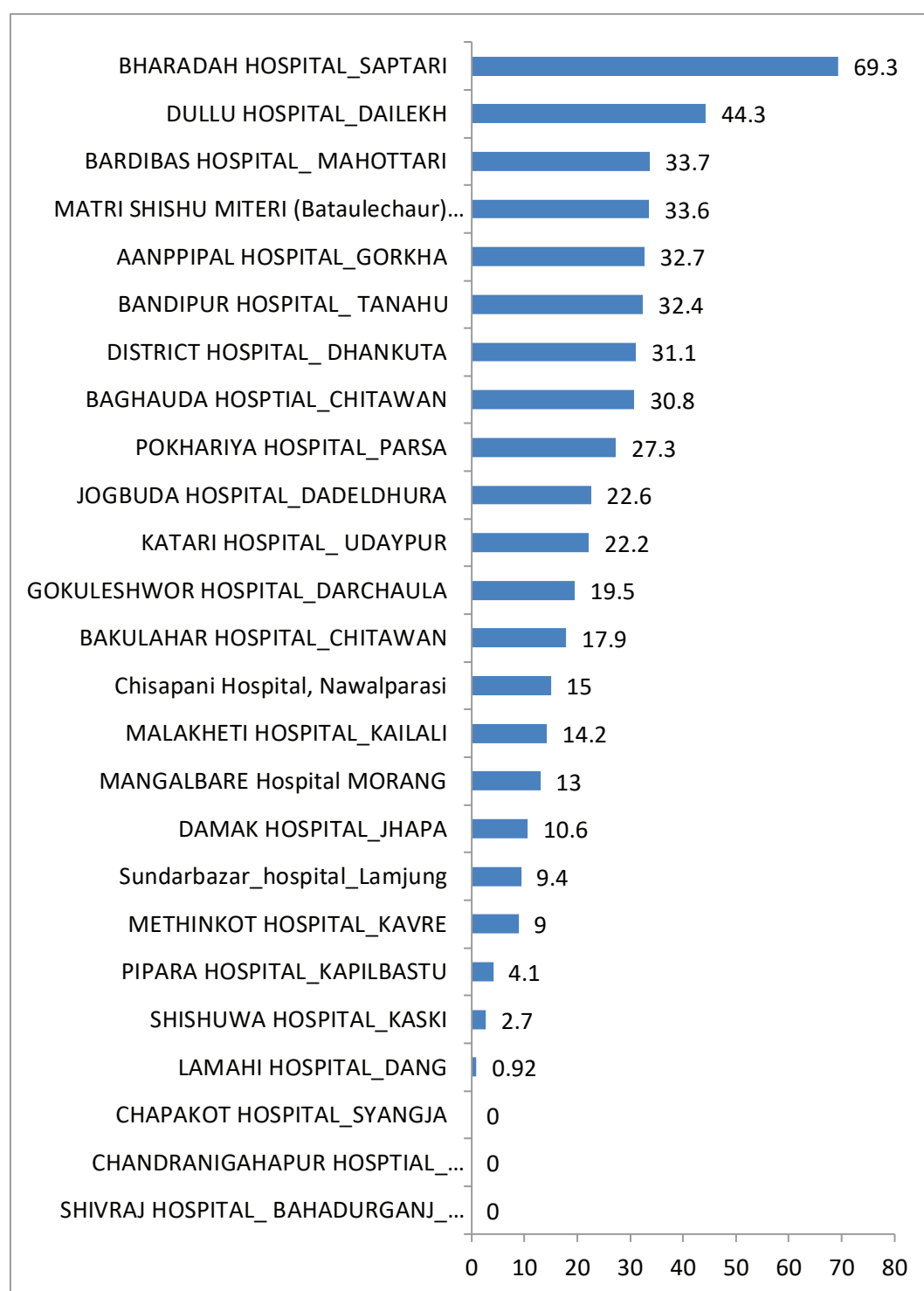


Figure 3: Bed occupancy in Primary level hospitals , FY 2075/76

4. Average length of stay — In fiscal year 2075/76, the average length of stay by inpatients:

- at Federal-level government hospitals ranged from 3.2 days at Bheri Hospital to 28.6 days at the Sahid Gangalag National Heart Center. 14 Federal hospital are no reporting (Figure 4);
- at provincial hospitals ranged from 0.73 day at Bardibas hospitals to 9.8 days at Pyuthan District hospital (Figure 5); and
- in other district level hospitals ranged from 0.14 day at, Lamahi hospital to 6.8 days in Chisapani hospital Figure 6).

Figure 4: Average length of stay by inpatients in Federal -level hospitals, FY 2075/76

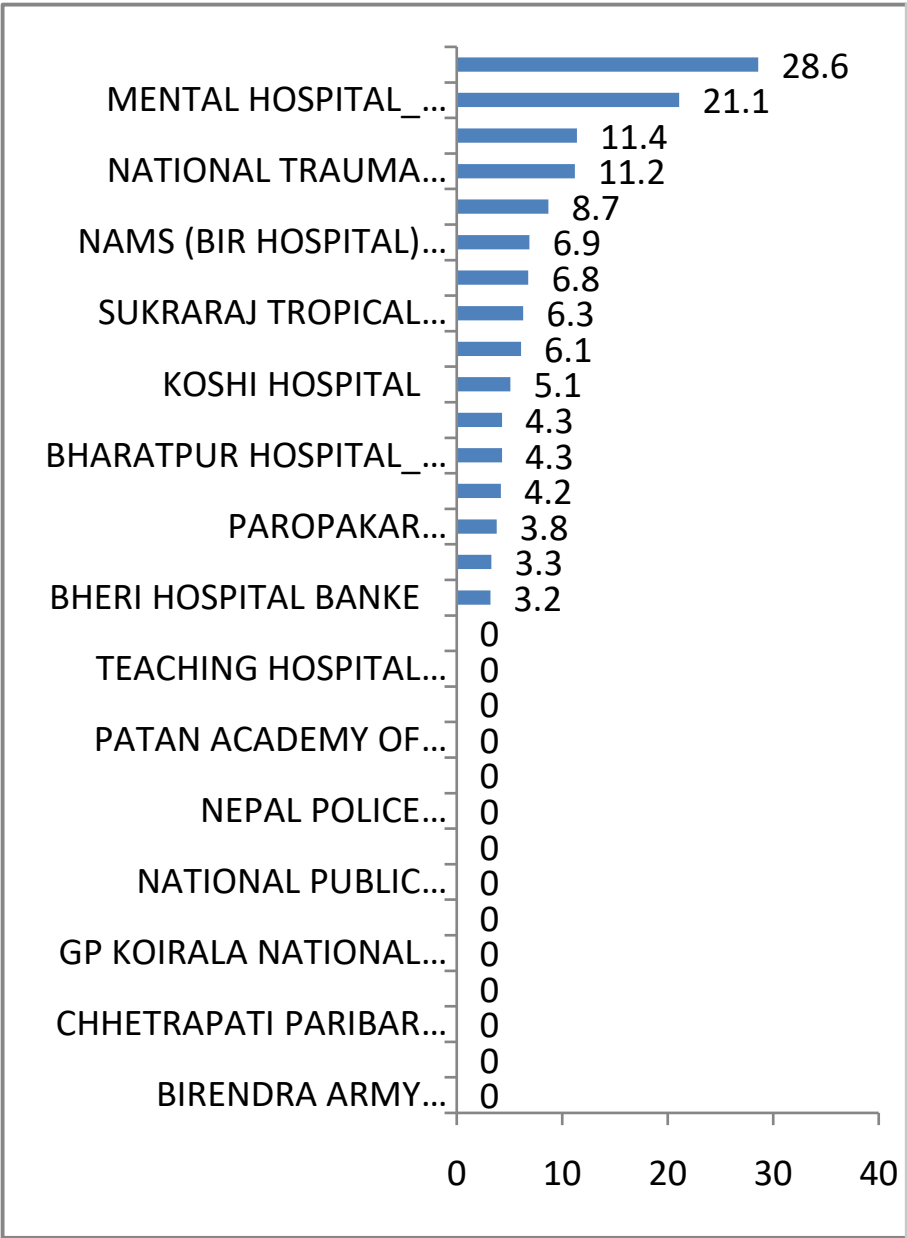
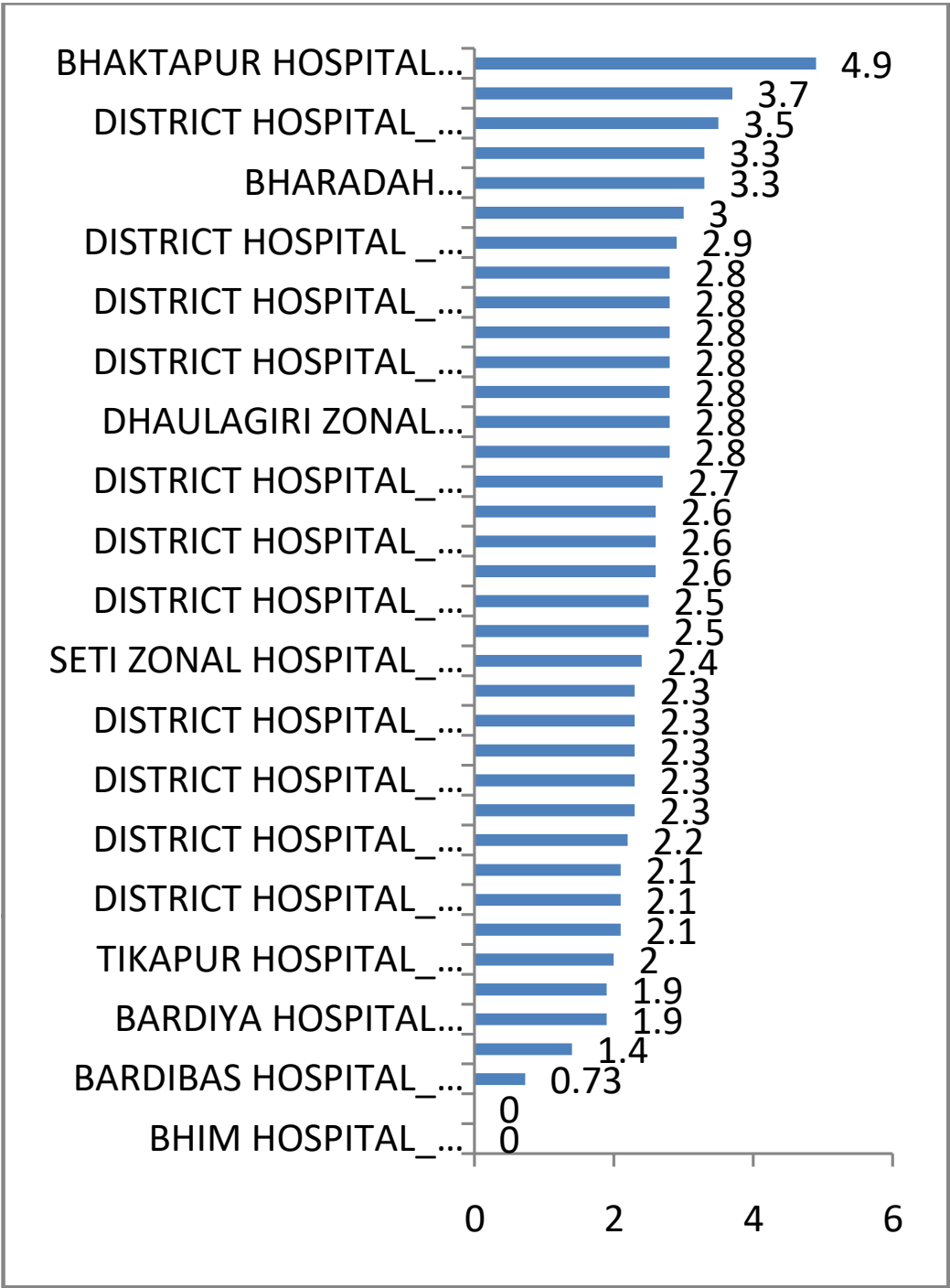


Figure 5: Average length of stay by inpatients in Province level hospitals, FY 2075/76



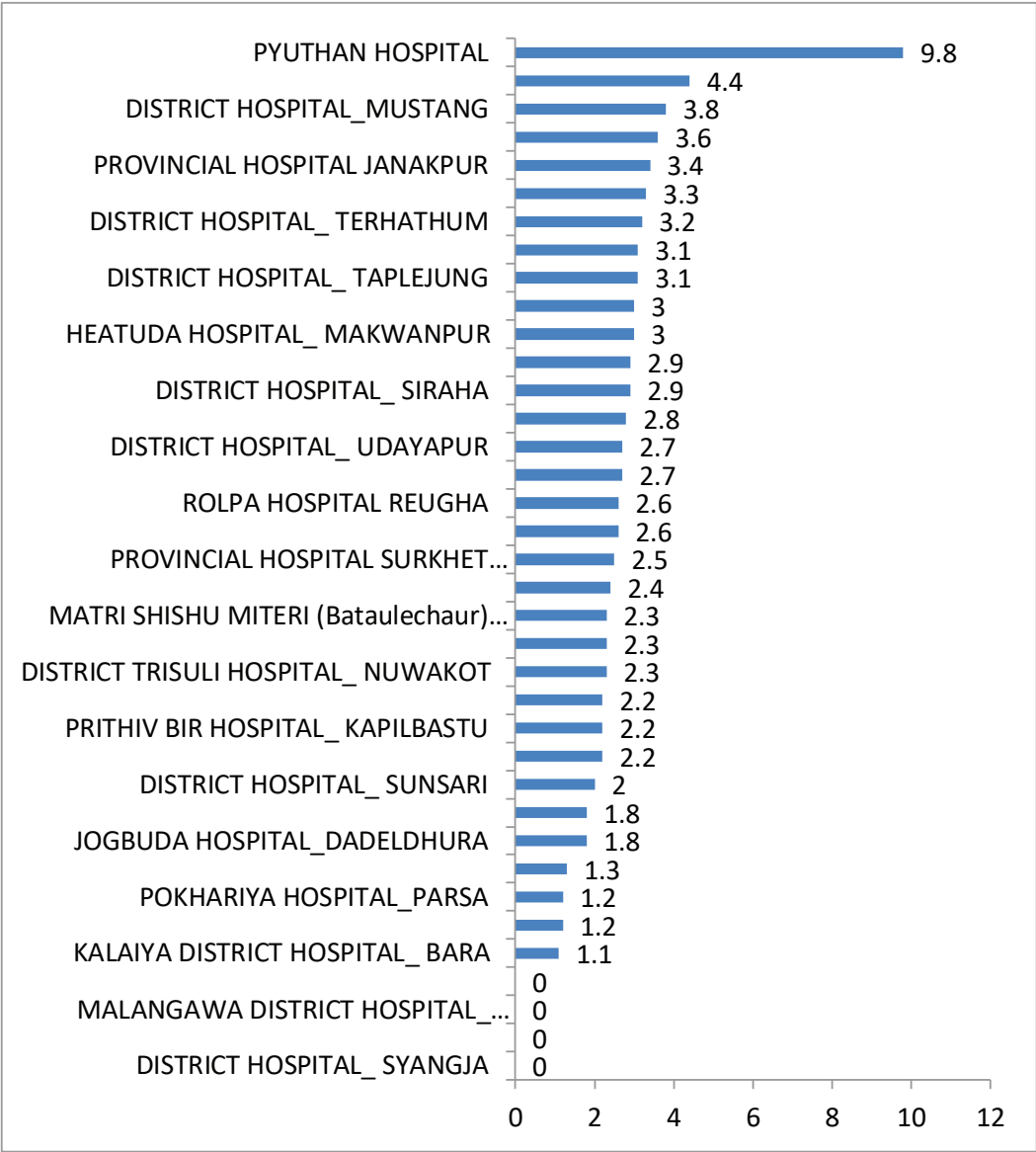
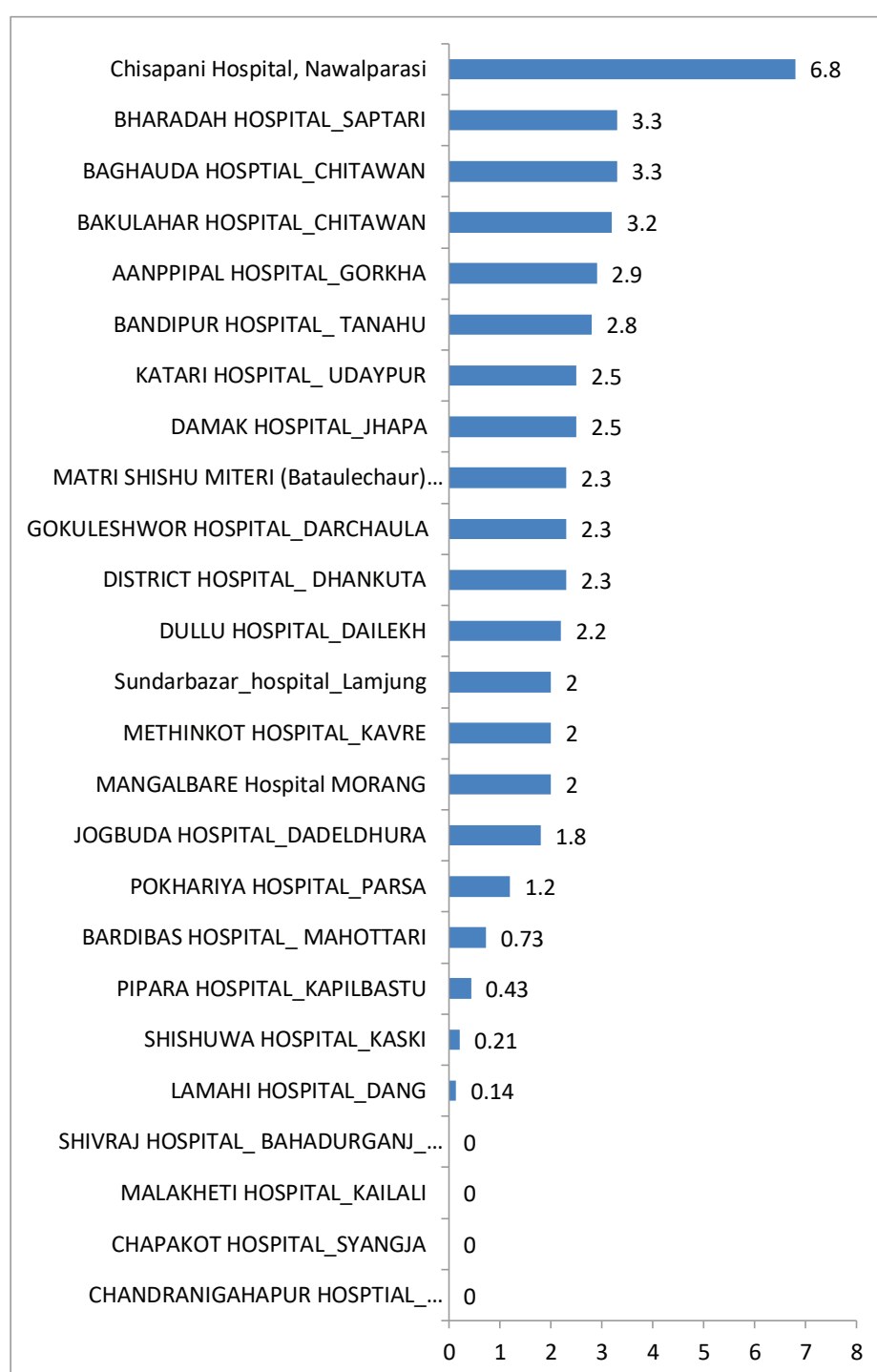


Figure 6: Average length of stay by inpatients in other Primary level hospitals, FY 2075/76

5. Hospital use

The use of hospitals is measured in this section according to emergency room attendance and total outpatient and inpatient admissions

Hospital emergency ward attendance at hospitals with full progress reporting in 2075/76 was as follows:

- Among Federal level hospitals, Bir Hospital recorded the highest attendance at its emergency ward (56840) while Mental Hospital recorded the lowest (655) (Figure 7).
- Among provincial hospitals provincial Hospital had the highest attendance at its emergency unit (53759) while Malakheta Hospital had the lowest (175) (Figure 8).
- Among primary level hospitals Dhankuta Hospital had the highest attendance at its emergency ward (9229) while Chandranigahapur hospital, Rautahat had the least (25) (Figure 9).

Figure 7: Emergency ward attendance in Federal level hospitals, FY 2075/76

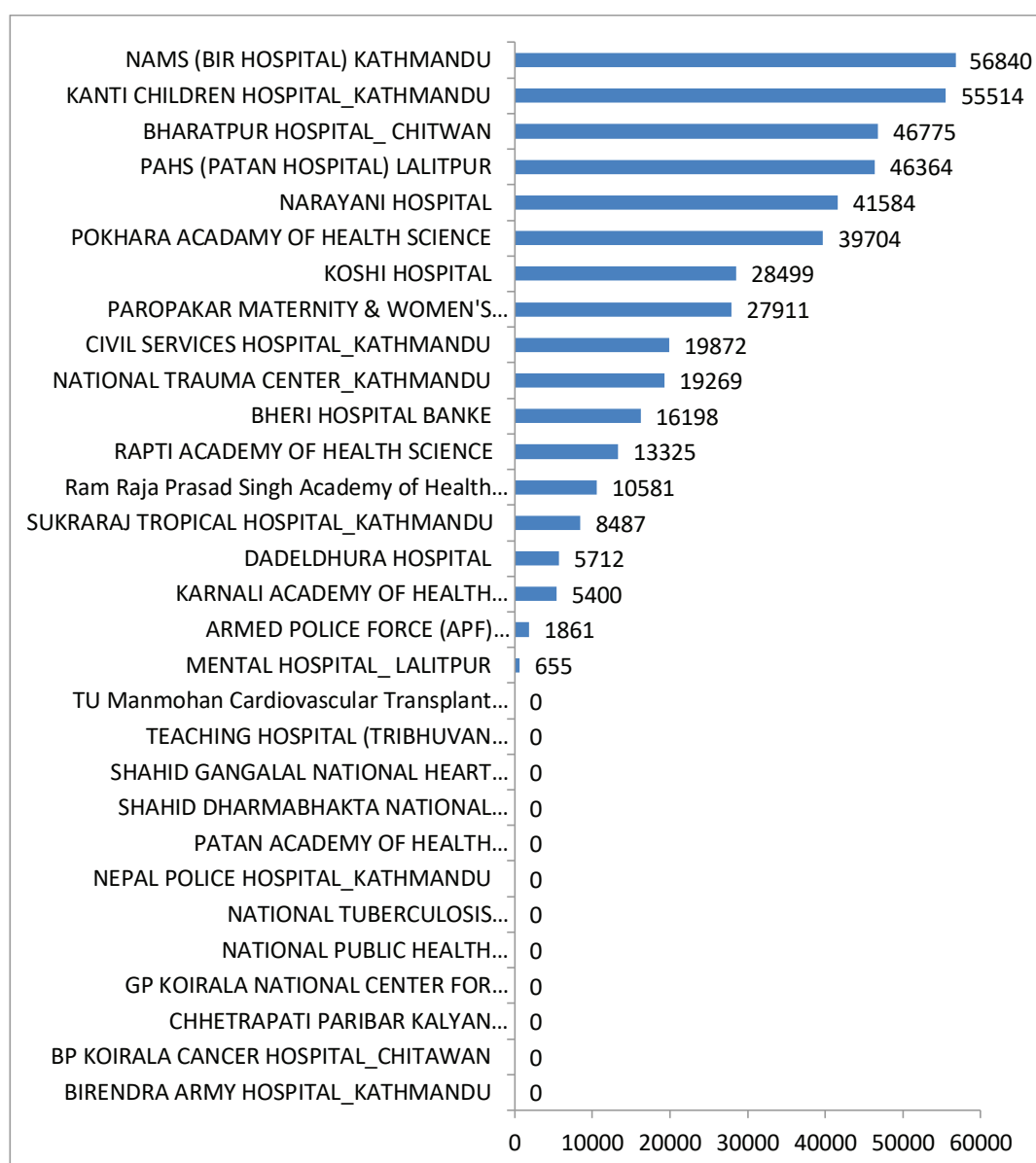
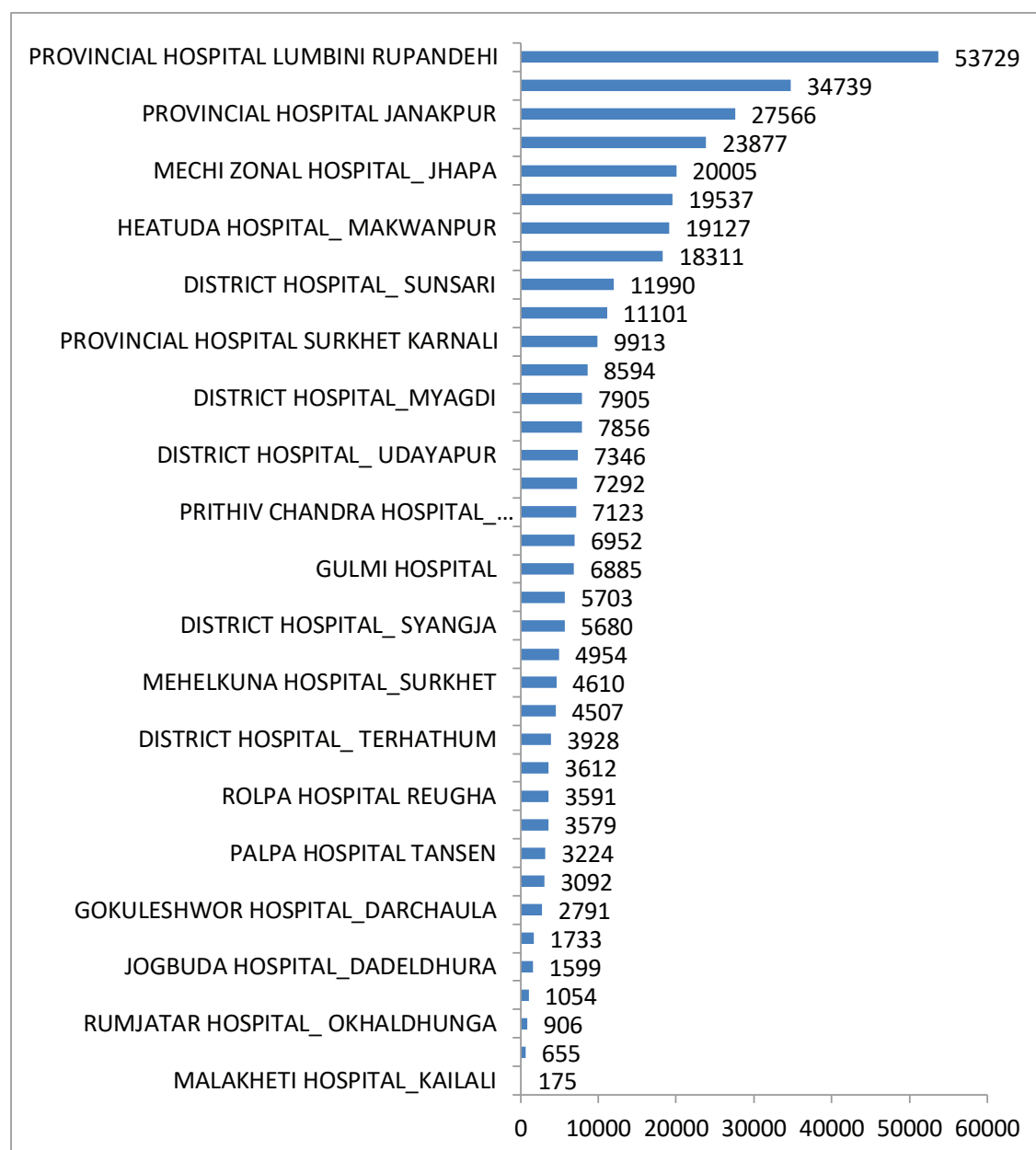


Figure 8: Emergency ward attendance at provincial hospitals, FY 2075/76

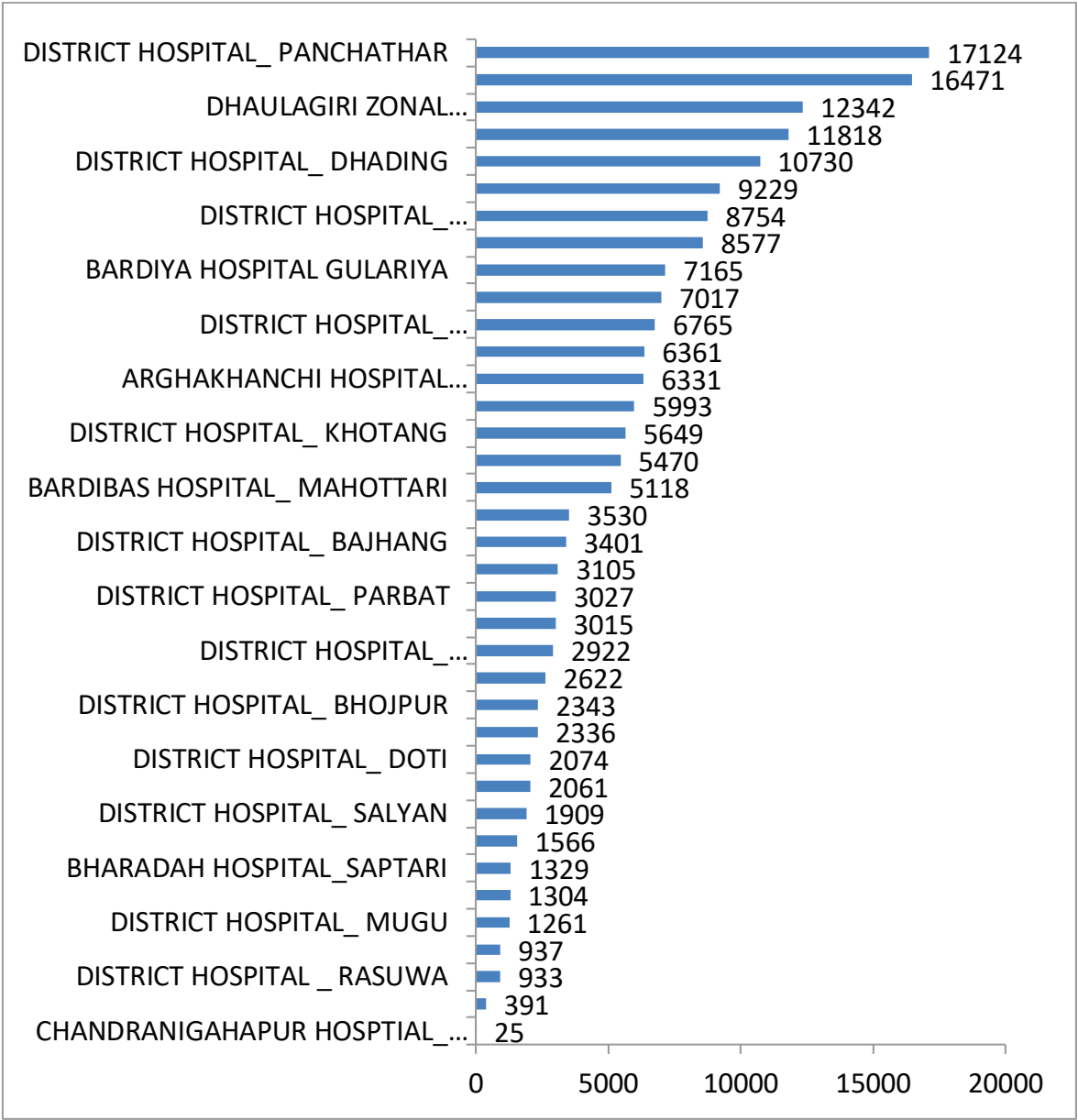
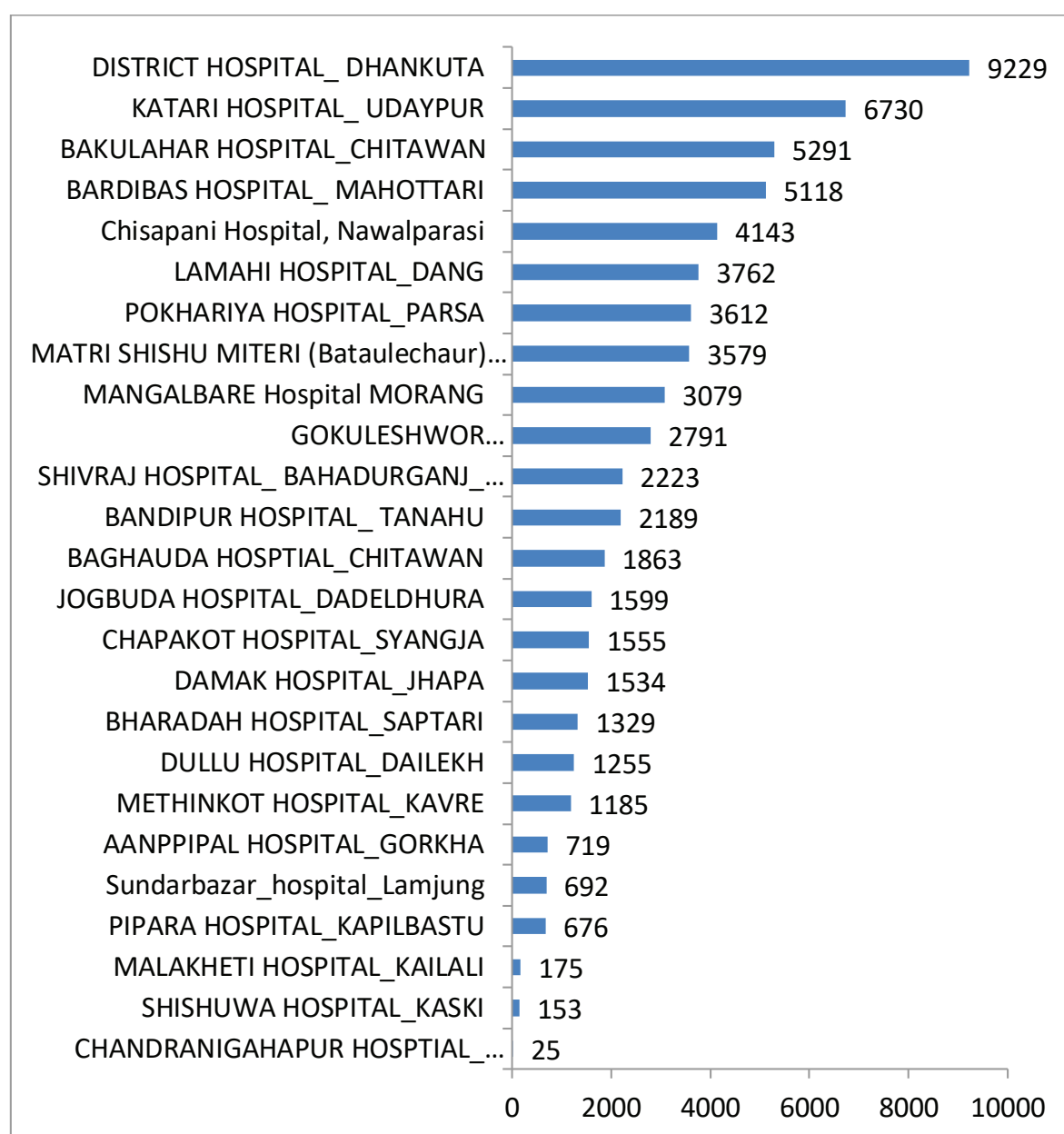


Figure 9: Emergency ward attendances at primary level hospitals, FY 2075/76

6. Outpatient attendance in the fiscal year 2075/76 at hospitals with full progress reporting was as follows:

- Outpatient attendance at Federal level hospitals ranged from 44317 at Karnali Academy of Health Science, Jumla to 22 at Civil Service Hospital most of federal hospitals are not reporting of OPD morbidity (Figure 10).
- Outpatient attendance at Provincial hospitals ranged from 54403 patients at Palpa Hospital Tansen to 227 at Seti provincial Hospital (Figure 11).
- Outpatient attendance at Primary level hospitals ranged from 89600 at Bakulahar Hospital, Chitawan to 13 at Shivraj hospital, Kapilbastu (Figure 12).
- New outpatient visits accounted for a varying range of the proportion of total clients across Nepal (Figure 13).

Figure 10: Outpatient attendance at Federal level hospitals, FY 2075/76

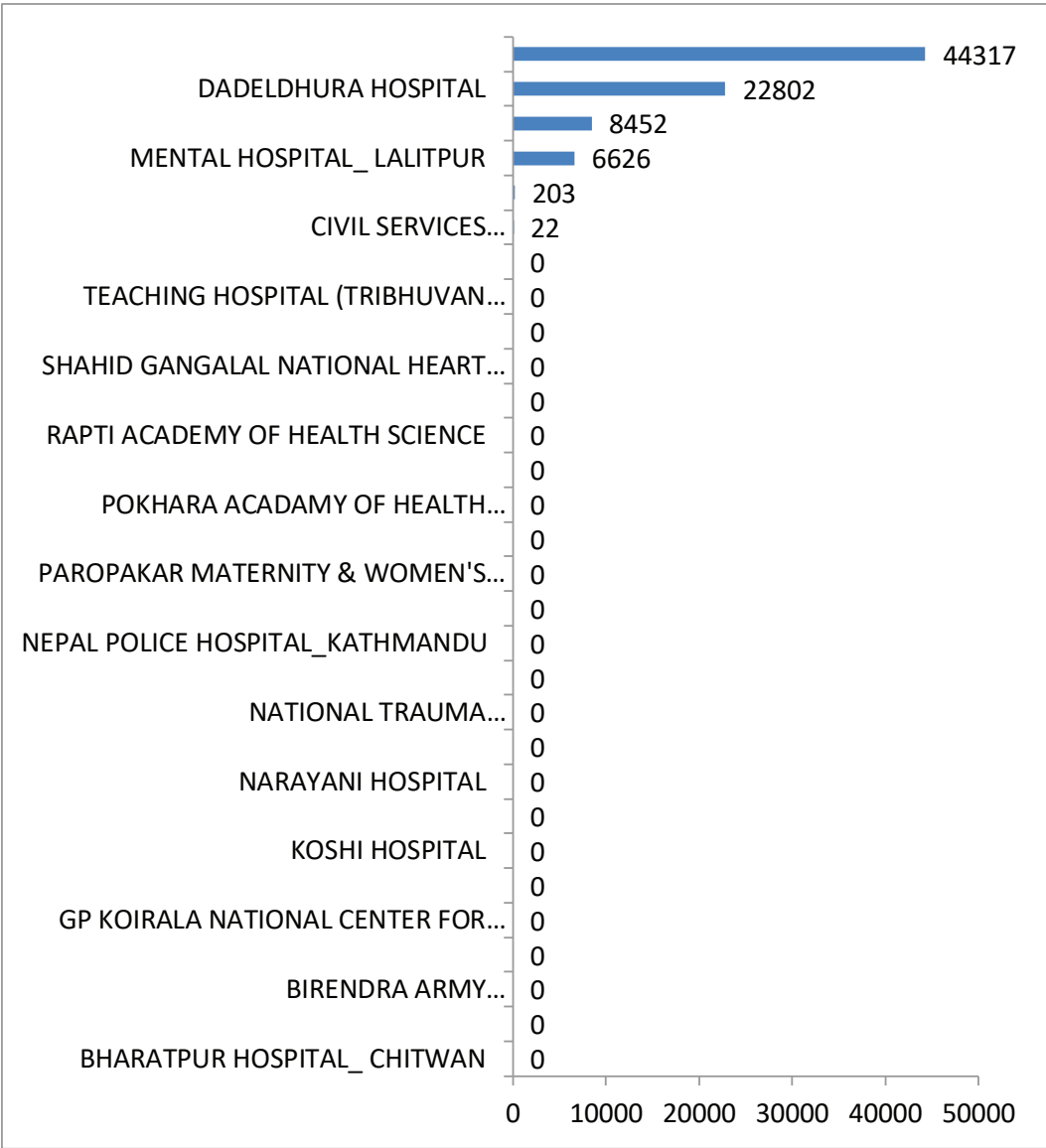
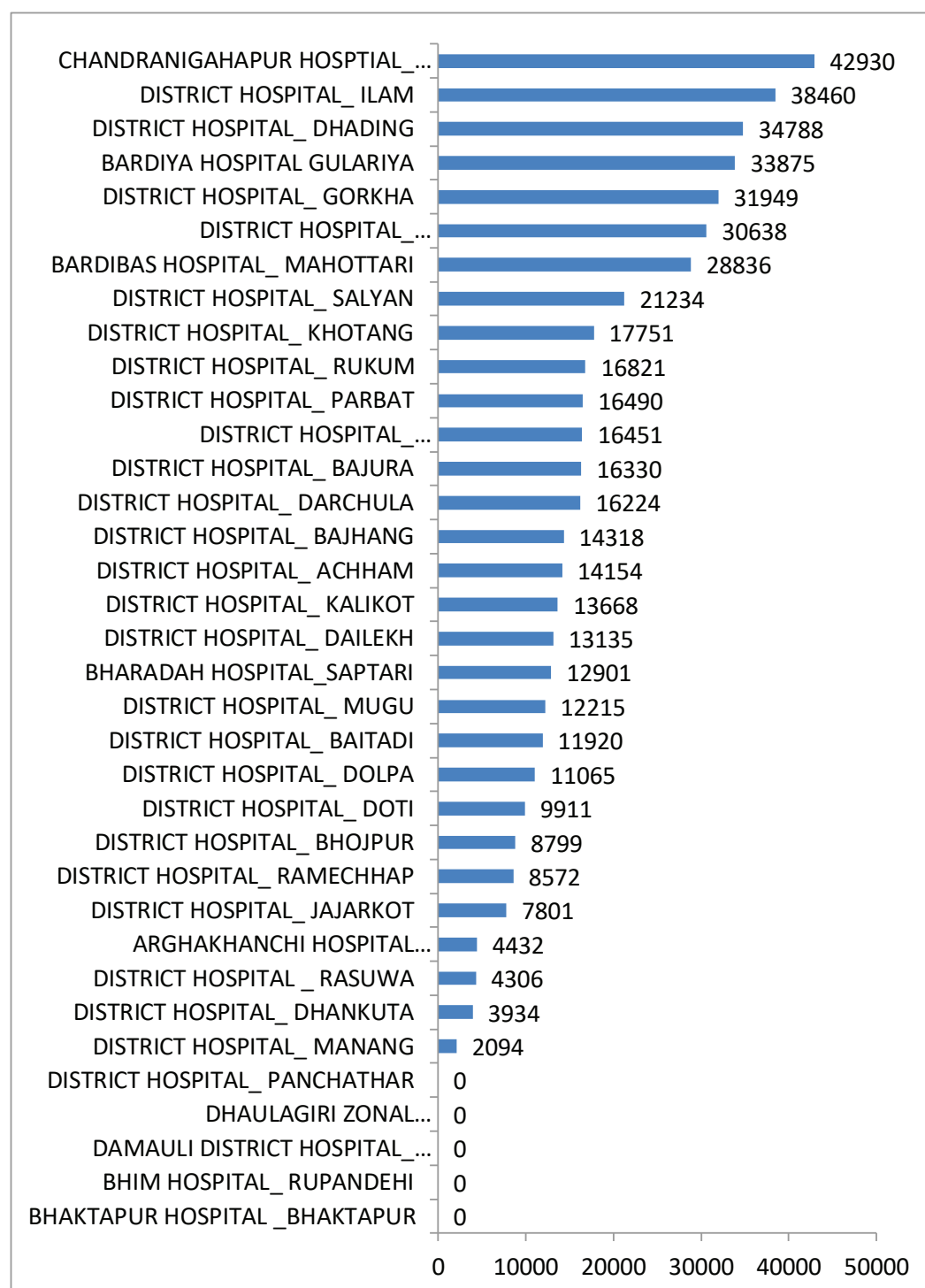


Figure 11: Outpatient attendance at provincial hospitals, FY 2075/76

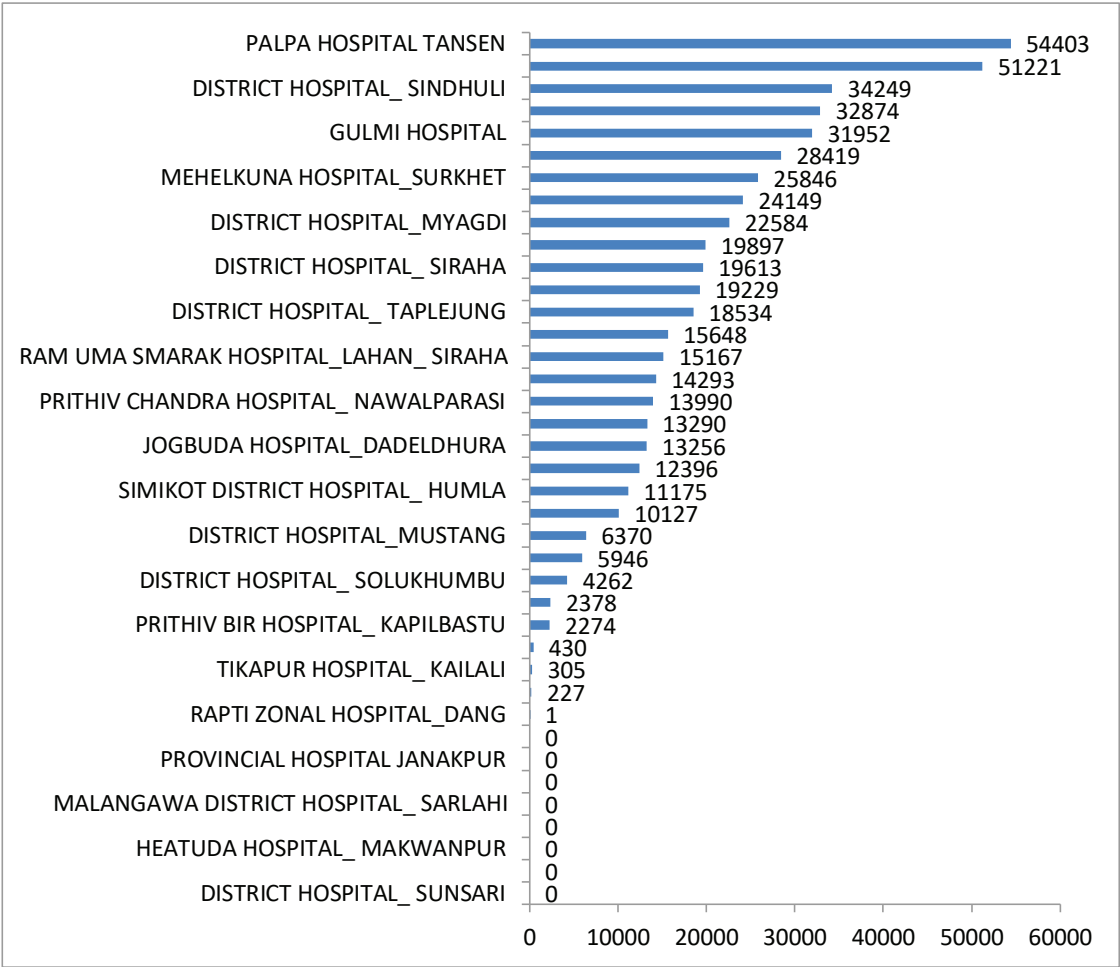


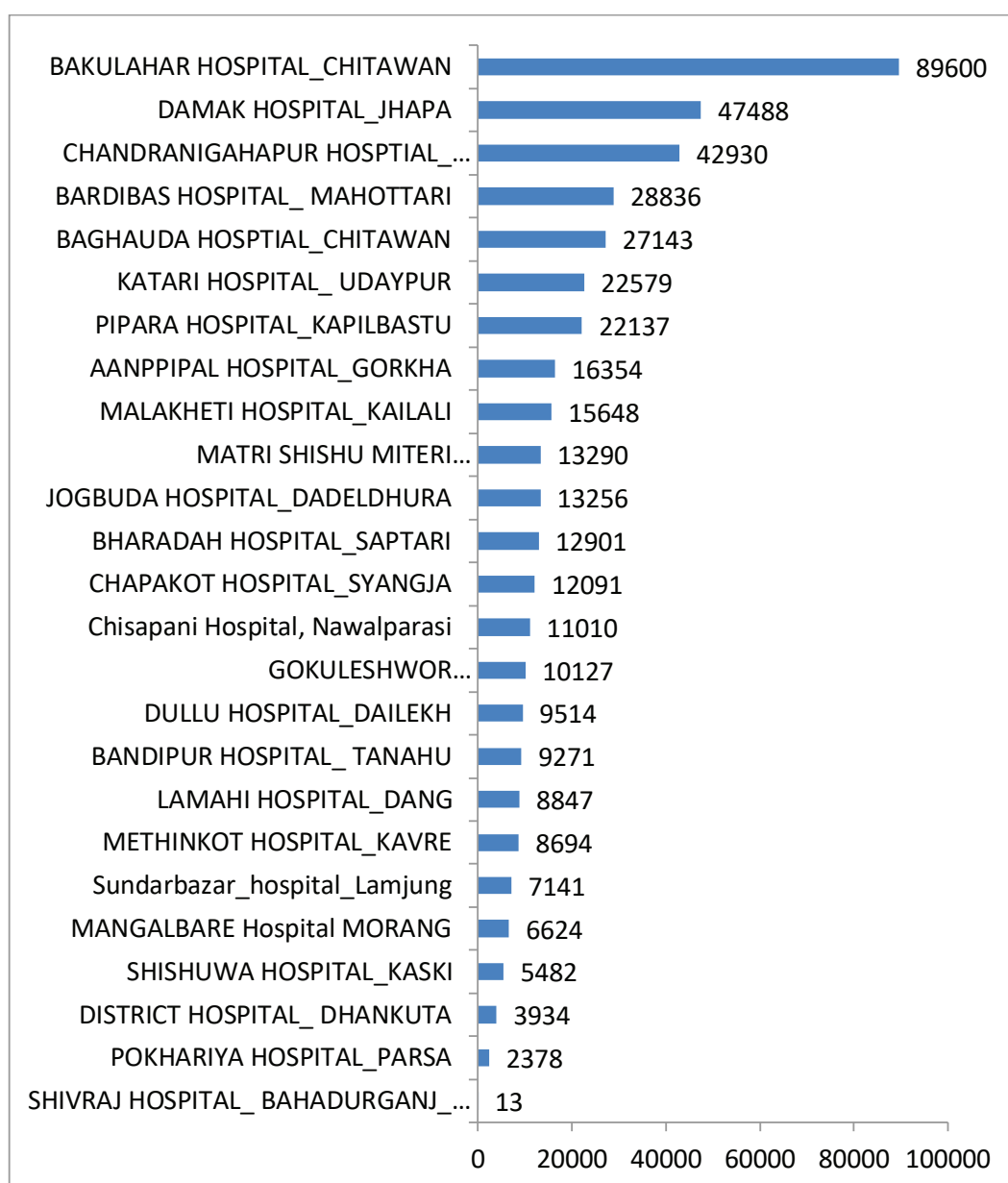
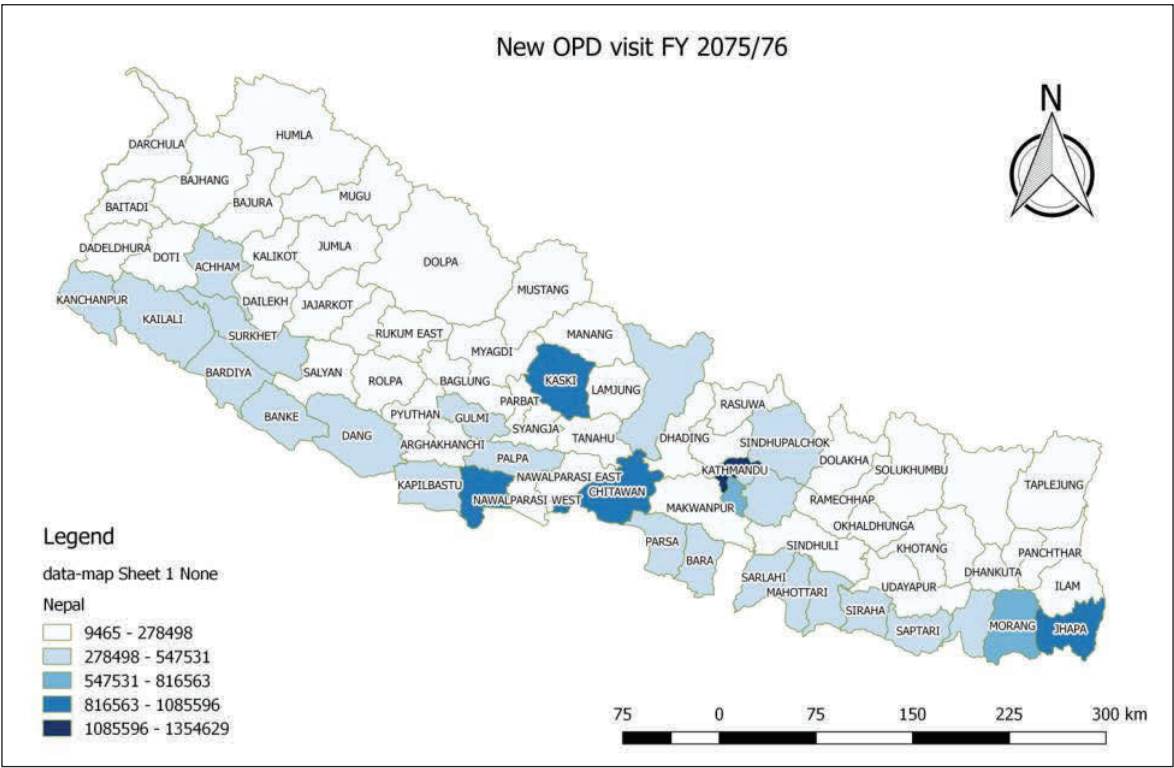
Figure 12: Outpatient attendance at primary level hospitals, FY 2075/76

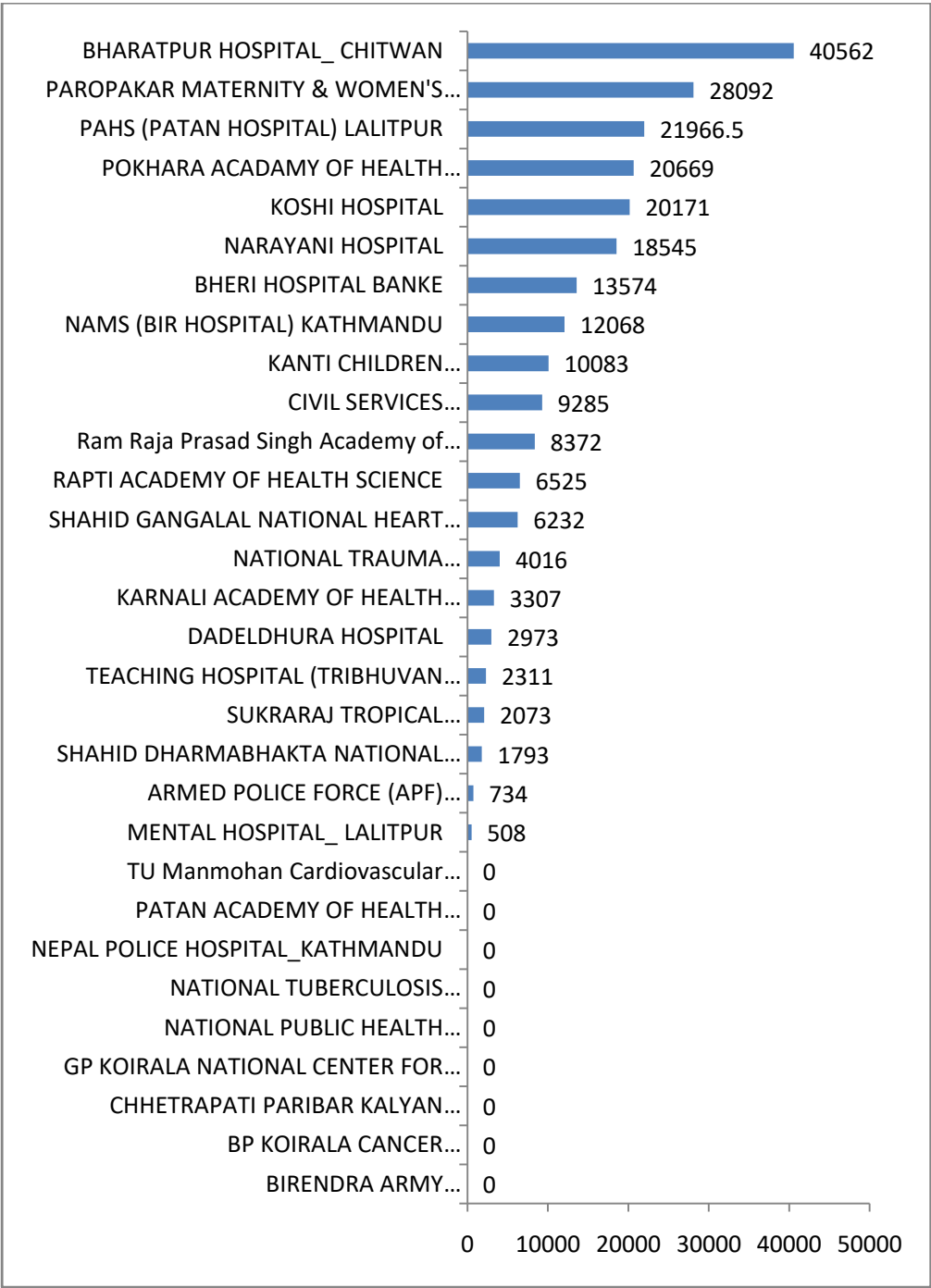
Figure 13: Percentage of new outpatient visits among total population, FY 2075/76



7. Inpatient attendance in 2075/76 at hospitals with full progress reporting was as follows:

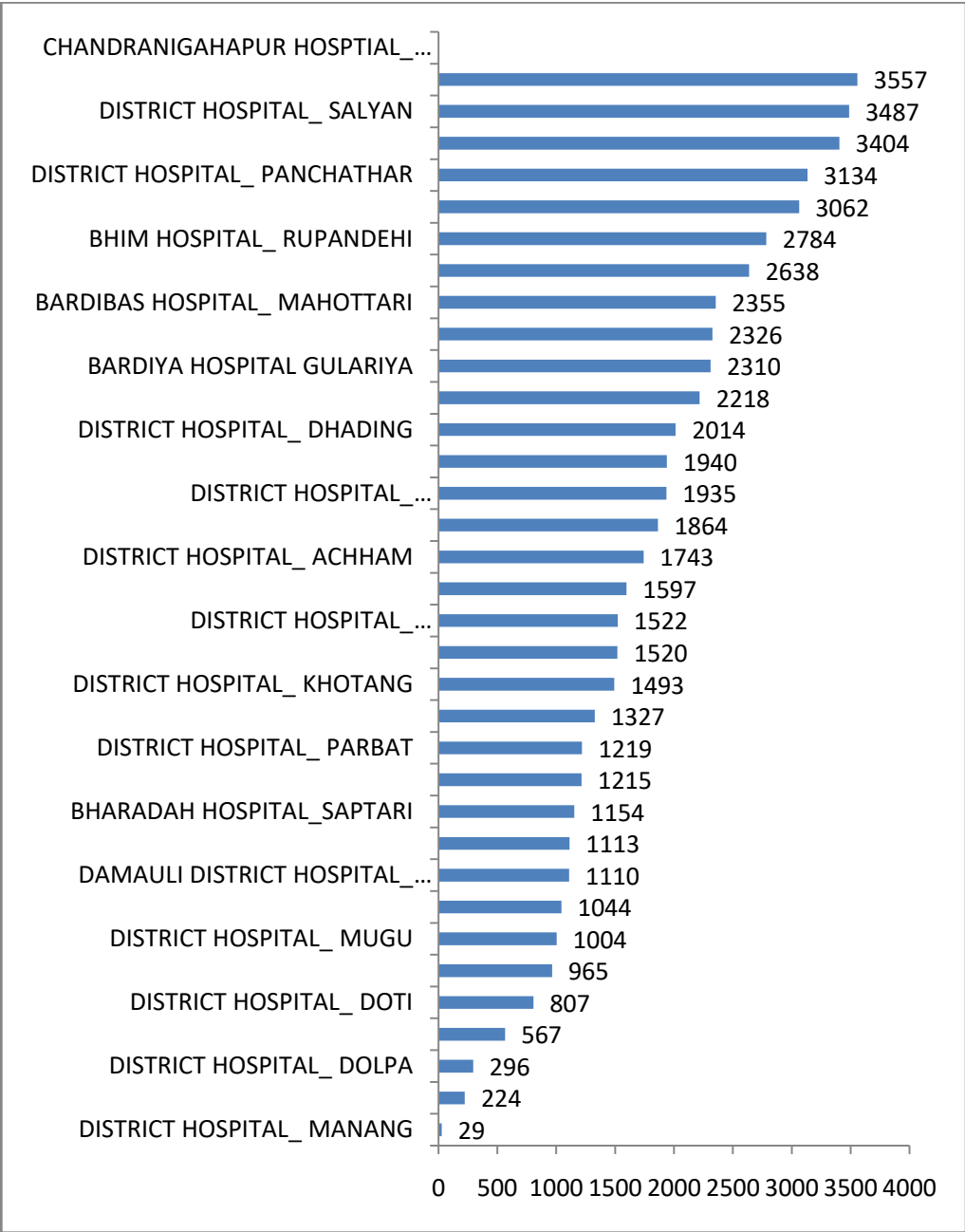
- Bharatpur Hospital, Chitawan had the most inpatient admissions 40562 with the Mental Hospital, Patan having the fewest (508) some federal hospital had no report (Figure 14)
- Among public provincial hospitals, Janakpur Provincial Hospital had the most inpatient admissions (20397), while Malangawa District Hospital, sarlahi had the fewest (76) some provincial hospital had no reported (Figure 15).
- Among primary hospitals Bardibas Hospital, Mahotary recorded the most inpatient admissions (2355) while Chapakot Hospital syangja recorded the fewest (6) (Figure 16).

Figure 14: Inpatient admissions at Federal level hospitals, FY 2075/76



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Figure 15: Inpatient admissions at provincial hospitals. FY 2075/76



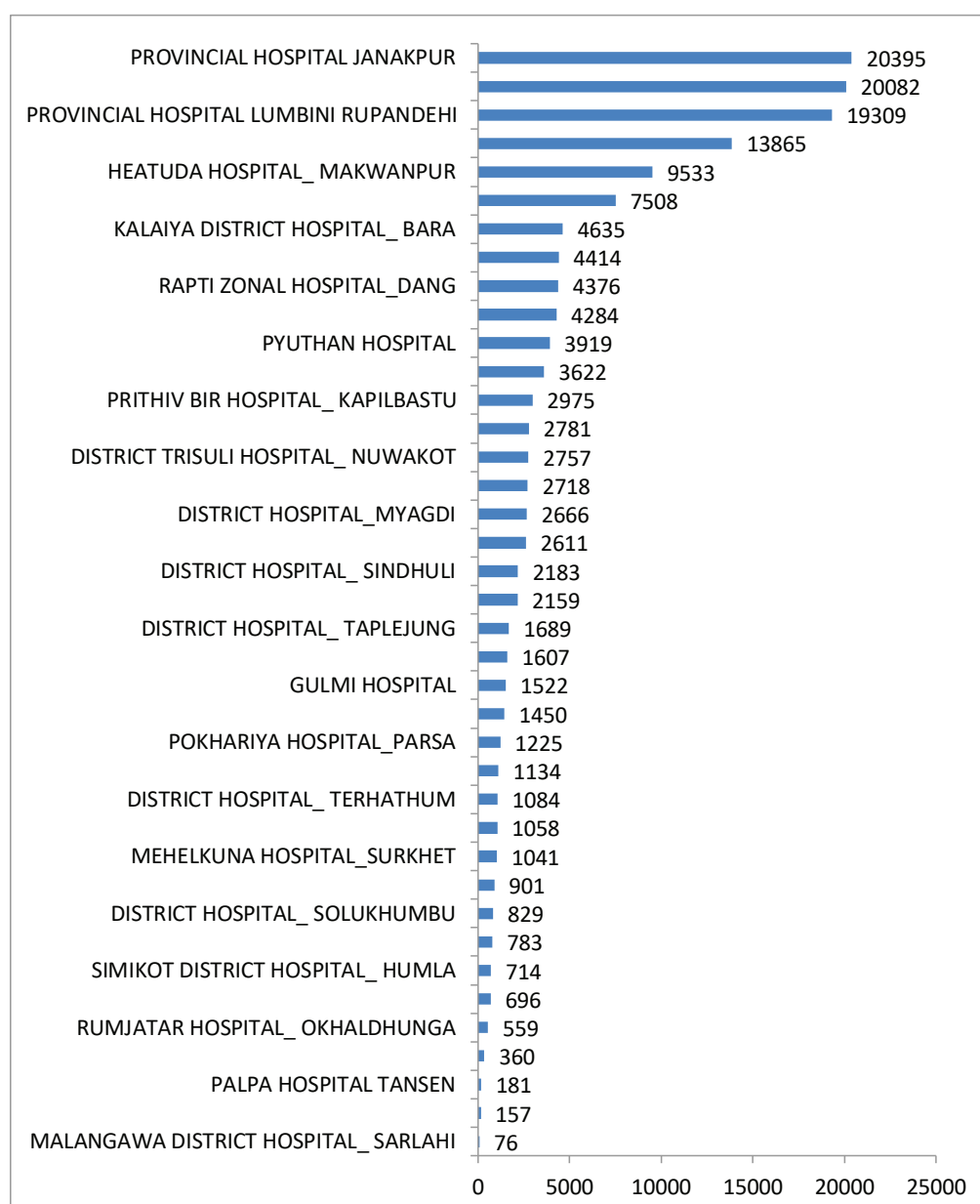
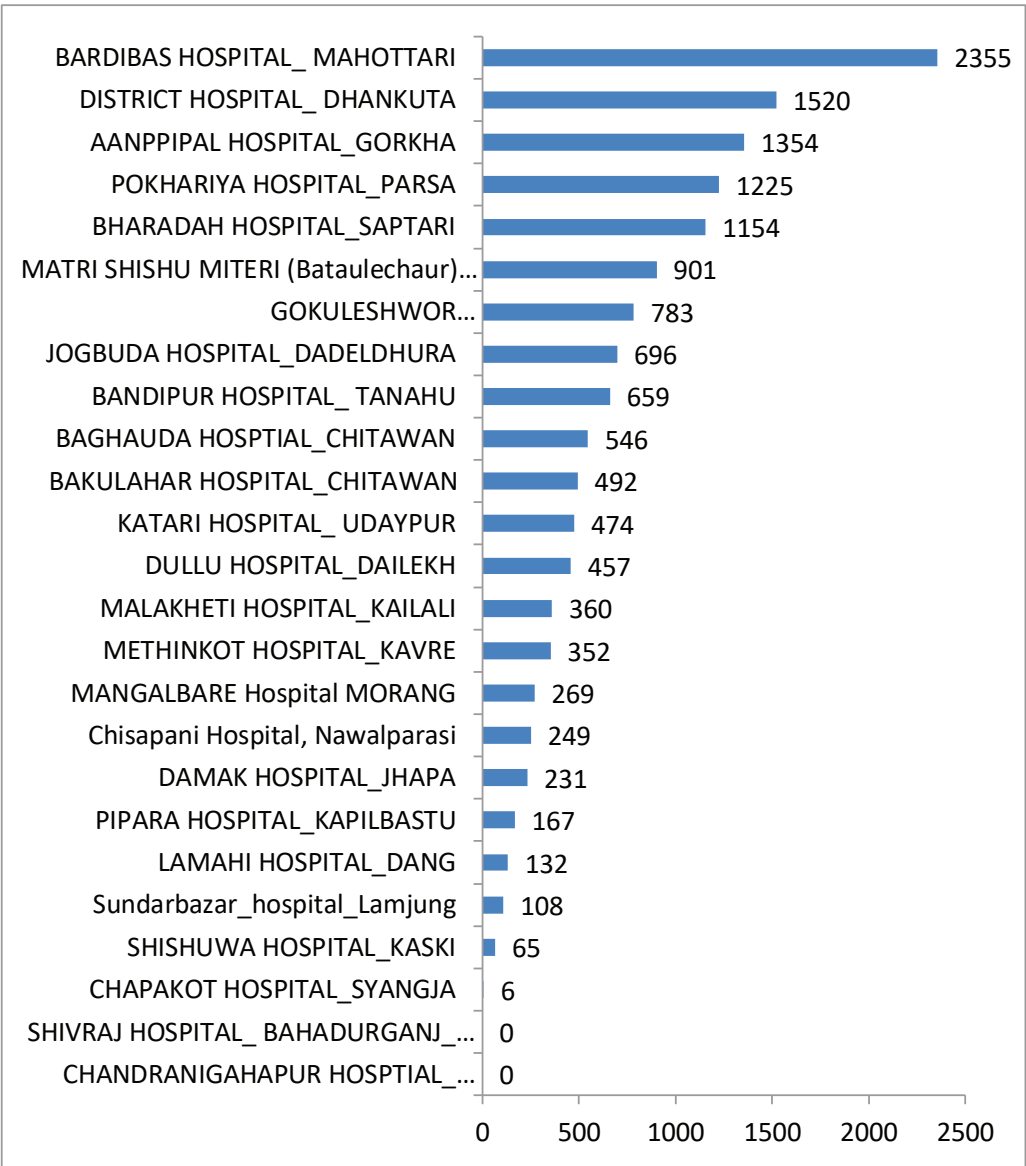


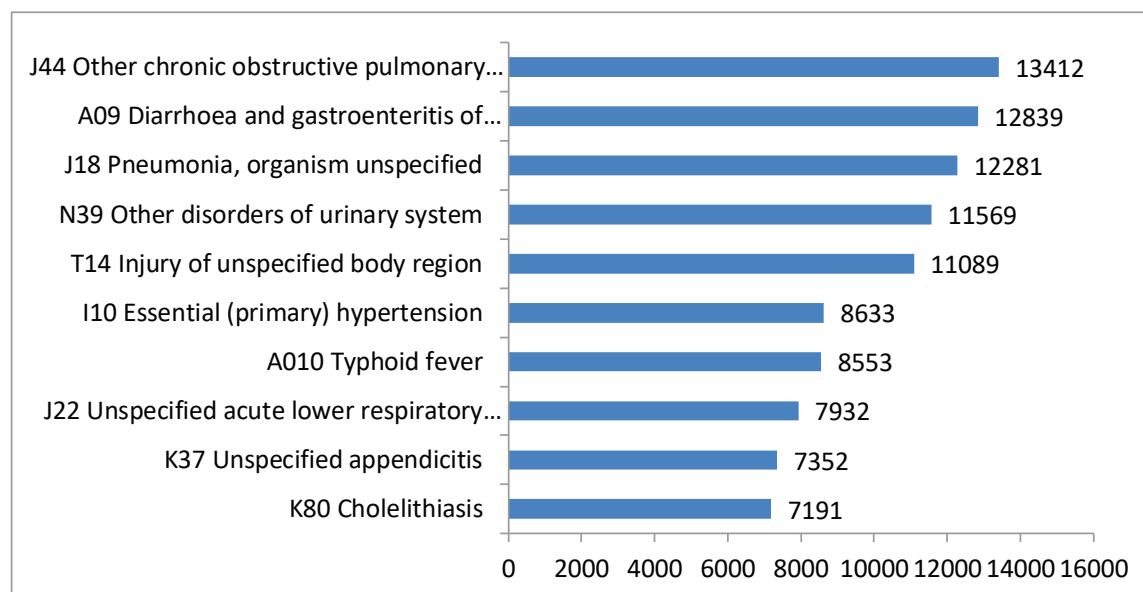
Figure 16: Inpatient admissions at primary level hospitals, FY 2075/76



8. Disease analysis

Top ten morbidities among inpatients — In fiscal year 2075/76 other chronic obstructive pulmonary disease was the number one for inpatient admission (13,412) followed by diseases that notified by ICD code were A09, J18, N39, T14, I10, A010, J22, K37 and number tenth was Cholelithothiasis disease (7191) (Figure 18).

Figure 5.18: Top ten inpatient morbidities in FY 2075/76



Source: HMIS

9. Total patients — In 2075/76 Nepal's the HMIS recorded 1045062 patients (female 62.47%–male 37.53%) being discharged from all types of hospitals (Table 5). Of this number 995414 (91.22%) were recorded as cured or recovered, while 19756 (1.81%) did not show clinical improvement. A total of 5659 (0.51%) patients died within 48 hours of admission while, whereas 6228 (0.57%) patients died more than 48 hours after admission. Most patients were aged between 20-29 years (25.75%), More than a half of the inpatients were aged 15-49 years (59%).

Table 5: Inpatient morbidity by age and sex, all hospitals, FY 2075/76

Age Group		≤ 28 days	29 Days - 1 Year	01 - 04 Years	05 - 14 Years	15 - 19 Years	20 - 29 Years	30 - 39 Years	40 - 49 Years	50 - 59 Years	≥ 60 Years	Total
Recovered/Cure	Female	25514	15841	20752	28994	59400	214059	95718	54229	48755	70765	634027
	Male	31318	23581	29573	40218	30201	53220	49555	47671	48501	7549	361387
Not Improved	Female	325	391	334	632	700	1260	1218	1158	1293	2392	9703
	Male	463	565	401	692	608	1083	1032	1104	1231	2874	10053
Referred Out	Female	545	473	407	806	1004	2640	1223	1346	855	1972	11271
	Male	810	760	607	879	563	971	902	955	1061	2227	9735
DOR/LAMA/DAMA	Female	1166	725	799	1008	1572	4060	2350	1748	2006	4771	20205
	Male	1577	1058	1221	1340	1211	2348	2090	2026	2097	5101	20069
Absconded	Female	58	67	60	98	91	377	190	120	104	188	1353
	Male	59	69	105	124	377	163	145	124	99	173	1438
Deaths in < 48 Hours	Female	253	70	37	65	73	195	195	227	347	955	2417
	Male	387	123	47	66	96	199	267	380	438	1239	3242
Deaths in ≥ 48 Hours	Female	176	77	53	93	93	184	204	267	384	1170	2701
	Male	287	141	76	91	102	215	292	397	480	1446	3527

Curative Service

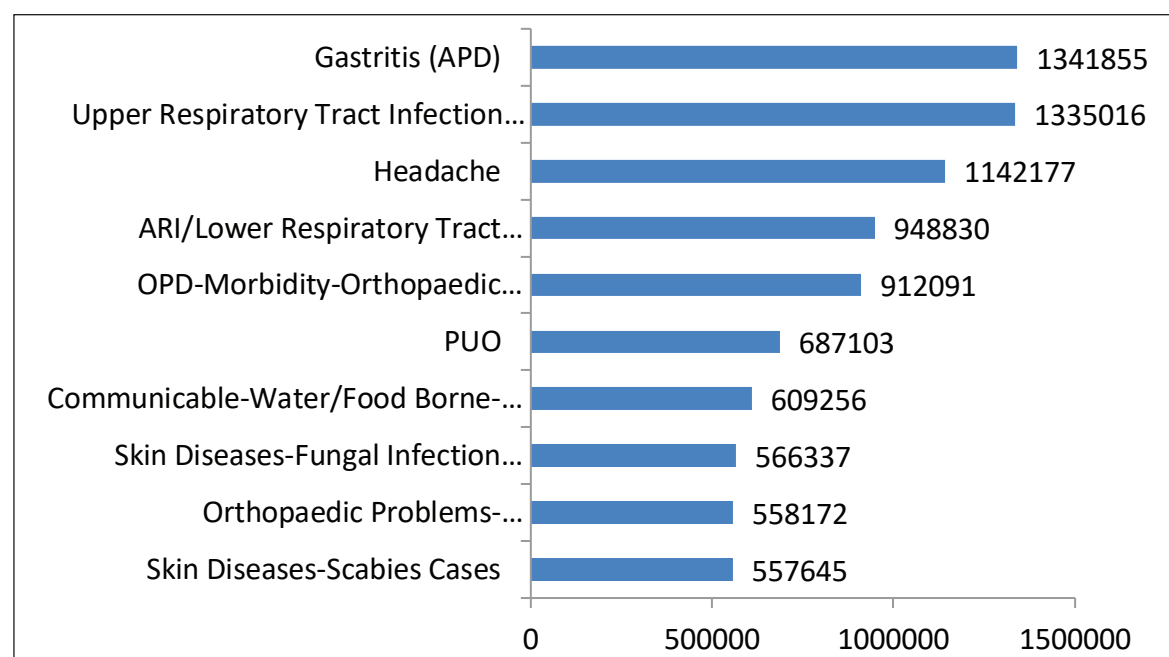
Total	Female	28037	17644	22442	31696	62933	222775	101098	59095	53744	82213	681677
	%	55.45	59.85	58.80	57.80	34.51	20.71	34.94	47.12	50.08	20.04	37.53
	Male	34901	26297	32030	43410	33158	58199	54283	52657	53907	20609	409451
	%	55.45	59.85	58.80	57.80	34.51	20.71	34.94	47.12	50.08	20.04	37.53
	Total	62938	43941	54472	75106	96091	280974	155381	111752	107651	102822	1091128
	%	5.77	4.03	4.99	6.88	8.81	25.75	14.24	10.24	9.87	9.42	100.00

Source: HMIS, DoHS

Note: LAMA = left against medical advice , DAMA discharged against medical advice

Outpatient consultations — The top-most reason for outpatient consultations in 2075/76 was for Gastritis (APD) (5.84%), followed by upper respiratory tract infection (5.81%) (Figure 5.19).

Figure 19: Top ten reasons (%) for outpatient consultations, FY 2075/76



10. Disease types — In terms of disease types among inpatients and outpatient services in FY 2075/76:

- the number one airborne disease was pneumonia (organism unspecified) (12,281 cases) followed by pneumonia (unspecified) (5,222 cases) and Acute tonsillitis (2,880 cases) (Table 6);
- among the 144 cases of vector borne diseases total death case 3, among 61 cases 2 death reported from Viral Encephalitis (Table 7);
- diarrhoea and gastroenteritis was the leading cause of inpatient waterborne disease (A09 :12839 cases), followed by typhoid fever (A010: 8553 cases) (Table 8);
- 22.9 million communicable and non-communicable diseases were reported by outpatients in 2075/76 (communicable 11.46%, non-communicable 88.58%) (Table 9)

Table 6: Breakdown of airborne disease cases among inpatients, FY 2074/75

ICD Code and Name	Inpatient Morbidity Cases			Inpatient Morbidity Deaths		
	Female	Male	Total	Female	Male	Total
A15 Respiratory tuberculosis, bacteriologically and histologically confirmed	97	197	294	1	4	5
A150 Tuberculosis of lung, confirmed by sputum microscopy with or without culture	45	83	128	4	7	11
A151 Tuberculosis of lung, confirmed by culture only	8	17	25	1		1
A152 Tuberculosis of lung, confirmed histologically	4	0	4	0		0
A153 Tuberculosis of lung, confirmed by unspecified means	2	3	5			0
A154 Tuberculosis of intrathoracic lymph nodes, confirmed bacteriologically and histologically	1	0	1			0
A155 Tuberculosis of larynx, trachea and bronchus, confirmed bacteriologically and histologically	0	1	1			0
A156 Tuberculous pleurisy, confirmed bacteriologically and histologically	3	3	6			0
A157 Primary respiratory tuberculosis, confirmed bacteriologically and histologically	1	1	2	0		0
A158 Other respiratory tuberculosis, confirmed bacteriologically and histologically	1	3	4	1		1
A159 Respiratory tuberculosis unspecified, confirmed bacteriologically and histologically	9	5	14			0
A16 Respiratory tuberculosis, not confirmed bacteriologically or histologically	49	109	158	2	1	3
A160 Tuberculosis of lung, bacteriologically and histologically negative	21	30	51	3	3	6
A161 Tuberculosis of lung, bacteriological and histological examination not done	6	5	11	0	0	0
A162 Tuberculosis of lung, without mention of bacteriological or histological confirmation	46	55	101	0	4	4
A164 Tuberculosis of larynx, trachea and bronchus, without mention of						

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bacteriological or histological confirmation	2	1	3	0		0
A165 Tuberculous pleurisy, without mention of bacteriological or histological confirmation	9	10	19	0	0	0
A168 Other respiratory tuberculosis, without mention of bacteriological or histological confirmation	17	22	39			0
A169 Respiratory tuberculosis unspecified, without mention of bacteriological or histological confirmation	144	237	381	3	9	12
A17 Tuberculosis of nervous system	3	3	6			0
A170 Tuberculous meningitis	16	26	42	2	3	5
A171 Meningeal tuberculoma	0	1	1	0	0	0
A178 Other tuberculosis of nervous system	3	3	6			0
A18 Tuberculosis of other organs	44	93	137	0	4	4
A180 Tuberculosis of bones and joints	15	14	29	0	0	0
A181 Tuberculosis of genitourinary system	3	0	3			0
peritoneum and mesenteric glands	28	37	65	0	1	1
A187 Tuberculosis of adrenal glands	0	1	1			0
A188 Tuberculosis of other specified organs	3	8	11			0
A19 Miliary tuberculosis	8	14	22	1	2	3
A190 Acute miliary tuberculosis of a single specified site	1	0	1			0
A191 Acute miliary tuberculosis of multiple sites	1	0	1			0
A192 Acute miliary tuberculosis, unspecified	0	1	1	0		0
A199 Miliary tuberculosis, unspecified	5	16	21	0	0	0
G03 Meningitis due to other and unspecified causes	85	115	200	2	3	5
G030 Nonpyogenic meningitis	1	4	5	0	1	1
G031 Chronic meningitis	0	2	2		1	1
G038 Meningitis due to other specified causes	0	1	1			0
G039 Meningitis, unspecified	134	170	304	4	11	15
J02 Acute pharyngitis	206	215	421	6	7	13
J020 Streptococcal pharyngitis	2	5	7		2	2
J029 Acute pharyngitis, unspecified	28	45	73	0	0	0
J03 Acute tonsillitis	1498	1382	2880	48	38	86
J030 Streptococcal tonsillitis	24	11	35	0		0
J038 Acute tonsillitis due to other specified organisms	10	12	22	0	0	0
J039 Acute tonsillitis, unspecified	304	272	576	2	1	3

J18 Pneumonia, organism unspecified	5668	6613	12281	397	335	732
J180 Bronchopneumonia, unspecified	74	110	184	0	0	0
J181 Lobar pneumonia, unspecified	79	70	149	7	6	13
J182 Hypostatic pneumonia, unspecified	61	34	95	46	25	71
J188 Other pneumonia, organism unspecified	19	14	33	0		0
J189 Pneumonia, unspecified	2380	2842	5222	68	90	158
J40 Bronchitis, not specified as acute or chronic	739	917	1656	49	47	96
Total	11915	13841	25756	647	605	1252

Table 7: Breakdown of vector borne diseases among inpatients, FY 2074/75

ICD Code and Name	Inpatient Morbidity Cases			Inpatient Morbidity Deaths		
	Female	Male	Total	Female	Male	Total
A50 Congenital syphilis	1	2	3			0
A86 Unspecified viral encephalitis	27	34	61	2	0	2
B50 Plasmodium falciparum malaria	0	2	2		1	1
B500 Plasmodium falciparum malaria with cerebral complications	1	1	2	0		0
B509 Plasmodium falciparum malaria, unspecified	3	10	13	0		0
B51 Plasmodium vivax malaria	5	7	12			0
B519 Plasmodium vivax malaria without complication	7	8	15	0		0
B54 Unspecified malaria	13	14	27	0	0	0
B559 Leishmaniasis, unspecified	5	4	9			0
Total	62	82	144	2	1	3

Table 8: Water borne diseases among inpatients, FY 2075/76

ICD 10	Inpatients Case		Total	Inpatients Death		Total
	Female	Male		Female	Male	
A00 Cholera	43	34	77	0	1	1
A00.0 Cholera due to <i>Vibrio cholerae</i> 01, biovar cholerae	28	13	41	2	1	3
A00.1 Cholera due to <i>Vibrio cholerae</i> 01, biovar eltor	10	8	18	0	0	0
A00.9 Cholera, unspecified	64	35	99	29	20	49
A01 Typhoid and paratyphoid fevers	1960	1969	3929	43	46	89
A010 Typhoid fever	4432	4121	8553	45	61	106
A011 Paratyphoid fever A	53	74	127	0	0	0
A014 Paratyphoid fever, unspecified	40	37	77			0
A03 Shigellosis	35	27	62	0	0	0
A030 Shigellosis due to <i>Shigella dysenteriae</i>	3	6	9			0
A038 Other shigellosis	16	24	40	0	0	0
A039 Shigellosis, unspecified	108	82	190	0	2	2
A06 Amoebiasis	133	112	245	0	2	2
A060 Acute amoebic dysentery	53	53	106	1	2	3
A061 Chronic intestinal amoebiasis	5	7	12	0	0	0
A062 Amoebic nondysenteric colitis	1	0	1			0
A064 Amoebic liver abscess	0	5	5	0		0
A065 Amoebic lung abscess	16	3	19			0
A066 Amoebic brain abscess	6	5	11			0
A067 Cutaneous amoebiasis	4	6	10		1	1
A068 Amoebic infection of other sites	0	3	3			0
A069 Amoebiasis, unspecified	114	97	211	3	1	4
A09 Diarrhoea and gastroenteritis of presumed infectious origin	6543	6296	12839	113	84	197
B15 Acute hepatitis A	48	56	104	1	1	2
B150 Hepatitis A with hepatic coma	12	13	25		1	1
B159 Hepatitis A without hepatic coma	40	77	117	2	1	3
B16 Acute hepatitis B	11	27	38	0	2	2
B161 Acute hepatitis B with delta-agent (coinfection) without hepatic coma	1	0	1			0
B169 Acute hepatitis B without delta-agent and without hepatic coma	24	48	72	1	0	1
B17 Other acute viral hepatitis	36	61	97	1	0	1
B170 Acute delta-(super)infection of hepatitis B carrier	2	0	2			0
B172 Acute hepatitis E	5	12	17	1	0	1
E86 Volume depletion	162	151	313	0	2	2
K52 Other noninfective gastroenteritis and colitis	80	72	152	4	2	6
K520 Gastroenteritis and colitis due to radiation	3	0	3			0
K521 Toxic gastroenteritis and colitis	2	2	4			0
K522 Allergic and dietetic gastroenteritis and colitis	1	0	1			0
K528 Other specified noninfective gastroenteritis and colitis	6	4	10	0	0	0
K529 Noninfective gastroenteritis and colitis, unspecified	247	250	497	0		0
R17 Unspecified jaundice	352	397	749	45	44	89
Total	14699	14187	28886	291	274	565

Table 9: Communicable and non-communicable diseases among outpatients by province, FY 2075/76

Province	Communicable		Non-Communicable		Total
	Cases	%	Cases	%	
Province 1	366901	9.92	3329450	90.07	3696351
Province 2	686147	19.34	2861653	80.66	3547800
Bagmati Province	440359	8.2	4892851	91.74	5333210
Gandaki Province	230585	8.70	2418414	91.29	2648999
Province 5	449280	11.14	3580429	88.85	4029709
Karnali Province	223966	13.75	1403883	86.24	1627849
Sudurpashchim Province	233895	11.30	1834345	88.69	2068240
National		11.46		88.53	22952158
Nepal	2631133		20321025		

11. Communicable and non-communicable diseases (inpatients)

Cases — In 2075/76, Total cases were 446811 to hospital, of which 92.1 percent were non-communicable disease cases (Table 5.10). There were nearly more than seven times as many non-communicable disease deaths as communicable disease deaths.

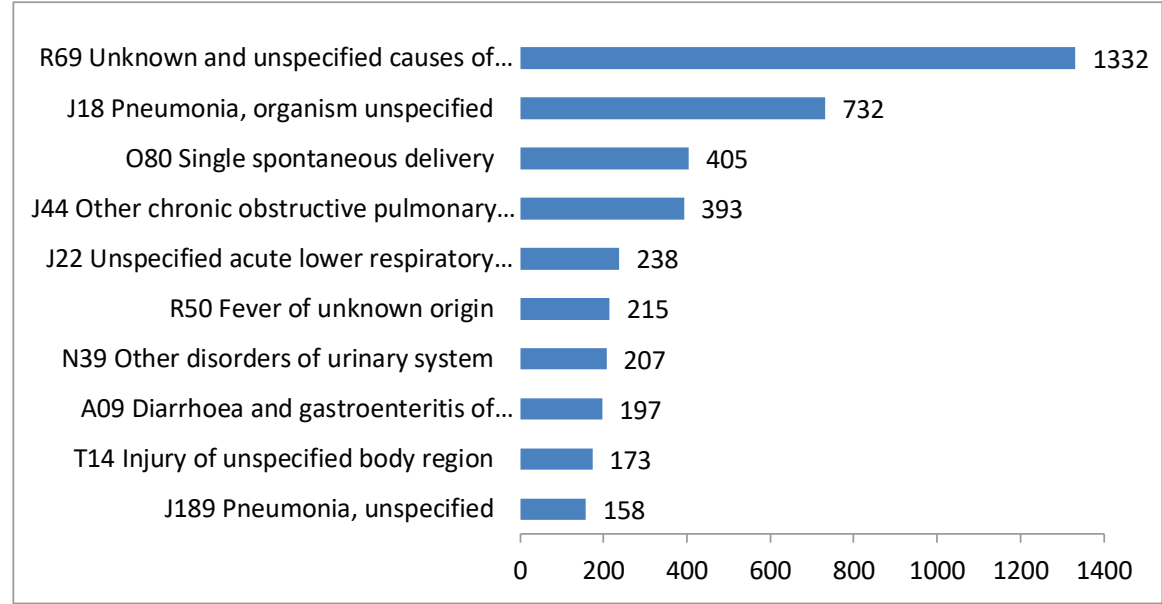
Table 10: Communicable and non-communicable disease cases and deaths (inpatients), FY 2075/76

Diseases	Cases	%	Deaths	%
Communicable	35281	7.89	716	6.67
Non-communicable	411530	92.1	10010	93.32
Total	446811	100	10726	100

12. Cause of death — Regarding the causes of death (and morbidity) among inpatients in FY 2075/76:

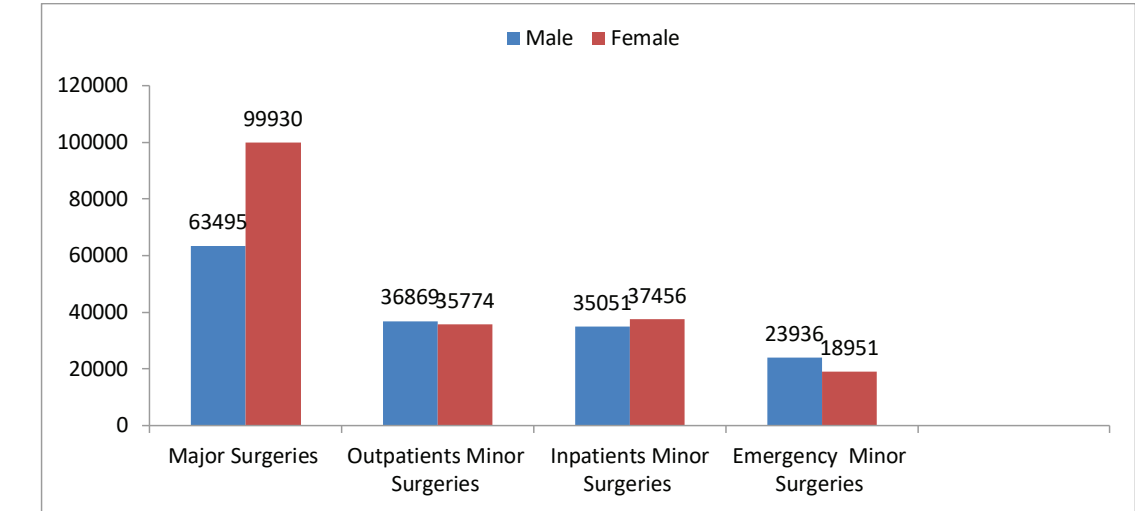
- The leading cause of death among inpatients was ‘Unknown and unspecified cause of morbidity (1332) (Figure 22).

Figure 22: Top 10 causes of death among inpatients, FY 2075/76



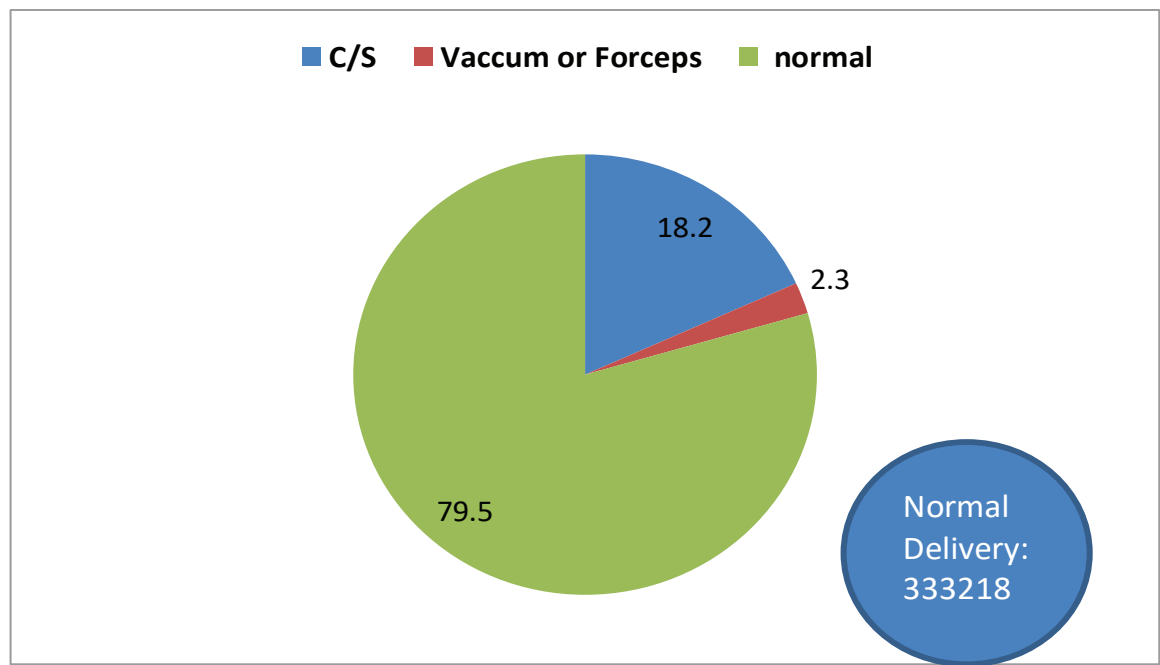
13. Surgeries — 163425 major surgeries were performed in the reporting period (combined inpatient and outpatient surgeries) of which 61.14 percent were female cases (Figure 23). A total of 72643 minor surgical procedures were performed on hospital outpatients while 72507 were performed on an inpatient basis. Females accounted for 49.02 percent of all minor surgeries. More of the minor emergency surgery cases were males than females

Figure 23: Surgeries in hospitals, FY 2075/76



14. Deliveries —333,218 deliveries were conducted in Health Facilities in 2075/76 of which 79.5 percent happened through spontaneous labour, 18.2 percent through caesarean sections and 2.3 percent were vacuum assisted (Figure 24).

Figure 24: Deliveries in hospitals, FY 2075/76



Note: Please see Annex 3 for more details.

15. Hospital Brought deaths and Post-mortem cases — In FY 2075/76:

- 3417 brought dead cases to hospital (60% male Vs 40% female) and 7547 hospital post-mortem cases (64% males Vs 36% females) were reported to the HMIS (Table 11).

Table 11: Hospital brought dead and post-mortem cases, FY 2075/76

	Female	%	Male	%	Total
Brought dead	1359	40	2058	60	3417
Post-mortem done	2724	36	4823	64	7547
Total	4083	37	6881	63	10964

7.2 Human Organ Transplant Services

7.2.1 Introduction

Sahid Dharma Bhakta National Transplant Center (SDBNTC) was established in 2012 by the Ministry of Health and Population (MoHP) to strengthen and expand organ transplantation services in the country. This center started its services merely with the OPD services but within a few years of its establishment it has extended its services beyond organ transplantation under the leadership of Liver and a Kidney Transplant Surgeon and Executive Director Dr Pukar Chandra Shrestha.

7.2.2 Major Milestones of Shahid Dharmabhakta National Transplant Center (SDNTC)

- Establishment 2012, February
- Initiations of Dialysis services 2012, November 12
- Kidney transplantation started from 2013, January 19
- Free Hemodialysis service started from 2013, March 29
- Human Organ Transplantation Act 2016, February 25
- 1st Pair Exchange Kidney Transplantation 2016, July 27
- Initiation of Cardiac Surgery 2016, November 17
- Human Organ Transplant Regulations 2016, December 1
- First Liver Transplantation 2016, December 7
- Free Kidney Transplantation 2017, April 15
- Second Liver Transplantation 2017, July 2
- Transplantation from a brain dead persons 2017, May 11
- Third Liver Transplantation 2018, June 2
- 1st cadaveric liver transplantation in Nepal 2019, January 18
- 5th Liver Transplant and 467 consecutive successful kidney transplants that were discharged home after the surgery.

7.2.3 Objectives

- To strengthen and expand organ transplantation services in the country.
- To provide and expand specialized services beyond transplantation
- To provide high quality health care at a low price/free of cost
- To undertake research related to human organ transplant to understand the state of kidney and other organ failure in Nepal.
- To advocate for policy interventions
- To organize free health camps across Nepal to screen any kind of diseases.
- To conduct educational activities to raise awareness regarding organ failure, organ transplantation and organ donation.
- To produce high level human resources by providing structured training in various aspects of services to expand the services across the country.

7.2.4 Major achievements of FY 2075/76

- instigator of 1st cadaveric liver transplantation in Nepal
- Conducted 2 kidney transplantations from a brain dead donor for the Third time in Nepal
- Carried out 179 kidney transplants in the FY 2075/76
- Process for Permanent placement of Technical human Resources.

Status of health care services, fiscal year 2075/76

The number of patients in all these aspects has increased remarkably in the FY 2075/76. There were 34,469 patients served in outpatient department, while the rate of admission and discharge were almost similar with 1,793 and 1,802 respectively.

There were 799 minor surgeries and 652 major surgeries in the FY 2075/76. The number of kidney transplantation escalated from 152 to 179 in FY 2075/76. The number of sessions of paid dialysis decreased from 2826 in FY 2075/76 to 3,229 in fiscal year 2074/75. There has been a slight decrease also in the free dialysis sessions from 26,051 in FY 2074/75 to 21,202 in FY 2075/76.

7.2.5 Status of specialized diagnostic services

The number of lab tests done in FY 2075/76 was 129,186. The number of ultrasound tests and X-ray and CT scan in the FY 2075/76 was 42,823,115 and 787 respectively. Similarly, the number of ECG done was 2013 while that of the echocardiograph was 1,274 followed by 654 endoscopy and colonoscopy. The total number of BCM done was 99 and that of ABG was 205.

The status of human resources at SDBNTC shows an upward trend in each fiscal year. In the FY 2075/76, there were a total of 200 staffs of which 167 were technical and 33 were non-technical staffs. These both numbers are higher than that of previous years.

7.2.6 Status of Financial Resources,

The total budget expenditure in the FY 2075/76 was 192,814,516.40

7.2.7 Physical infrastructures at SDNTC- FY 2075/76

- Hospital owned land: 0 Ropani
- Building:
 - Hospital Room: Inadequate
 - Doctor quarter: Not available
 - Staff quarter: Not available
- Ambulance : Functioning - 1
- Major Medical Equipment:
 - X-Ray machine – 1, USG – 3
 - Laboratory Equipment : Biochemistry, Hematology , dry chemistry analyzer, automated immunoassay analyzer, automated tissue presser, rotary microtome, automated coagulation analyzer, 6 port fully automated hematology analyzer,
 - Dialysis Machine : 60
 - OT/ICU Major Equipment's : Ventilator – 4 , Monitor – 15 , Syringe Pump - 10 , Infusion Pump – 10, Defibrillator- 6, Laparoscopy – 1, Endoscopy
 - 256 Slice CT Scan
 - Cath Lab
 - Endoscopic Ultrasound,
 - CUSA
 - Low Temperature Analyzer
 - TEG Analyzer
 - Autologous Blood Salvage System
 - TEE Probe
 - PCA Pump
 - EBUS
 - ECMO
 - ABP
 - Halter
 - TMT

7.2.8 Status of House Keeping at SDBNTC, FY 2075/76

SN	Activities	Remarks
1	Cleanliness of the hospital	Satisfactory
2	Maintenance of hospital premises	Satisfactory
3	Sanitation	Satisfactory
4	Health care waste management	Satisfactory
5	Safe drinking water	Satisfactory
6	Canteen	Satisfactory
7	Triage system	Satisfactory
8	Hospital parking	Poor
9	Hospital garden	Poor

7.2.9 Challenges:

- Lack of awareness
- Lack of adequate space

7.2.9 Aims of SDBNTC in FY 2075/76

- Conduct massive awareness programs on prevention of organ failure, organ donation and transplantation across the nation.
- Produce competent human resources for kidney, liver, heart surgeries through extensive training and technical support
- Conduct at least 200 kidney transplants per year
- Conduct at least 1 liver transplant and 1 heart surgery per month
- Increase the bed capacity to 300 beds
- Develop the center as a multi-specialty hub and health science institution

7.2.10 Available Services of Shahid Dharmabhakta National Transplant Center

- ☞ Kidney Transplant
- ☞ Liver Transplant
 - Nephrology -HemoDislysis, CAPD, CRRT, Plasma exchange, Access surgery (Fistula creation, permanent catheter insertion)
 - Endo Urology (Mini PCNL, TURP, TURBT, Cystoscopy, URS)
- ☞ Gastroenterology / Hepatology
- ☞ OPD
 - Gastroduodenoscopy, Colonoscopy, ERCP, Endoscopic Ultrasound
 - Laparoscopic Cholecystectomy
 - HEPATOBILLOIARY SURGERY
 - Gallstone, GB and Bile duct cancer
 - Liver Surgery
- ☞ Cardiology Cardiothoracic & Vascular Surgeon
 - VATS
 - Lung Resection
 - Open Heart Surgery
 - CABG
 - Congenital Heart
 - Valve Surgery
 - Carotid artery surgery
 - (ECG)
 - (BCM)
 - (Echo Cardiogram)
 - Bronchoscopy Lung Biopsy
- ☞ ENT
- ☞ Radio diagnosis
 - X-Ray
 - Ultrasound
- ☞ Pathology
- ☞ Organ Donation
- ☞ Physiotherapy
- ☞ 24 hour Pharmacy

7.3 Homoeopathic Services

7.3.1 BACKGROUND

Dr. Samuel Hahnemann of Germany had discovered Homoeopathic system before two and half centuries. This is based on fixed principals of “Similia Similibus Curantur”. Medicine is provided on the basis of sign and symptom exhibited by patients.

is the only one hospital providing homoeopathic services to the people of Nepal in the public sector. The homoeopathic system is economic, easy and effective having zero side-effect as well. The hospital provides OPD service only.

7.3.2 STRATEGIES ADOPTED

This is the only one hospital of Homeopathy in Nepal. This system is economic, easy and convenient, covering most of the diseases with no side effect from the medicine being used. OPD patients are outnumbered. But, due to lack of manpower and pathology lab IPD is not in action. The treatment provided here is free of cost.

7.3.3 SUMMARY OF ACHIEVEMENT

The number of patients is increasing day by day. Some of the referred cases are also treated here like allergic rhinitis, urticaria, laryngeal papilloma, PCOD and other skin diseases. Total service provided in FY 2075/76 are summarized in Table 7.1

Table 7.1: Description of patients visited in Hospital, fiscal year 2075/76

Particular	Number of Patients
General Medicine	45,302
Skin	21,125
E.N.T	3,135
Eye	2,025
Dental	1,806
Gyn/Obs.	2,530
Other	8,525
Total Patients	84,448

7.3.4 HEALTH CAMP SERVICES: FISCAL YEAR 2075/76

1. Bethan chowk Gaupalika, Dhunkharka {Health post}, Kavre
Total number of patients- 600
Male- 350
Female- 250
2. Kakani Gaupalika { Kakani PHC }, Nuwakot
Total number of patients- 405
Male- 225
Female- 180

7.3.5 Summary of Financial Allocation and Expenditure

Summary of Financial Allocation and Expenditure

Fiscal Year	Regular Budget in Rs (in thousand)	Development Budget in Rs (in thousand)	Total Budget in Rs (in thousand)
2075/76	13,600	2,000	15,600

7.3.6 Constraints

- i. Lack of doctors, paramedics and other staffs made ineffectiveness in its services.
- ii. Doctors and other staff are not provided with higher training and education.
- iii. There is high need of pathology lab.

7.3.7 Conclusion:

This homeopathy hospital is central level hospital. It needs to be ungraded. People of Kathmandu valley and nearby districts can take free and convenient service of the hospital. People far from Kathmandu valley are not able to take the benefits provided by this hospital. It is essential to provide service at all the 7 provinces of Nepal

SUPPORTING PROGRAMS

8.1 Health Training

8.1.1 Background:

National Health Training Centre (NHTC) was established in 1993 AD as the national body for coordinating and conducting all training activities under MoHP. It plans and conducts its training activities in line with the National Health Training Strategy, 2004 and according to the need of the different divisions and centers. The goal of NHTC is to build the technical and managerial capacity of health service providers at all levels to deliver quality health care services to attain the highest level of health status of Nepali citizens. There are seven provincial training centers (Dhankuta, Pathaliya, Kathmandu, Pokhara, Butwal, Surkhet and Dhangadi) and 49 clinical training sites. It caters to training needs of all departments, divisions, and centers of the Ministry of Health and Population (MoHP), and coordinate and supports to provincial health training centers, thus contributing to meet the targets envisioned in the National Health Policy 2076 BS, National Health Sector Strategy (2015- 2020) and Sustainable Development Goals 2030 AD.

8.1.2 Goal:

The overall goal of NHTC is to build a technical and managerial capacity of health service providers at all levels to deliver quality health care services towards attainment of the optimum level of health status.

8.1.3 Objectives:

- To standardize the training Learning Resource Packages (LRP) i.e. Trainer's Guide, Participant's Handbook and Reference Manual of different trainings
- To organize and conduct in service trainings to address the need of the country and to support the quality of care by enhancing the service provider's competency
- To ensure the quality of training activities by different mechanisms in adherence to national standards and to enhance the capacity of different training sites
- To adopt and promote innovative training approaches
- To strengthen mechanism and capacity for post training follow up and support

8.1.4 Strategies:

- Assessing, standardizing and accrediting training activities and clinical training sites
- Developing and standardizing training packages
- Institutional Capacity development of training sites
- Conducting pre-service, in-service, short term and long term trainings as per national requirements
- Integrating and institutionalizing training activities
- Developing links with professional career development organizations
- Strengthening Training Information Management System (TIMS) and develop trainer's pool at federal, provincial and local level.

8.1.5 Training Network of NHTC:

National health training network co-ordinates and supports seven Provincial Health Training Center (previous Regional Health Training Centers/ Sub-Regional Health Training Center) currently established under Ministry of Social development (MOSD) of each Province and 49 clinical training sites (Figure 8.1.2). The hospital-based training sites conduct Family Planning, Skilled Birth Attendance, Mid-Level Practicum, Safe Abortion Services, Rural USG, Anesthesia Assistant, Pediatric Nursing, Medico-Legal and other types of training program. The new organizational structure and training network are as shown in below.

Figure 8.1.1 New Organizational Structure of NHTC:

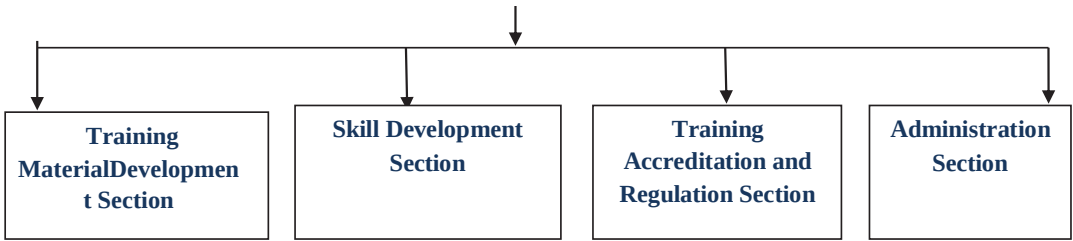
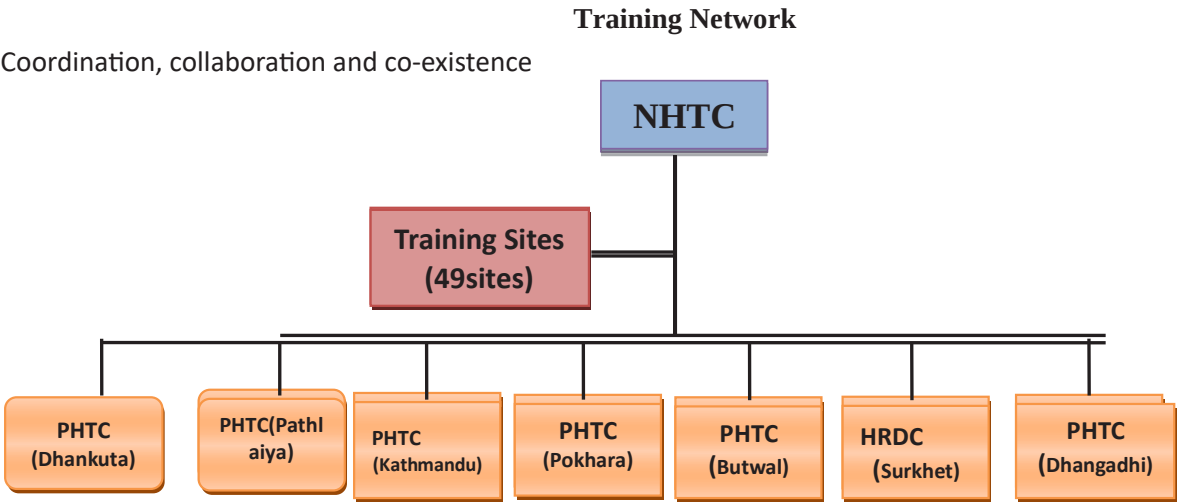


Figure 8.1.1 Training co-ordination Wings:



8.1.6 Different Clinical Training Sites accredited by NHTC:

National Health Training Centre provides following training through different training sites as listed below.

Clinical training sites

S.N	Number	Name of the training site	site accredited for
Province 1			
1	1	FPAN, Charali, Jhapa	Implant, IUCD, Minilap, NSV
2	2	AMDA Hospital, Damak, Jhapa	SBA, RUSG, MLP, AAC
3	3	Mechi Provincial Hospital, Bhadrapur, Jhapa	MLP
4	4	FPAN, Itahari	GBV, PoP, SBA, ASBA, BRH, VIA Cryo, CAC, MA
5	5	BPKIHS, Dharan	PNC, VIA
6	6	Koshi Hospital, Biratnagar	RH, PPIUCD, SBA, SAS, GBV, IP, COPF Counseling, ASRH, GBV
7	7	Nobel Medical College, Biratnagar	PPIUCD
8	8	Udayapur Hospital, Gaighat	GBV
9	9	Inaruwa Hospital, Sunsari	GBV
10	10	Okhaldhunga Community Hospital	MLP, GBV
Province 2			
11	1	Gajendra Narayan Singh Hospital, Rajbiraj	RH
12	2	Province Hospital, Janakpur	RH
13	3	Narayani Hospital, Birgunj	SBA, PPIUCD
14	4	FPAN, Jhanakpur, Dhanusa	Implant, IUCD, Minilap
Bagmati province			
15	1	Paropakar Maternity and Women's Hospital, Kathmandu	ASBA, SBA, Implant, IUCD, PPIUCD, ASRH, GBV, AAC, RUSG, CNC(SNCU), VIA/CRYO, STI, SAS (CAC, MA, 2nd Trimester Abortion Care), Minilap
16	2	CFWC, Chhetrapati, Kathmandu	FP, ASRH
17	3	Bhaktapur Hospital, Bhaktapur	ASRH
18	4	FPAN, Pulchowk	FP, SAS
19	5	MSS, Satdobato	FP, SAS
20	6	FPAN, Chitwan	FP, SAS
21	7	MSS, Narayanghat	FP, SAS
22	8	Bharatpur Hospital, Chitwan	ASBA, SBA, MLP, SAS, OTTM, GBV
23	9	PHECT Nepal Kirtipur Hospital, Kathmandu	SBA, FP, VIA
24	10	PHECT Nepal Model Hospital, Kathmandu	SAS, VIA, AAC
25	11	Nepal Medical College, Kathmandu	2nd Trimester Abortion Care, SAS
26	12	Army Hospital, Chhauni, Kathmandu	SBA, FP
27	13	TUTH, Maharajgunj, Kathmandu	NICU, ICU, OTTM, PNM, Medicolegal
28	14	Kanti Children Hospital, Kathmandu	Pediatric Nursing care
29	15	Nepal Cancer Care Foundation, Lalitpur	VIA/CRYO
Gandaki province			
30	1	Pokhara Academy of Health Science, Pokhara	RH, GBV, AAC
31	2	Community Hospital, Lamjung	SBA, MLP
32	3	Dhaulagiri Provincial Hospital, Baglung	SBA, MLP
Province 5			
33	1	Lumbini Province Hospital, Butwal	SBA, SAS, GBV
34	2	Bhim Hospital, Bhairahawa	SBA
35	3	AMDA Hospital, Butwal	OTTM
36	4	FPAN, Butwal	FP, SAS
37	5	MSS, Chandrapur, Kapilvastu	FP, SAS
38	6	Lumbini Medical college, Palpa	FP, RH
39	7	FPAN, Dang	FP
40	8	Bheri Hospital, Nepalgunj	RH, GBV
41	9	Mission Hospital, Palpa	SBA, MLP

Supporting Programs

Karnali province			
42	1	Karnali Provincial Hospital, Surkhet	SBA, FP (Implant, IUCD, NSV, Minilap)
43	2	Karnali Academic of Health Science, Jumla	SBA, IP
Sudurpaschhim province			
44	1	Seti Provincial Hospital, Dhangadhi	RH, GBV, MLP
45	2	Mahakali Provincial Hospital, Kanchanpur	SBA
46	3	FPAN, Kanchanpur	FP
47	4	Dadeldhura Hospital	SBA, MLP
48	5	Bayalpata Hospital, Achham	MLP
49	6	AchhamHospital,Mangalsen	MA

Figure 8.1.2: Province level training sites



8.1.7 MAJOR ACTIVITIES CONDUCTED BY NHTC

8.1.7.1 Training Material Development

According to ToR of Training Material development Section of NHTC, different training manuals were developed or revised this year with support from external development partners Like, Spinal cord injury management, Primary Trauma Care packages for paramedical staffs, Climate Change and Health Impact, Palliative Care, Burn Care management, Geriatric Nursing Care, Road Traffic Accidents, Basic Physiotherapy, EPI Nurse, Kidney Dialysis Package, Orientation in health and Planning at local levels, orientation on Health Facility Operation and management Committee (HFOMC). Different Learning Resource packages (LRP) are on the process of revision and development in FY 2076/77 and some of them are Anti-Microbial Resistance (AMR) prevention, Occupational Health and Safety, Basic Life Support (BLS), Menstruation Hygiene Management (MHM), Psychosocial Counseling part 2, Service Induction Training for Health Officers, Integrated health Care waste management, Healthy Baby Breathe & Healthy Mother Survive, Environmental health, health care waste management and WASH, Organizational Capacity Assessment Tool (OCAT) and Medico-legal training etc.

8.1.7.2. Skill Development

Decentralization of many training programs at provincial level has been done and Ministry of Social Development is responsible for this task. Accordingly, the main role of NHTC will be transferring of service providers' level training programs to Provincial Health Training Centers. In central level, NHTC will be more focus on Master/Training of Trainers (MTOT, TOT), special clinical trainings (Medico-legal and OTTM etc.), development of training program management guideline, expenditure guideline; training manual development and revision; monitoring programs; and further facilitate the provincial level for conducting training programs.

The Skill Development Section of NHTC conducted the following types of training:

a. Pre-service training: NHTC provides two types of pre-service trainings; the Diploma in Biomedical Equipment Engineering (18 months) and Anesthesia Assistant Course (1 year). The CTEVT accredited DBEE training is targeted for the plus two science graduate who will work as biomedical equipment technician after training completion to perform preventive and repair maintenance of healthcare equipment. The AA course under National Academy of Medical Sciences (NAMS) is considered as pre-service as well as in service training course which is designed as a task shifting to produce non-doctor AA. Staff Nurses and Health Assistant are the candidates for this course and after graduation; they can help in the conduction of various emergency surgeries, especially the caesarean section in peripheral hospitals in the absence of anesthesiologists.

b. In service trainings: Followings are the different types of in-service trainings conducted by NHTC

1. Upgrading Training: In-service upgrading trainings are designed and conducted as per the needs of MOHP, divisions and centers. The training packages aim to develop the skills to implement new programs and improve job performance. In FY 2074/75 no any upgrading training were planned and held at NHTC.

2. Competency and clinical-based training: NHTC organize various competency and clinical based training for existing government health workers in coordination with multiple clinical training sites to upgrade the knowledge and skills of the service providers in multiple clinical areas. These

in-service trainings are based on local need and demand and are supported, developed, and updated according to the national and international practice and scientific evidence. Twenty courses are offered which are listed in box below:

Types of Upgrading and Competency and Clinical-based Training Courses		
<i>Upgrading courses</i>	<i>Competency and clinical based courses</i>	
• Senior auxiliary health worker training (6 months) • Senior auxiliary nurse-midwife (6 months) • Auxiliary nurse-midwife Padnam (P) (6 months) • Auxiliary health worker-P (6 months) • Auxiliary health worker(15 months) • Auxiliary nurse-midwife (18 months)	• Skilled birth attendance • Advanced skilled birth attendance • Rural ultrasonography (USG) for nurses • Medico-legal Training • Non-scalpel vasectomy • Intrauterine Contraceptive Device (IUCD) • Postpartum intrauterine contraceptive device (PPIUCD) • Minilaps • Implants • Safe abortion services • Comprehensive abortion care • Medical abortion	• Mid-level practicum (MLP) • Palliative care • Pediatric nursing care • Gender based training • Clinical training skills (CTS) • Operation theatre technique and management (OTTM) • Infection prevention (IP) • Mental health • Comprehensive family planning (CoFP) counseling • Primary trauma care (PTC) and emergency trauma management (ETM) • Adolescent and sexual reproductive health (ASRH) • Packages of Essential Non-communicable Diseases

3. Refresher training: A range of refresher trainings are conducted as per the needs of divisions and centers to develop the skills for implementing new programs and to improve job performance. In this fiscal year 2075/76, the refresher training courses include for skilled birth attendants (SBAs), VIA/CRYO, Family planning and Palliative care.

4. Orientation programs: NHTC supports the divisions and centers to develop orientation packages and prepare pools of trainers for conducting orientations for health and non-health workers including for Health Facility Operation and Management Committee (HFOMC) members and orientation program on planning at local levels.

5. Basic training: Basic trainings are organized for Female Community Health Volunteers (FCHVs) who are newly recruited by the local mother's group among the member. The duration of this course is 18 days. This training is not being conducted

6. Service Induction training: NHTC has begun providing induction training for newly PSC recruited all gazette 7/8th level Health Officers of all health service groups from 2072/73. The one month courses (24 days working day) are provided for all health service disciplines.

7. Others:

Others training includes

- Training on the Transaction Accounting and Budgetary Control System (TABUCS)
- Biomedical equipment assistant training (BMEAT)
- Biomedical equipment training for users (cold chain, laboratory, X-ray)

8.1.7.3. Training Accreditation and Regulation

Accreditation and Regulation section of NHTC is responsible for accrediting appropriate clinical and competency based training courses and training sites. All Institutions must be accredited before providing training courses. This section is responsible to monitor and regulate learning resource materials i.e. curriculum and training programs conducted by other divisions and centers under MOHP and by other supporting partners. It also helps MOHP in formulating Guidelines, protocols and standards in maintaining quality of training. This section is also responsible to perform training follow up programs like Follow up Enhancement (FEP), training monitoring and certification etc. The lists of accredited site are listed in table 8.1.1.

8.1.7.4. Institutional Capacity Development

NHTC focuses on the following activities for the institutional capacity development of training:

- **Physical facilities:**

NHTC supports /facilitate for infrastructure developments of PHTCs, hospitals and training sites as per the need and demand. Along with this, it reviews and ensures the presence of adequate physical facilities and equipment.

- **Training program development:**

NHTC develops the training program as per the need of MoHP, DoHS and other stakeholders and facilitates coordination between divisions, centre, province and training sites. NHTC also plans, implements, and manages different trainings and supports training improvement in coordination and collaboration with external development partners, NGOs, private providers and medical colleges.

- **Capacity building:**

NHTC develops the capacity of central and provincial level staff in different training and development specialized areas. It strengthens and enhances knowledge and skill of staff by providing an opportunity to participate in different national and international workshop, seminar, training, and different programs.

- **Training Working Group:**

A high-level Training Working Group (TWG) is formed in the leadership of NHTC. This TWG comprises the membership of government and external development partners which meet on regular basis to discuss training quality improvement, curriculum development, certification, and training accreditation.

- **Training Information Management System (TIMS)**

Training Information Management System is a web application to manage the training Recording, Reporting and Certification at a centralized location for different Training Sites and Province wise. It is a web based online closed source and interruptible software which manage all training related data including trainers and participants' profile, training information, training record log and certification. There is a possibility of interoperability with HuRIS an individual, task and organization level to analyze the correlation with training expenditure and quality improvement if the training conducted from all Divisions, Centers, Province and local levels are linked to maintain centralized registration system within TIMS.

8.1.7.5. Follow –up Enhancement (FEP):

National Health Training Center (NHTC) has been providing various in-service training to improve health service provision. However, it was not clear if they were actually retaining and utilizing the skills that they learned at their worksites. There is evidence that to retain the knowledge and skill of health worker, Follow-up and Enhancement (FEP) is essential. In this regard NHTC has a policy, NHTC in collaboration with Nick Simons Institute (NSI) initiated a Follow-up and Enhancement Program since 2011.

FEP allows assessing the knowledge and skill of trainees to find the gaps and provide on-site coaching and it also assesses the enabling environment in terms of drugs supply, equipment, team support. The FEP team also provides feedback to trainees Health Facility Operation and Management Committee (HFOMC), province and central level stakeholders so that they can fulfill the gaps. The objectives of FEP programs are:

- To assess the retention of knowledge and skills of the trainees
- To provide onsite coaching based on gap findings
- To assess the enabling environment of each site
- To feedback/share findings to all the concern stakeholders (Birthing Centers, province and Central level)

8.1.9 Annual target and achievements

a. Program activities

In FY 2075/76 NHTC has achieved most of its annual training target i.e. about 4597 participants among which 1481 male and 3115 female were trained. Under different headings of training activities, NHTC has performed remarkably by achieving more than 100% of the training target in VIA/CRYO, CoFP, ASRH, Palliative Care, SBA, NICU, PPIUCD, PEN, Pediatric Nursing and Infection prevention training. The overall physical progress was 104.10 and financial progress was 91.23 in the FY 2075/76.

b. Budget and Expenditure

The data shows the percentage of budget spent with respect to budget allocation in FY 2075/76 compared to previous FYs.

Status of budget allocation and financial progress in three consecutive fiscal years

Budget	FY 2073/074 (in NRs '000)		FY 2074/075 (in NRs '000)		FY 2075/076 (in NRs '000)	
	<i>Allocated Budget</i>	<i>Expenditure (%)</i>	<i>Allocated Budget</i>	<i>Expenditure (%)</i>	<i>Allocated Budget</i>	<i>Expenditure (%)</i>
Central level	188,450	80.62	204,149	90.3	10,37,00	91.23

8.1.10. ISSUES AND RECOMMENDATIONS:

Major issues, problems raised at this year's national and regional review meetings are listed in Table. Major Issues and Recommendations

Issues	Recommendations
• Manage a separate pool of trainers from different disciplines • Unplanned selection of participants: – Training plan for program and service (district and respective division) – Training as incentives rather than need based and career development • Multi-door trainings • Lack of strategic and uncoordinated approach to training, e.g. staff may be trained but lack the equipment required or opportunities to practice their skills. • Focus of training on transfer of knowledge (theory) rather than developing practical skills • Inadequate training follow up mechanism	• Consolidate the overall training needs of health service providers • Consolidate all training program run by divisions and centers through NHTC. • Improve the quality of training by regularly updating trainers, by post-training follow-up, by preparing a roster of master trainers and by ensuring training quality as per guidelines • Recognize competency based training for career development • Design and develop practical training which encourages 'learning by doing' and links directly to an individual's job/ tasks • Establish a national health resource unit at NHTC • Rapidly assess the needs of NHTC, RHTCs and training sites including infrastructure and human resources. • Make transfer policies and guidelines • Revise the selection criteria for upgrading training • Develop regulating bodies to ensure quality and standard of training

8.2 Vector Borne Disease Research and Training

8.2.1 Introduction

Vector Borne Disease Research and Training Center (VBDRTC) was established in the year 1979 AD with the name of Malaria Research and Training Centre under the Nepal Malaria Eradication Organization which was renamed as VBDRTC in 16 May 1997 with extending its working areas. This center is responsible for research and training of VBDS including Malaria, Kala-azar, Dengue, Chikungunya, Lymphatic filariasis, Scrub typhus and Japanese encephalitis.

8.2.2 Major activities carried out in fiscal year 2075/76

Training:

8.2.2.1. VBDs training for health workers

The objective of this training is to update the knowledge, skills and strengthen management capacity of health workers on VBDs in Nepal. Three days VBDs training was conducted in Gulmi, Kaski and Kapilbastu district. The methodologies used were lecture, audio/visual aids, power-point presentation, group works and discussion. A total of 75 persons including MO, VCI/ VCO/ MI, HA, AHWs, ANMs and MR were trained on VBDs.

8.2.2.2 VBDs training for physicians, pediatricians and medical officers

The objective of this training is to orient the participants on treatment protocol of VBDs and to facilitate early diagnosis and appropriate treatment of VBDs. The training was conducted in GN Singh Hospital Saptari, Seti Zonal Hospital, and Damak Hospital, Jhapa. Physicians, pediatricians, medical generalists were used as facilitators. A total of 90 doctors were oriented in the fiscal year.

8.2.2.3 Malaria microscopy training

Light microscopy (Giemsa Malaria Microscopy) is still the gold standard technique for malaria diagnosis. VBDRTC is providing basic and refresher malaria microscopy training to laboratory technicians/assistants working in the malaria endemic areas to develop competent manpower at microscopic centers.

8.2.2.3.1 The basic malaria microscopic training

This training is intended to provide to laboratory personnel who are new to malaria microscopy and are involved in malaria diagnosis. It is 30 days of course with lots of hands on techniques involving smear preparation, staining, and microscopic examination of malaria parasites. The expected outcome of this training is to provide basic malaria microscopy quality diagnosis and to acquire skillful eyes in differential diagnosis of all species of Plasmodium parasites. A total of 24 persons were trained in basic malaria microscopy at VBDRTC.

8.2.2.3.2 The refresher malaria microscopy training

This 15 days training is intended to provide to those who had previously obtained basic

microscopy training to update and upgrade the skills in malaria microscopy and to strengthen the malaria microscopy laboratory services in malaria endemic districts. A total of 60 persons were trained.

8.3. Early warning and reporting system on-site coaching programme

The objective of Early Warning and Reporting system (EWARS) on-site coaching is to improve recording /reporting system, strengthen surveillance system of VBDs and other epidemic potential diseases and encourage timely and complete reporting. Programme was conducted in 10 sentinel hospitals. A total of 141 persons were participated including medical superintendent, medical officers and medical recorders. Timeliness and completeness of the reporting has been improved in the oriented sentinel hospitals.

8.4. Molecular diagnosis of Malaria and dengue using PCR at VBDRTC

In VBDRTC, PCR is used for diagnosis, quality assurance, surveillance and outbreak investigation of malaria and serotyping of dengue virus. In FY 2075/76, a total of 100 serum samples (96 NS1 positive +4 ns1 negative) were subjected to PCR. Among 96 PCR positive sample, 86 were dengue 2, 4 were dengue 1 and remaining 6 were mixed with dengue 1 & dengue 2.

8.5 Research activities

8.5.1 Serotyping of dengue virus and entomological survey of its vectors in Gandaki province

Introduction

In Nepal, dengue outbreak occurs every year with alarming impact on both human health and the national economies. Recovery from infection of one serotype provides lifelong immunity but subsequent infections by other serotypes may increase the risk of developing severe dengue. Therefore knowledge of current circulating serotype & vector will be helpful for managing severe cases, preparedness and response of the forthcoming outbreaks by applying appropriate vector control methods.

8.5.2 Methods

This hospital based cross sectional study was carried out from August 2018 to May 2019 by screening dengue cases among all febrile patients seeking treatment in different hospitals, medical colleges, nursing homes, private and community/government hospitals using standard questionnaire. Blood samples were collected to perform RDT(NS1 & Ig M&IgG) based on dengue case definition and serum sample was used for serotyping of dengue virus by using RT PCR.

8.5.3 Results

A total of 574 dengue cases, 334 patients were included for demographic, clinical & other information. Out of 334 patients, 118 acute NS1/IgM positive serum sample were collected for PCR. 96 NS1 positive samples subjected for serotyping of dengue virus by using real time PCR. Among 96 PCR positive sample, 86 were dengue 2, 4 were dengue 1 and remaining 6 were mixed with dengue 1 & dengue 2. During vector survey, *Aedes aegypti* which is known as primary vector for dengue transmission in Nepal along with *Aedes albopictus* found significantly in higher density.

8.5.4 Conclusion and Recommendation

Although all sero-types were detected in 2006, dengue-2 was found predominant circulating sero-type in 2018 (86/96) out breaks occurred in Pokhara Metropolitan and its surrounding districts along with few cases (4/96) of dengue 1. Subsequent cross sero-type's infection may increase severe cases in near future. Due to the shifting epidemiology of dengue virus with expanding its map from Tarai to mountainous zones, country needs to strengthen the dengue outbreaks prediction, early detection and rapid response capacity at all level by improving VBDs surveillance system.

8.6 Study on Microepidemiology of PKDL

8.6.1 Introduction

PKDL is considered as an important reservoir of sand flies infection, their detection and treatment are important for VL elimination. The objectives of the survey were to document the prevalence rate of PKDL in past treated kala azar cases, explore the possible risk factors for developing PKDL, document the sero-prevalence of *Leishmania donovani* infection among healthy contacts living together and surroundings of PKDL cases and document the sandfly vector status/density in and around the houses living with PKDL cases.

8.6.2 Methods

The retrospective cohort study was conducted from March to June 2019, in Jhapa, Morang, Sunsari, Saptari, and Siraha districts which are known to be highly endemic for Kala-azar. 854 cases were screened for PKDL among the 1172 past treated VL cases.

8.6.3 Results

8.6.3.1 Prevalence and risk of PKDL in previously treated Kala-azar cases

Most of the PKDL cases had previously been treated for Kala-azar with SSG (52.2%; 12/23) followed by Miltefosine (34.8%; 8/23), with Amphotericin B (8.7%; 2/23) and three days regimen of Liposomal Amphotericin B (4.3%; 1/23). The overall prevalence of PKDL in Miltefosine treatment was 3.8%, 3.6% in SSG treatment regimen, 1.9% in Amphotericin B treatment and 0.5% in Liposomal Amphotericin B treatment. A total of 23 (2.7% of 854) were confirmed as PKDL. In the SSG treated group (358 patients) the prevalence rate of PKDL was 3.4% where as Miltefosine treated group (209) the prevalence rate was 3.8%. In the Univariate analysis, PKDL was significantly associated with inadequate Miltefosine treatment in the past for Kala-azar (OR=9.1; 95% CI 3.21 – 39.81). Both findings remained independently significant in the multiple logistic regression models. Overall, the risk to develop PKDL was 1.8% within two years after Kala-azar treatment, 2.9% within 4 years and 3.9% within 8 years. Age is also important because younger patients (<15 years) were reported to have significantly shorter intervals than the older age group.

8.6.3.2 *Leishmania donovani* infection in healthy individuals

All the healthy individuals living together with PKDL households and nearby surroundings were tested with rK39 RDTs and overall sero- prevalence was 2.9% (3/102) excluding the PKDL cases.

8.6.3.3 Entomological findings

All clusters/villages with confirmed PKDL cases except Korobari-4 in Jhapa district, didn't found to be harboring vector sand flies *P. argentipes* inside and surrounding the case houses. Other Phlebotomine sand fly species like *P. papatasi* and *Sergentomyia* species were captured from the houses and cattle sheds where vector was searched. Presence of kala-azar vector, i.e. *Phlebotomus argentipes* in and around the PKDL case house is a strong evidence of local and hibernate transmission of the Kala-azar in the area.

8.7 Entomological activities

8.7.1 Insecticide susceptibility status of *Anopheles fluviatilis* against different insecticides

One hundred fifteen adult female *Anopheles fluviatilis* mosquitoes exposed with Alphacypermethrin showed 100% mortality. Similarly one hundred twenty nine adult female *Anopheles fluviatilis* mosquitoes exposed with Lambdacyhalothrin also showed 100% mortality. Two hundred sixty nine adult female *Anopheles fluviatilis* mosquitoes exposed to DDT showed 49.4% mortality. However, 100% mortality was observed in susceptibility tests performed on one hundred forty seven adult female *Anopheles fluviatilis* mosquitoes with Malathion and one hundred sixty with Bendiocarb. All the mosquitoes were collected from Nibuwater village, Makwanpur district and susceptibility tests were performed at VBDRTC.

8.7.2 Insecticide susceptibility status of malaria vector *Anopheles annularis* againsts Alphacypermethrin and Lambdacyhalothrin

One hundred twenty five adult female *Anopheles annularis* mosquitoes collected from Kushnahari village ward number.13, Nawalpur district exposed against Alphacypermethrin showed 57.6% mortality and one hundred twelve exposed against Lambdacyhalothrin showed 59.8% mortality. In order to obtain the intensity of resistance, additional one hundred ten adult female *Anopheles annularis* mosquitoes were further exposed against 5x higher concentration of Alphacypermethrin and 89.0% mortality was observed.

8.7.3 Entomological survey of dengue vectors in different localities of Pokhara metropolitan city during Pre and post monsoon priod.

The objective of the entomological survey was to determine the breeding habitats and prevalence of *Aedes* mosquito species during pre and post monsoon season. Survey of *Aedes* mosquitoes was carried out in different localities of ward no. 8, Pokhara Metropolitan city Kaski district during the pre monsoon period (2076/01/20 to 2076/01/28). Overall, 436 water-holding containers were inspected in 105 houses in Shivalaya tol, Chalise tol, Nagbeli tol and Nagdhunga tol to detect the presence of *Aedes* mosquito breeding habitats. Among these surveyed houses, 49 (46.6%) houses were found positive for *Aedes* larvae. Among these 436 water-holding containers inspected, 103 (23.6%) were found infested with *Aedes* mosquito larvae. The overall House hold, Container, Bruto and Pupal Indices were 46.66, 23.62, 98.09.00 and 304.76 respectively. Among all the water-holding containers inspected, highest positivity percentage of *Aedes* mosquito larvae was recorded in plastic drums (8.8%), followed by automobile tyres (7.4%), metal drums (2.3%), paint bucket (1.9%), plastic bucket (1.4%) respectively. A total of 320 pupae were collected from different types of water-holding containers. All collected pupae were emerged adult stage.

Supporting Programs

182 (56.9%) were *Aedes albopictus* and 138 (43.1%) *Aedes aegypti*. This pre-monsoon entomological survey also revealed that both *Aedes* mosquito species *Aedes aegypti* and *Aedes albopictus* co-existed in the surveyed localities. A total of 211 water-holding containers inspected among surveyed 60 houses, 96 (45.5%) were found infested with *Aedes* mosquito larvae during post monsoon season to detect the presence of *Aedes* mosquito breeding habitats from 2075/07/15 to 2075/07/17. Among these houses, 42 (70.00%) were found positive for *Aedes* mosquito larvae. The overall entomological indices HI, CI, BI and PI were 70.00, 45.5, 160.00 and 363.33 respectively. Among all the water-holding containers inspected, highest positivity percentage of *Aedes* mosquito larvae was recorded in plastic drums (23.2%), followed by tyres (9.9%), metal drums (5.2%), plastic pots (3.3%), plastic jars (1.4%), fridge vessels (1.0%), plastic bottles (1.0%) and milk crate (0.5%) respectively. A total of 134 collected and reared pupae were emerged into adult stage were 70 (52.2%) *Aedes aegypti* and 64 (47.7%) *Aedes albopictus*.

8.7.4 Entomological survey of dengue vectors of Dharan

To determine the breeding habitats and prevalence of *Aedes* mosquito species, a total of 102 houses were surveyed in different localities of ward no. 15 of Dharan sub-metropolitan city, Sunsari district from 2076/03/10 to 2076/03/16. Among surveyed houses, 65 (63.7%) houses were found positive for *Aedes* mosquito larvae. Overall, 361 water-holding containers were inspected. Among these 361 water-holding containers, 118 (32.6%) were found infested with *Aedes* mosquito larvae. High levels of entomological indices were observed during this survey. The overall HI, CI, BI and PI were 63.7, 32.6, 115.6 and 128.4 respectively. Among all the water-holding containers inspected, highest percentage of *Aedes* mosquito larvae was recorded in plastic drums (13.5%), followed by flower pot (4.14%), plastic pot (3.6%), automobile tyre (2.7%) and metal drum (1.6%) respectively. A total of 131 pupae were collected from different types of water-holding containers emerged into adults stage. Among these, 124 (94.6%) were *Aedes aegypti* and 7 (5.3%) *Aedes albopictus*. It revealed that *Aedes aegypti* is the most prevalent *Aedes* mosquito species in the surveyed localities.

8.8. Financial Achievement

Fiscal year	Allocated budget	Total Expenses	Expenses %	Remaining	Irregularity Regulated	Irregularity to be regulated (cumulative)
2073/74	22,600,000.00	16,366,998.55	72	6,233,001.45	0	29,700.00
2074/75	30,030,000.00	15,235,068.58	51	14,794,931.42	0	1015973.10
2075/76	23260000	20459136.09	87.9	2800863.91	1015973.10	0

8.9. Problems/ constrains

S. N	Problems/ constrains	Action to be taken	Responsibility
1	VBDRTC's Office & dormitory for trainees is occupied by health office Makawanpur and educational directorate, Hetauda.	Health office & Educational Directorate to be managed in other place.	VBDRTC & MoHP /MoSD
2	Old infrastructure: dormitory, office building and quarters.	Hostels, office and staff quarters to be renovated.	VBDRTC/MOHP
3	Vacant post: parasitologist, entomologist & VCO	Vacant post needs to be filled	VBDRTC/MOHP
4	Lack of vehicles for training, research, surveys and outbreak investigation of VBDs.	At least one vehicle should be provided for field program.	VBDRTC/MOHP
5	Lack of sanctioned post for microbiologist, epidemiologist, research officer and statistical officer.	O & M survey to be done to revitalize VBDRTC.	VBDRTC/MOHP

8.3 Health Education Information and Communication

8.3.1 Background

The National Health Education, Information and Communication Centre (NHEICC) is the apex body under the Ministry of Health and Population for planning, implementing, monitoring and evaluating Nepal's health promotion, education and communication programmes including periodic surveys and research. The Scope of the centre is guided by the National Health Communication Policy 2012 and the National Health Policy 2014, communication strategies and other health related plans and policies. The centre functions to support health programmes and services to achieve national health goals and SDGs through health promotion, education, information and communication approach. The centre is the lead for all health promotion, education and communication programmes including multi-sectoral health initiatives. The centre uses advocacy, social mobilization and marketing, behaviour change and community lead social change strategies to implement its programmes.

8.3.2 Vision:

Every Nepali is healthy and lives a long and productive life.

8.3.3 Goal:

The goal of NHEICC is to contribute to the attainment of the highest level of health of the people of the nation.

8.3.4 Objectives:

The general objective of education, information and communication for health is to raise health awareness of the people as a means to promote improved health status and to prevent disease through the efforts of the people themselves and through full utilization of available resources.

The specific objectives of NHEICC are listed below:

- To mobilize and use modern and traditional communication multimedia and methods to raise health awareness, knowledge and promote healthy behaviour among the general public.
- To strengthen, expand and implement health communication programmes at all levels.
- To generate, collect and mobilize resources to implement health communication programmes.
- To prevent the unauthorized dissemination and duplication of health related messages or information and materials on different issues.
- To enhance capacity on health communication to develop, produce and disseminate quality, correct, authorized, uniform and appropriate messages and information.
- To provide quality health messages and information through appropriate media and methods to the citizens who otherwise have little access to such messages and information.

8.3.5 Strategies:

Advocacy, social mobilization and behaviour change communication are the major strategies for health promotion, education and communication. The specific strategies are as follows:

- Advocating with all levels of stockholders for building healthy public policy and health in all policies.
- Implementing a one-door integrated approach for all health communication programmes under MoHP.
- Ensuring adequate budget for health communication programmes.
- Coordinating and collaborating with all levels of stakeholders through technical committees and other means.
- Ensuring implementation of health communication programs through health infrastructure at all tiers of federal government i.e. federal, provincial and local levels in a decentralized manner.
- Mobilizing communication media, methods and materials for the prevention of diseases and promotion of health.
- Standardizing health messages and information for uniformity and appropriateness.
- Using edutainment approach with an education format for disseminating health messages and information.
- Ensuring that all stakeholders disseminate health messages and information after taking consent from concerned MoHP authorities.
- Encouraging the media to disseminate messages and information on health issues.
- Encouraging the dissemination of health messages and information through public private partnerships.
- Discouraging messages and information that is harmful to health.
- Prioritizing lifestyle diseases prevention messages and information dissemination.
- Building the capacity of health workers to plan and implement health communication programmes.
- Ensuring the quality, uniformity and standardisation of health messages and materials through technical committees.
- Introducing new communication technologies for health promotion and health communication.
- Coordinating with academia for building the capacity of health workers on health promotion and health communication.
- Strengthening monitoring and supervision activities to determine the gaps in knowledge, attitudes and practices among target audiences and service providers.

8.3.6 Major activities and achievement by federal, province and district level in 2075/76

Health education, information and communication (health promotion) activities that were carried out by federal level in the reporting period are listed in the following table (table 8.3.1).

Table 8.3.1: Major activities carried out by federal level in 2075/76	
Development, production and distribution of IEC materials to stakeholders, regional medical stores, DHOs and DPHOs.	Health awareness and communication program on mental health and birth defect
Development, production and broadcasting of health messages through radio, television, and newspapers (printed and electronic).	Pen-package promotion regarding the Control of non-communicable diseases.
Golden 1000 days promotion communication campaign	Communication programme on tobacco control and regulation.
Communication programme on IMNCI, immunization, nutrition.	Communication programme on communicable disease and epidemic prevention.
Health promotion program's national commitment message dissemination on Merobarsha pratibaddhata; swasthya prati jimmewar : samriddhiko aadhar	School and adolescent friendly service centre, safe motherhood, delay marriage and family planning related inter-personal, social mobilization and mass communication programme
Health promotion, reproductive and child health, free health, communicable and non-communicable disease prevention related IEC materials printing and distribution	Dissemination of messages and information through popular online media
Broadcasting of health messages through Radio Nepal and Nepal television in packages including Jeevanchakra, Janaswasthya radio program, Janaswasthya Bahas.	Communication programme on risk factors of non-communicable diseases through social mobilization, interpersonal communication, electronic and print media.

Source: NHEICC

Health education, information and communication (health promotion) activities that were carried out by provincial and district level in the reporting period are listed in the following table (table 8.3.2).

Table 8.3.2: Major activities carried out by Province and District level in 2075/76	
Hygiene and sanitation programmes for preventing and controlling epidemics.	Publication of health messages in print media.
Production of need-based IEC materials.	Community interaction programmes for promoting health services.
Distribution of IEC materials to health facilities.	Celebration of world health day and other health related days, week and months.
Production and airing of health programmes and messages through local FM radio on different health issues.	

Source: NHEICC

8.3.7 Trend program analysis by federal, provincial and district level

The physical and financial achievement in the year 2075/76 regarding Health education, information and communication (health promotion) programme by federal level was 95 percent and 76.41 percent respectively. Provincial and district level achievement report was not obtained in the reporting year. The trend is shown in the following table (Table 8.3.3)

Table 8.3.3: Percentage trend of physical and financial achievement by federal, provincial and district level in 2073/74 to 2075/76.

Programme	2073/74		2074/75		2075/76	
	Physical	Financial	Physical	Financial	Physical	Financial
Federal Level	90.13	69.55	56.04	79.12	95	76.41
Provincial and District Level	73.00	72.92	85	83	NA	NA

Source: NHEICC

8.3.8 Strength, Weakness and Challenges:

The strength, weakness and challenges of Health education, information and communication (health promotion) programme in the reporting year are shown in the following table.

Table 8.3.4: Strength, Weakness and Challenges

Strength	Weakness	Challenges
- National health communication policy, strategy and directive are in place. - Good organizational structure at federal/province level for health promotion program. - Behaviour change communication for health approach has been developed in line with national health communication policy 2012. - Programmes flow from federal to province and local level.	- Limited human resource for health promotion at federal and province level. - No human resource for health promotion at local level. - No organizational structure for health promotion program at local level.	- Inadequate compliance with National Health Communication Policy (NHCP), guidelines and directives. - Less emphasis in health promotion activities according to changing disease pattern. - Inadequate allocation of budget on the basis of planned programs.

8.4 Health Service Management

Background

The Management Division(MD) is responsible for DoHS's general management functions. DoHS's revised Terms of References (ToR) of MD describing it as the focal point for information management, planning, coordination, supervision, forecast, quantify, procure, distribute health commodities for the health facilities and the monitoring and evaluation of health programmes. The division is also responsible for monitoring the quality of air, environment health, health care waste management, water and sanitation. It also monitors the construction and maintenance of public health institution buildings and supports the maintenance of medical equipment. It also involved repair and maintenance of bio-medical equipment, instruments and the transportation vehicles. More activities assigned to this division include including policy and planning related to health infrastructure and logistic management. The objectives and strategies of the Management Division are listed in Box 8.4.1

Box 8.4.1 Objectives and strategies of the Management Division

Objectives — The Management Division aims to support health programmes and DoHS to deliver health services through the following specific objectives:

- Facilitate and coordinate among concerned divisions and centres to prepare annual plans, programmes and to make necessary arrangements to get approval from the National Planning Commission (NPC) and Ministry of Finance.
- Make arrangements for the preparation and compilation of annual budgets and programmes of province and local levels.
- Monitor programme implementation status and carryout periodic performance reviews.
- Manage integrated health information system.
- Manage and coordinate the construction and maintenance of buildings and other public health infrastructure including the maintenance of biomedical equipment.
- Support MoHP to develop and implement environmental health, health care waste management and drinking water-related policies, directives and guidelines
- Support MoHP to develop and update national-level specification bank for drugs and health equipment's.
- To plan and carry out the logistics activities for the uninterrupted supply of essential medicines, vaccines, contraceptives, equipment, HMIS/LMIS forms and allied commodities for the efficient delivery of healthcare services from the health institutions of government of Nepal in the country.

Strategies:

- Make arrangements to collect and analyse health information and use it to support the planning, monitoring, and evaluation of health programmes
- Strengthen bottom-up planning from community to central levels via the optimum use of available resources including health service information.
- Support MoHP to Conduct and expand regular periodic performance reviews and use outcomes for improvements down to community level.

- Strengthen and guide the monitoring and supervision system at all levels.
- Establish a central data bank linking HMIS with the Human Resources Management Information System (HURIS), health facility and work force registry, surveillances, HHS, LMIS, finance, surveys, censuses and other sources of information.
- Expand computerized information systems at all levels.
- Monitor the health services provided by state and non-state health institutions.
- Develop and implement construction, repair and maintenance plans for public health facilities and for biomedical equipment.
- The routine management of integrated health service Information.
- Develop and implement integrated supervision and monitoring plans.
- Establish and develop required infrastructure, human resource and guidelines to conduct other assigned designated and non-routine works.
- Logistics planning for forecasting, quantification, procurement, storage and distribution of health commodities.
- Introduce effective and efficient procurement mechanisms like e-Bidding, e Submission.
- Use of LMIS information and real-time data in the decision making.
- Strengthen physical facilities at the Federal, Provincial, District and Local level for the storage and distribution of health commodities.
- Promote Online Inventory Management System and Non-Expendable/Expendable Items Inventory System in Federal, Provincial, District and Local level warehouses.
- Auctioning of non-functional cold chain equipment's/furniture, vehicle etc.
- Repair and maintenance of bio-medical, cold chain equipment's/instruments and transportation vehicles.
- Capacity building of required human resources on logistics management regarding public procurement, e-bidding, e-procurement, and online Inventory Management System at all levels.
- Implement effective Pull System for year-round availability of Essential Drugs and other health commodities at all levels (Federal, Provincial, District and Local level Health Facilities).
- Improvement in procurement and supply chain of health commodities, working on procurement reform and restructuring of federal, provincial and district stores.
- Formation of IHIMS Working Group at Federal and Provincial levels.

Organizational arrangements

The Management Division has four sections and one unit for the overall management of functions and service delivery (Box 8.4.2). The specific functions of sections and units are given below:

Box 8.4.2 Sections under Management Division

- Integrated health information Section
- Environmental health and health related waste management Section
- Health Infrastructure Development Section
- Logistic Management Section

8.4.1. The Integrated Health Information Management Section

Manages health service information from community to the DoHS level. This system provides the basic information for planning, monitoring and evaluation of the health system at all levels. The major functions of the HMIS are listed in Box 8.4.3

Box 8.4.3 Major functions of the Integrated Health Information Management System

- Facilitate MoHP to develop national level policies, plans, regulation, guidelines, standards and protocols related to integrated information system.
- Timely update and making information digital friendly for effective management and health information.
- Develop, expand and institutionalize existing health sector information system such as HMIS, LMIS, HIIS etc as an integrated information system.
- Identification and revision of sector wise health indication for national level health information.
- Develop periodic and annual health reports and disseminate the funding based on rigorous analysis and existing health information.
- Facilitate for capacity building and health personnel for institutionalization of integrated information system at different level.
- Coordination and cooperation with provincial and local level government for health-related information management system development and implementation.
- Facilitate division of DoHS for developing annual work plan and budget.
- Prepare and document monthly, trimester and annual progress and various activities conducting by divisions under DoHS and need based reporting to MoHP.
- Provide support to MoHP on behalf of DoHS for development of overall plan.
- Improve online data entry mechanisms in all districts and hospitals and gradually extend online data entry to below districts level health facilities. Online data entry mechanism will be established in provinces and local levels.
- Establish a uniform and continuous reporting system from government and non-government health service providers so that all health services provided by government and non-government providers are reported and published.
- Verify, process and analyse collected data and operate a databank.
- Provide feedback on achievements, coverage, continuity and quality of health services to programme divisions and centres, RHDs, hospitals, DHOs and DPHOs. Databased feedback will be provided to provinces.
- Disseminate health information through efficient methods and technologies.
- Improve the information management system using modern information technology.
- Update HMIS tools as per the needs of programme divisions and centres.
- Update geo-information of health facilities.
- Provide HMIS and DHIS 2 tracking as per needed.

Nepal's health sector needs accurate, comprehensive and disaggregated data to gauge its performance, to identify inequalities between social groups and geographic areas, to plan future interventions, and to enable the monitoring of NHSP-2 and NHSS targets to provide evidence to inform strategic and policy level decisions.

The current HMIS software system (DHIS 2 software) meet the basic requirements of the recently revised HMIS. Existing software related errors have been resolved with upgrading of System to dHIS 2.3. Few problems related to Nepali Calender are on the progress of sorting out with the help of DHIS 2 developers. New Dashboards for different level governments have been developed which will facilitate program managers and policy managers to monitor real time health situation. There is still software related errors seen which are raised due to calendar and other issue.

8.4.2. Health Infrastructure Development Section

Functions of the health infrastructure Development Section are listed in Box 8.4.4

Box. 8.4.4 Major Functions of the Health Infrastructure Development Section

- Support MoHP for development of national level policy, regulation and standards related to physical structure of health facilities and health equipment's.
- Maintain the updated record and upgradation of physical infrastructure and health equipment.
- Facilitate health facilities to develop national plan for need based infrastructure development.
- Coordination with concerned authorities for basic infrastructure management of health facilities.
- Facilitate for development update and monitoring of hospital code of conduct.
- Facilitate for supervision, monitoring and quality control of health infrastructure and equipment.
- Identifying the status of and maintaining medical equipment;
- Rolling out the out sourcing of maintenance contract nationwide.
- Coordinating with government agencies and other stakeholders for the maintenance of health facility and hospital medical equipment.
- Manage and mobilize biomedical engineer and other human resources.

8.4.3. Environment health and health related waste management section

As per the work description approved from council of ministers federal gvernemtn is responsible for development and monitoring and evaluation guideline, logical framework, quality standard for drinking water, food and air quality. This section was establish to implement the above function of the federal government. Detail terms of reference of this section is included in Box 8.4.5.

Box 8.4.5 Major Functions of the Environmental health and health related waste management section

- Support and facilitate MoHP to develop environmental mental health related policy, guideline, directions and standards.
- Facilitate for carrying out regular surveillance and studies related to impact and drinking water, air and overall environmental on health status and support for environmental pollution control.
- Support MoHP for development of national laws, policies, plans, standards and protocols for health-related waste management.
- Facilitate for scientific management of health-related wastages released for different health facilities under federal, provincial and local level government.

- Carry out monitoring and central activities for scientific management of health-related wastages released from health facilities under federal government.

8.4.4. Logistic Management Section

The function of the Logistic Management section are listed in Box 8.4.6

Box 8.4.6 : Major functions of the Logistic Management Section

- Support MoHP for development of procurement and supply related national laws, policies, guidelines, quality standards, protocols.
- Support MoHP to prepare national level standard and specification bank for drugs, health related tools and equipment.
- Procurement of vaccine, family planning commodities and other essential health commodities to the province.
- Facilitate federal and local level government for procurement and supply of the essential medicines and equipment.
- Coordination and facilitation to develop and institutionalize logistic information system at the national level.
- Management of essential commodities at the health facilities under DoHS.

Major ongoing activities

The following innovative activities were conducted on a regular or ad-hoc basis in 2075/76 alongside the above-mentioned regular functions.

a) Health Infrastructure Information System — The HIIIS is expected to provide the basis for decision making on building construction and maintenance as well as for resource allocation. The system is in process of completion after which it will be regularly updated.

b) Building construction and maintenance— The Management Division oversees the construction and maintenance of health facility buildings and other infrastructure in partnership with the Department of Urban Development and Building Construction (DUDBC). All maintenance within health facilities premises and construction and maintenance works costing less than one million were disbursed through the Management Division till 2074/075. All other construction works costing more than one million is done through DUDBC. Since 2061/062, 2031 facilities have been built while in 2075/076 NPR 4,871 billion was spent on health building construction through DUDBC (Table 8.4.1). An MoHP committee monitors these works.

Table 8.4.1: Summary of building construction by DUDBC (2061/062 – 2075/076)

Detail	Number
Total number of health facilities built	2031
Number of facilities under construction	342
Near to completion facilities	158
Completed/handed over facilities	1689*
Budget allocated (in NPR) in 2075/076	6,11,34,00,000
Expenditure (in NPR) in 2075/076	4,87,16,00,000 (79.69%)

* Out of 1689 completed/handed over facilities, 60 facilities are completed but final payment is due.

Table 8.4.2: Building construction scenario in previous five years from DUDBC.

Types of building	2071/72	2072/73	2073/74	2074/75	2075/76
Health posts with birthing centres	200	101	275	-	-
Doctors' quarters	-	-	20	-	1
Staff quarters	-	-	36	-	-
PHCCs	7	2	6	-	-
Birthing centres	20	5	8	-	-
District health stores	-	-	-	-	-
BEOC buildings	-	-	-	-	-
CEOC buildings	-	-	-	-	-
Public health office buildings	3	2	-	-	-
District hospital buildings	6	5	3	-	6
Regional hospital buildings	1	-	-	-	
15 bedded hospital building	3	2	-	-	
Zonal hospital buildings	2	2	-	-	
Sub-regional hospital buildings		2	-	-	
Maternity units in zonal hospitals		1	-	-	
Emergency blocks in district hospitals		1	-	-	
Block A buildings in districts		-	-	-	

d) Health facility upgrading— The Management Division has started the process of upgrading PHCCs and below 15 bed district hospitals up to 15 bed hospitals. In line with the upgrading of all sub-health posts to health posts and higher level facilities to at least 15 bed hospitals following certain procedures, division collects demand and recommendations from concerned agencies and process for approval.

e) Logistics Management Information System (LMIS) - This unit was established in 1994. LMIS unit just started Online Inventory Management System in 2 Central Warehouses, 5 provincial warehouses and 77 District Warehouses. After the restructure of Nepal's governance in federal structure, the logistic management division was demolished and its functions are being carried out through logistic management section under Management Division of Department of Health Services. Major Functions of Logistic Management section are collection and analysis of quarterly (three monthly) LMIS reports from all of the health facilities across the country; preparation, reporting and dissemination of information to:

- Forecast annual requirements of commodities for public health program including family planning, maternal, neonatal and child health, HIV and AIDS commodities, vaccines, and Essential Drugs;
- Help to ensure demand and supply of drugs, vaccines, contraceptives, essential medical and cold chain supplies at all levels;

- Quarterly monitor the national pipeline and stock level of key health commodities.

The following are the major activities conducted by the Management Division in 2075/76:

- Conducted 24th National Annual Performance Review Meeting, 2075/76.
- Continued HMIS's web-based online reporting system.
- Prepared dashboards in dHIS-2 so that major indicators can be easily observed.
- Manage to print and distribute HMIS/LMIS forms, stock books and different forms required for all health institutions.
- Major Problems encountered in dHIS-2 were fixed.
- Prepared, printed and distributed the DoHS Annual Report, 2074/75 (2017/18).
- Support and conducted HMIS/DHIS 2 training for newly recruited health workers and palika level health incharge throughout the country.
- Arranged the printing and supply of HMIS recording and reporting tools.
- Orientated and trained health workers on health care waste management.
- Orientation and training on health care waste management to Province and Local level staff.
- Plan for the efficient management on forecasting/quantification, procurement, storage, distribution and transportation of health commodities to all health facilities for the delivery of healthcare services based on LMIS.
- Develop tender documents as per public procurement rules and regulations and procure essential medicines, vaccines, contraceptives, equipment, different forms including HMIS/LMIS and allied commodities.
- Store, re-pack and distribute medicines, vaccines, contraceptives equipment and allied commodities.
- Support on implementation and functioning of Web Based LMIS. Web based LMIS will be modified and robust into Online Inventory Management System at federal, provincial and local level.
- Conduct capacity building in Online Inventory Management System to all New/Old Store Keepers, Computer Assistants for full functioning of OIMS throughout country with live operation.
- Conduct capacity building on Public Procurement Act and Regulations with coordination of Public Procurement Monitoring Office to provincial and local level managers and Store Keepers
- Capacity building of health workers and office assistant of central, provincial and local level on Standard Operating Procedures (SOP) in Effective Vaccine Management (EVM).
- Disposal, De-junking and auctioning of unusable equipment, materials and other health commodities.
- Coordination with partner INGOs and NGOs for strengthening cold chain capacity through support in disaster resilient cold chain equipment as well as repair and maintenance of refrigerators and freezers.
- Manage to maintain the bio-medical equipment, machineries and transport vehicles.
- Implement and monitor Pull System for contraceptives, vaccines and essential drugs in the districts.
- Coordinate with all development partners supporting health logistics management.
- Supervise and monitor the logistics activities of all medical stores.
- Conduct RDQA for LMIS data Quality Assessment.

Issues, challenges and recommendations**Table 8.4.5: Issues, challenges and recommendations — health service management**

Issues and challenges	General recommendations
Inadequate quality human resources	Produce and appoint skilled human resources
Individualized planning in divisions and centres (due partly to time constraints) and negligible bottom-up planning	Ensure strategic joint central annual planning and budgeting under the Management Division for one-door planning from DoHS and promote bottom up planning to address district specific issues
Insufficient budget for building health facility and hospital buildings.	Provide funds and human resource support for upgraded health facilities.
Health facility buildings construction delayed and obstructed (around 2% sick projects).	Mandatory supervision and approval by concerned health facilities before payment for building construction. Self-dependence for health facility building construction in the long term.
The standardization of public hospitals	Strategic planning to bring public hospitals to design standard as per guidelines
The lack of WASH guidelines for health facilities and hospitals	Develop WASH guidelines
Insufficient and poor implementation of waste management guidelines by health facilities and hospitals	Expand programme and budget for health care waste management as per guidelines
Information flow from lower level health facilities and data quality issues	Provide more budgetary support for data quality and its timely flow from lower level health facilities to DHOs and DPHOs and make reporting to DoHS's information system mandatory for all hospitals
The monitoring of private health care	Establish a task force or outsource the supervision of private health facilities
Low Budget in Drug Procurement and supply in local level	Budget will be revised as demand in next year.
Capacity building in procurement, forecasting, quantification and LMIS	LMS has planned to conduct that training at all provinces.
Management of Expired, Wastage and unused materials	LMS will collect those materials from all provinces and destroy or disposed as process.
Inadequate of HMIS/LMIS tools and late supply	Tools will be supplied in time and adequately
High demand of required equipments	LMS will demand budget for equipment procurement.

Table 6.8.6: Specific recommendations — health service management

Recommendations	Responsibility
a. Health infrastructure	
• Endorse proposed Central Coordination Committee and Technical Committee • Form joint taskforce representing MoH, DoHS-MD, RHDs and DUDBC officials to assess delayed and ongoing infrastructure projects and make plan to address issues	MoH, DoHS-MD, PPICD, RHDs,
• Operationalise joint monitoring team for the field monitoring of construction projects • Endorse standard building design and guidelines • Develop a building planning cycle • Establish/strengthen a health infrastructure section with adequate capacity at central and regional levels to be responsible for construction related planning and budgeting. • Update and strictly implement land development criteria considering geographical variation, urban/rural settings (guidelines have been endorsed by MoH with ministerial decision). • Assess regional, sub-regional, and zonal hospitals against standard guidelines and develop standardization plan. • Develop mechanism to standardise PHC-ORC structures in coordination with communities.	DHOs, DPHOs
b. Information management	
• Initiate and continue measures to functionalise and regularize all routine information systems including TABUCS. • Roll-out routine data quality assessment mechanisms at all levels. • The monthly generation of data from all data platforms; sharing and review with concerned programmes, divisions, RHDs, DHOs, DPHOs, and hospitals. • Provide data access through public portal, including meta-data and resources. • Ensure interoperability among all existing management information systems. • Develop and implement a long-term survey plan.	MoH, DoHS-MD, PPICD, RHDs, DHOs, DPHOs
C. Supervision and monitoring	
• Update and implement integrated supervision checklist, supervision plan and feedback tools. • Deploy functional feedback mechanism with provision of coaching and mentoring services. • Develop monthly integrated online supervision calendar and submit to higher authority to monitor effective execution at all levels.	All levels

8.4.4 Logistic Management

8.4.4.1 Background

An efficient management of logistics is crucial for an effective and efficient delivery of health services as well as ensuring rights of citizen of having quality of health care services. Logistics Management Division (LMD) was established under the Department of Health Services in 2050/51 (1993), with a network of central and five regional medical stores as well as district level stores. The major function of LMD was to forecast, quantify, procure, store and distribute health commodities for the health facilities of government of Nepal. It also involved repair and maintenance of bio-medical equipment, instruments and the transportation vehicles.

In order to systematize the management of logistics, the Logistics Management Information System (LMIS) unit was established in LMD in 1994. LMIS unit just started Online Inventory Management System in 2 Central Warehouses, 5 Regional Warehouses and 75 District Warehouses in 2073/2074. After the restructure of Nepal's governance in federal structure, the logistics management division was demolished, and its functions are being carried out through logistic management section under Management Division of Department of Health Services. Major Functions of Logistic Management section are collection and analysis of quarterly (three monthly) LMIS reports from all the health facilities across the country; preparation, reporting and dissemination of information to:

- Forecast annual requirements of commodities for public health program including family planning, maternal, neonatal and child health, HIV and AIDS commodities, vaccines, and Essential Drugs;
- Help to ensure demand and supply of drugs, vaccines, contraceptives, essential medical and cold chain supplies at all levels;
- Quarterly monitor the national pipeline and stock level of key health commodities.

Goal

Quality health commodities available at health facilities and community level round the year.

Overall Objective

To plan and carry out the logistics activities for the uninterrupted supply of essential medicines, vaccines, contraceptives, equipment, HMIS/LMIS forms and allied commodities (including repair and maintenance of bio-medical equipment) for the efficient delivery of healthcare services from the health institutions of government of Nepal in the country.

Strategies

- Logistics planning for forecasting, quantification, procurement, storage and distribution of health commodities.
- Introduce effective and efficient procurement mechanisms like e-Bidding, e Submission.
- Use of LMIS information and real-time data in the decision-making through data visibility in electronic logistics management information system (eLMIS).
- Strengthen physical facilities at the central, regional, sub-regional and district level for the storage and distribution of health commodities.
- Promote Online Inventory Management System and Non-Expendable/Expendable Items Inventory System in Central, Regional and Districts warehouses.

- Auctioning of non-functional cold chain equipment/furniture, vehicle etc.
- Repair and maintenance of bio-medical, cold chain equipment/instruments and transportation vehicles.
- Capacity building of required human resources on logistics management regarding public procurement, e-bidding, e-procurement, and online Inventory Management System at Central, Regional and District levels.
- Implement effective Pull System for year-round availability of Essential Drugs and other health commodities at all levels (Central, Regional, District and Health Facilities).
- Improvement in procurement and supply chain of health commodities, working on procurement reform and restructuring of federal, provincial and district stores.
- Formation of Logistics Working Group at Central and provincial levels.

8.4.4.2 Major Activities

- Plan for the efficient management on forecasting/quantification, procurement, storage, distribution and transportation of health commodities to all health facilities for the delivery of healthcare services based on LMIS.
- Develop tender documents as per public procurement rules and regulations and procure essential medicines, vaccines, contraceptives, equipment, different forms including HMIS/LMIS and allied commodities.
- Store, re-pack and distribute medicines, vaccines, contraceptives equipment and allied commodities.
- Formation of 9 members Logistics Working Group (LWG) at Central level to solve logistics issues
- Manage to print and distribute HMIS/LMIS forms, stock books and different forms required for all health institutions.
- Support on implementation and functioning of Web Based LMIS. Web based LMIS will be modified and robust into Online Inventory Management System at Centre, provincial and local level.
- Conduct capacity building in Online Inventory Management System to all New/Old Storekeepers, Computer Assistants for full functioning of OIMS throughout country with live operation.
- Conduct capacity building on Public Procurement Act and Regulations with coordination of Public Procurement Monitoring Office to provincial and local level managers and Storekeepers
- Capacity building of health workers and office assistant of central, provincial and local level on Standard Operating Procedures (SOP) in Effective Vaccine Management (EVM).
- Disposal, De-junking and auctioning of unusable equipment, materials and other health commodities.
- Coordination with partner INGOs and NGOs like UNICEF, Lifeline Nepal for strengthening cold chain capacity through support in disaster resilient cold chain equipment as well as repair and maintenance of refrigerators and freezers.
- Manage to maintain the bio-medical equipment, machineries and transport vehicles.
- Implement and monitor Pull System for contraceptives, vaccines and essential drugs in the districts.
- Coordinate with all development partners supporting health logistics management.
- Supervise and monitor the logistics activities of all medical stores.
- Conduct RDQA for LMIS data Quality Assessment.
- Implement Telemedicine program in the hill and mountain districts.

8.4.4.3 Analysis of Achievement

LMIS Reporting Status

- Review and optimization of information flow for the LMIS reports

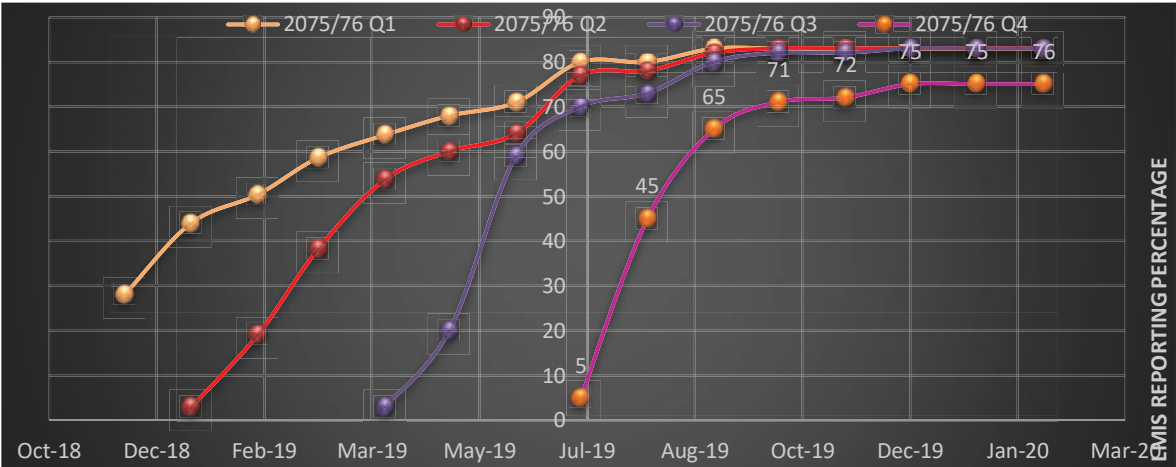
With new Federal structures in place, information flow across the supply chain levels was unclear resulting in difficulties in decision-making on supply quantities. To resolve the challenges, MD together in technical assistance with GHSC-PSM reviewed existing SOPs and the information flow process and advocated with the MoHP to streamline the LMIS reporting processes. MoHP issued letters to the Ministry of Federal Affairs and General Administration (MoFAGA) and the office of the provincial Chief Minister suggesting a process to streamline the LMIS reporting system. MoFAGA has uploaded a new SOP circular addressed to all LLGs on its website with a copy to the office of the Prime Minister. GHSC-PSM staff and FSOs followed up to ensure the letter was also sent to the Provincial Chiefs.

LMIS Reporting Rate

In FY 2074-75 Q4, the reporting rate was only 30%, whereas, in FY 2075-76 Q4, the reporting rate increased more than two-fold to 76%.

In FY 2074-75, the quarterly average reporting rate was 65%, whereas, in FY 2075-76, it increased to 78%.

Improving trend in reporting rate



These efforts to review the SOPs and follow-up on application implementation have resulted in improved reporting rates. The reporting rate for FY 2074/75 Q4 was only 30% whereas the reporting rate for FY 2075/76 Q4 has increased more than two-fold to 76%. The quarterly average reporting rate of FY 2074/75 was 65%, whereas, in FY 2075/76, it increased to 78%. Timeliness of reporting improved significantly after the implementation of data entry in health office in the district.

- GHSC-PSM providing training to 371 LLGs in conjunction with the DHIS2 training

1. eLMIS implementation in Province 5 & 6:

MD/LMS has successfully implemented the Electronic Logistics Management Information System (eLMIS) in all six central medical stores, two provincial medical stores (PMS), 22 district stores within Provinces 5 and 6 in the support of USAID GHSC-PSM project in this FY.

- eLMIS implementation at Local government and Health Facilities—eLMIS project was introduced to automate four local governments and their health facilities. This stage was added due to the new governance structure giving large responsibilities to provinces and local governments for health commodity procurement. Two urban and two rural municipalities were selected from Bardiya and Surkhet districts. The automation of their health commodity management required some software customization. The eLMIS was established at the four local governments and their 23 health facilities and all these sites are now operational. Mobile application is implemented to 23 health facilities which was built to automate their daily operation in an easy and effective way.
- Develop support mechanism and help desk—The establishment of a helpdesk, staffed by two support engineers and one support manager, located at the Management Division, provides user support through a toll-free helpline, trouble-shooting guidelines, support personnel and training. The helpdesk receives calls and emails from eLMIS users, which are logged and given support tickets. Each query is tracked in the support Team Foundation Server software.
- Standard operating procedures – The project developed standard operating procedures for the functionality of the eLMIS to address user difficulties. The procedures have been submitted and approved by the Management Division.
- Phase I results and adjustments based on learning during the implementation period

The assessment of the implementation of Phase 1 of the eLMIS is delayed to December 2018 as the eLMIS rollout personnel were occupied with the rollout of the new Stage 3. However, even though an assessment was not carried out, lessons learned from implementing Stages 1 and 2, such as the approach taken by the rollout team, were incorporated. Three software releases were introduced to address user feedback and learning.

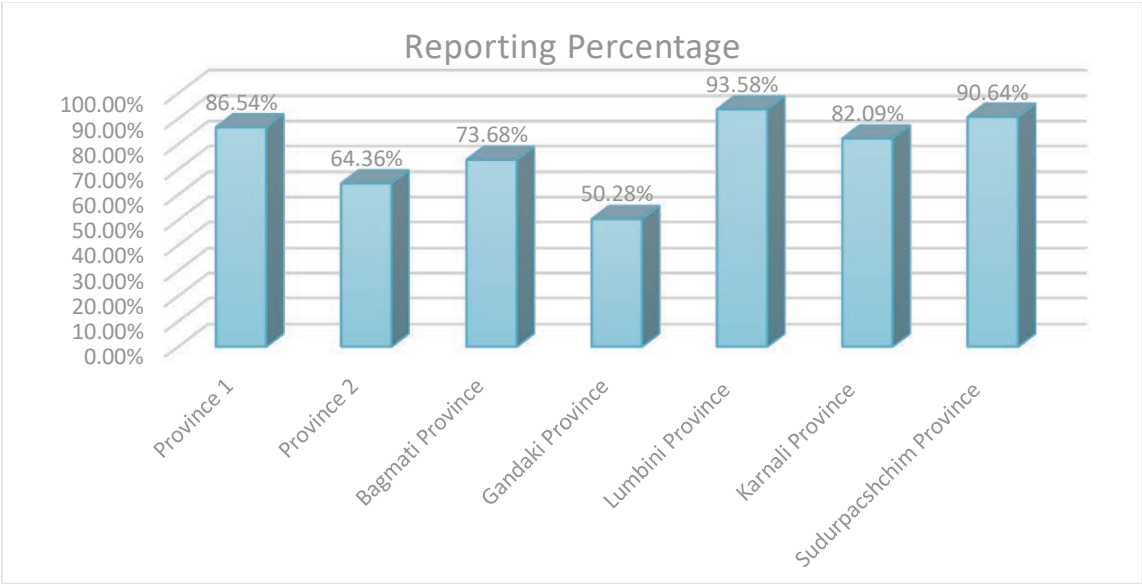
- eLMIS monitoring and data utility for decision making eLMIS performance dashboards were developed and updated weekly to monitor and show the use of the eLMIS at the live sites. The LMIS Centre began to enter facility quarterly user consumption data (paper-based LMIS reports) into the eLMIS from July 2018 at the central level and also entered three years of retrospective quarterly consumption data into the eLMIS.
- eLMIS rollout results and adjustments based on implementation learning in December 2018, GHSC-PSM, under the leadership of Mr. Mohammad Daud, the new Director of MD, and in close collaboration with MD officials, the project assessed the 22 operational eLMIS sites at all levels of the supply chain (i.e. CMS, PMS, district, LLGs and SDPs) and types of eLMIS modules (i.e. online, offline and mobile modules of eLMIS).

The Objectives of the assessment were:

- To determine the effectiveness of the eLMIS solution
- To determine the adaptation and alignment of the business processes and eLMIS solution
- To evaluate the effectiveness of the deployment tools and methods used to deploy the eLMIS solutions. Based on the observations GHSC-PSM take actions and implement processes.

2. Pradesh Reporting Status, fiscal year 2075/76

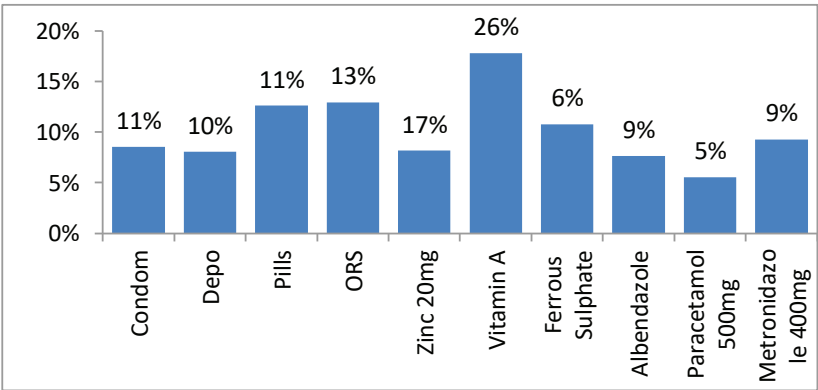
Figure 8.4.2. Reporting Status



3. Availability of Key Health Commodities

Figure 8.4.3 : Commodity Stockout Status, fiscal year 2075/76

LMIS report provides data visibility of stock status at the health facility level of key health commodities like Condom, Depo, Pills, ORS, Zinc, Vitamin A, Ferrous Sulphate, Albendazole, Paracetamol and Metronidazole 400 mg in and essential drugs for free health services on a quarterly basis. The figure shows among three FP commodities, Condom and Pills have stockout of 11% whereas Depo is slightly lower (10%). Out of MNCH and essential commodities, Paracetamol has the lowest stockout at 5% whereas Vitamin A shows the stockout of 26%.



8.4.4.4 Major Logistics Activities to Strengthen Health Care Services

a. Procurement

MD/LMS continued and added more commodities in the multi-year procurement. Condom, Injectable, ORS, Iron Tablets, Essential Drugs are now being procured through multi-year mechanism. Multi-year mechanism saves every year bidding and evaluation time for tender. LMS also completed the LICB (limited international competitive bidding) process in coordination with World Bank in the procurement of Implants, which results in procuring directly from the manufacturer in much lower cost.

A district-wise breakdown list of essential drugs and quantities to be procured at the district level, based on consensus forecast was developed by PHCRD and LMD. The list and budget were sent to all districts by the Primary Health Care Revitalization Division (PHCRD). Similarly, on the development of e-bidding software, the terms of reference/guidelines were finalized and sent to prospective e-bidders for their review and feedback.

Training on public procurement for the Province and District level personnel was provided with the financial support of UK AID/NHSSP and technical support of GoN/PPMO.

b. Forecasting and Supply Planning

Forecast is crucial in identifying long-term need and funding requirement of health commodities. Every year, the working group forecasts for coming three-year period with periodic review. The group consists of representation from various divisions under DoHS/MOHP, districts, social marketing organizations and EDPs.

Annually, quantification exercise has been undertaken through organizing consensus workshop. As in the past, in this FY also, workshop was organized in the support of USAID GHSC-PSM Program with participation from public sector, social marketing sector and EDPs.

The main purpose of the workshop is outlined below:

- To estimate the commodity needs and assess stock status of in-country supply pipeline so as to identify and correct supply imbalance.
- To provide data on specific commodity requirements and plan for government budget allocations.
- To support the estimation of commodity procurement cost.
- To inform donors about funding requirements and advocate for commodity procurement.
- To ensure government's commitment for Citizens Right in providing health care service.

Forecasting and quantification of Essential drugs, RH/FP commodities, MNCH commodities, vaccines, syringes and HIV& AIDS commodities were carried out for the coming FY. The forecast was based on scientific data which included demographic data, consumption pattern, morbidity issues and some special programmatic considerations. The workshop also incorporated other factors effecting forecasting i.e. non-prescribed drugs, replacing drugs, fast moving drugs and duplication.

The workshop was successful in addressing issues on forecast and quantification of health commodities and came out with recommendations. The success of forecast and quantification is a milestone in logistics management, but there is always room for continuous improvement.

Similarly, National Level Consolidated Annual Procurement Plan (CAPP) organized by DOHS in collaboration with all concerned division and Centre with technical assistance and financial support from NHSSP. Procurement Unit of Logistic Management Section took a lead role to prepare CAPP.

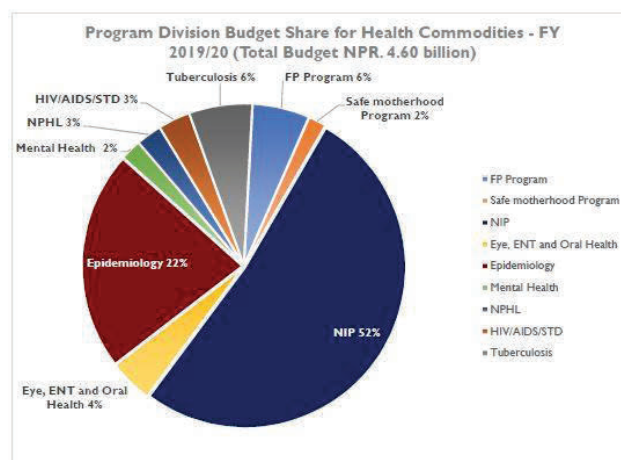
Quantification Guidebook

To institutionalize MoHP capacity for evidence-based and well-coordinated forecasting and supply planning of health commodities at all levels of the supply chain in the federal structure, MD developed separate facilitation and practice booklet in Nepali for the quantification exercise and practice with support from USAID Global Health Supply Chain Procurement Supply Management (GHSC-PSM). The booklets were approved and endorsed by the DoHS. Booklets are in use in all

training and quantification purposes at the province level.

Consensus Forecasting

MD organized 2-days workshop on national quantification of program drugs and EPI vaccines for the FY on April 4-5, 2019 with the support of GHSC-PSM. Participants conducted data analysis, assumption building, forecasting and supply planning exercises. The team produced a national forecast and supply plan for 700 items for FY 2076/77 (2019/2020) for all divisions and centers. The estimated budget for this forecast is NPR. 4.60 billion.



Establish Quantification Capacity at Provinces

MD with support of GHSC-PSM project provided technical assistance to three provinces in quantification of health commodities in Province 5, Province 1 and Sudharpaschim Pradesh based on data generated from eLMIS and HMIS data. The forecast on commodity requirements and cost estimate helped provinces to procure the medicine.

Develop Quantification Capacity for Local Level Governments

The quantification of health commodities at the central level has been effective to determine the quantities for the next fiscal year. Considering federal context of the country, MD organized the trainings on quantification for province and local level health personnel. Quantification guidebook and workbook were used as resource material in all the seven provinces. Skills and knowledge from the training enabled health personnel realize the importance of forecasting in procurement and supply planning of health commodities in their respective context.

c. Quarterly National Pipeline Review Meetings

Pipeline monitoring of FP commodities was started since 1997/98. It now covers FP, MNCH, EPI Vaccines, Syringes, selected Essential Drugs and HIV/AIDS commodities as well. National pipeline reports are now used to monitor the availability of the stock at service delivery points (SDPs) and to monitor the procurement status of key health commodities.

In each quarter, a national pipeline meeting takes place at the Logistic management section to review, monitor, and evaluate the procurement, shipment, distribution, transportation and stock status of family planning and other health commodities.

Quarterly Pipeline Review meetings was conducted where program Divisions of DOHS, External Donor Partners and stakeholders like Social Marketing agency participated. In the meetings shipment schedules, shipment status (planned, ordered and received), actual consumption and months-of-stock-on-hand of 32 health commodities were discussed.

In FY 2018/19 MD organized three quarterly pipeline monitoring meetings on Aug 9, 2018; Nov 26, 2018 and Feb 22, 2019 to share the stock status of the 37 key commodities including FP, EPI Vaccines

and some program commodities. Based on evidence, decisions were taken to cancel or postpone or prepone or even relocation / redistribution of the stock averting a situation of stockout or overstock and expiry.

d. Strengthen Storage Capacity

Ideal storage conditions for essential drugs and commodities are required to deliver quality health services from any service delivery sites and ensure optimal health service utilization by consumers. Numerous districts seriously lacked ideal storage space for handling health and other allied commodities including vaccines. Earlier assessment shown that storage space was inadequate, and security was poor, store space scattered in two or more rooms with none specifically designed for storage and many were in rented buildings. Most of the storerooms were filled with unusable commodities and junk. Every year huge quantities of drugs and other health commodities went missing, damaged or had to be destroyed.

Logistics Management Section in technical assistance with USAID GHSC-PSM enhanced warehouse capacity at the central and province 5 and 6 warehouse with installation of storage equipment, and induction of good warehouse practices. Health Commodities store at the health office of Provinces 2, 6, and 7 were reorganized making it possible to institute supportive supervision and good practices.

In the reporting period, GHSC-PSM worked closely with stakeholders – DoHS Divisions mainly the MD, provincial health directorates (PHDs) and Logistics Management Centers (PHLMCs), district health offices (DPHOs), local level governments (LLGs). The purpose is to ensure availability of uninterrupted supply of health commodities to patients.

In the reporting period, in coordination with MD, GHSC-PSM delivered new storage and safety equipment – racks, trolley, pallets, fire extinguishers to five PMSs. GHSC-PSM also worked closely with Save the Children (SC) and USAID Nepal Reconstruction Engineering Services (NRES) Project implemented by CDM Smith on designing the new construct warehouse in CMS Pathlaiya, to rebuild the warehouse floor to improve its' strength to accommodate modern racking and movement of fork lift or stacker and new construction at different provinces.

Data on expired commodities was built by collecting the list of expired and damaged commodities from PMSs and health office stores through GHSC-PSM field support officers (FSOs). In the process of importation of family planning commodities for social marketing GHSC-PSM has facilitated Contraceptive Retail Services (CRS). All scheduled shipments for FY 18 & 19 were procured and delivered on time.

a. Improving Inventory Management and Warehouse Best Practices

Proper warehouse storage and practices are key for maintaining quality health commodities and a functional supply chain system. Effective and efficient management of racking and shelving simplifies the warehouse operation. A competent, motivated, skill-mixed workforce is required to ensure good storage practices, operations and that health commodities reach where



they are needed most.

MD in collaboration with GHSC-PSM supported Provincial Health Directorate, and Health Office through mobilization of FSO, LMIS Officers and pharmacist in all the districts of Sudurpaschim, Gandaki and Province-2 to organize all health office stores aligning the process for effective inventory management. This included arranging stores based on warehouse best practices, conducting a physical count, removing expired commodities, updating inventory records, building overall capacity of staff with an emphasis on inventory management, supportive supervision, teamwork, dedication, hard work and cooperation with the local government institutions.

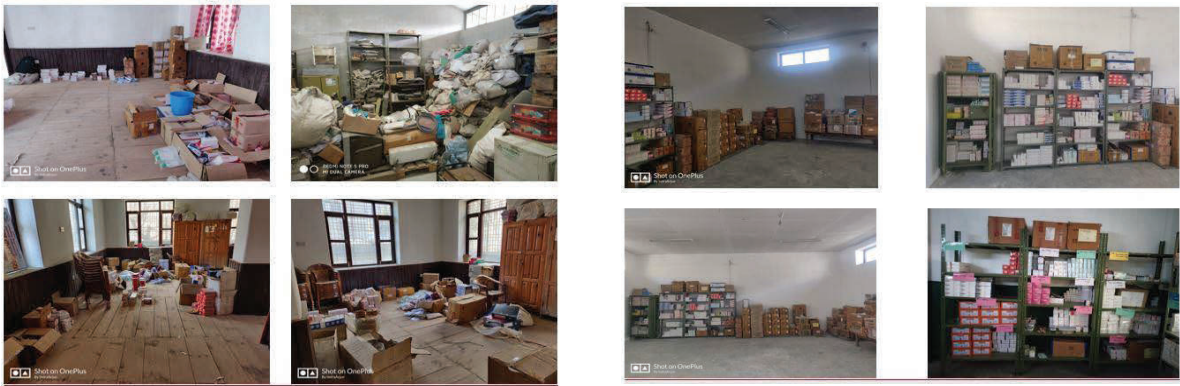
During a site visit the following tasks are performed with supportive supervision as part of inventory management and warehouse best practices:

- Cleaning of the storage area
- Organizing of stores based on FEFO/FIFO and separation of none usable health commodities from usable products;
- Performing physical count of all health commodities in a store;

“we know the store should be cleaned and arranged but today we understood the real meaning of good storage practice and why it is important for the supply chain management. This is a good learning experience for us and thank you to GHSC-PSM, Provincial Health Directorate and Management Division” – Karishma Bhatt, Storekeeper, Health Office, Dadeldhura

- Verifying and reconciling counted stock with stock registers;
- Signing and stamping reconciled quantities by relevant authority;
- Updating all inventory records and tools (registers and eLMIS)
- On-the job-training on inventory management and any relevant supply chain management function.

Reorganization of Mustang Health Office Store



Before

After

All the district stores of all three provinces were successfully reorganized with an updated stock balance in the system as well as segregation and record in the separate register of expired and damaged commodities. The event was highly appreciated by the district and provincial health directorates.

Effective Vaccine Management is one of the cores working areas of LMS. Effectiveness of vaccine management widely depends on the effective and proper storage of vaccine as well as cold chain and supply chain management. To ensure proper cold chain, LMS has mobilized Mechanical Engineers and Refrigerator Technician for immediate repair of damaged refrigerators and freezer

to ensure effective vaccine management. LMS had repaired and maintenance of refrigerators and freezers whenever required. By far, 107 cold chain equipment has been repaired in 50 districts. Currently one Refrigerator Technician has been mobilized in Biratnagar for CCE repair and maintenance in Province 1.

Similarly, storage capacity in 45 districts were strengthened by transportation of 96 Godrej Sure chill refrigerators enabling the districts and their sub-stores to store vaccine in proper temperature to provide quality immunization service. Lifeline Nepal supported in distribution, installation and preventive maintenance of refrigerators supported by UNICEF Nepal.

e. Capacity Building in Logistics Management

New Intervention

Quality assurance of Inj Oxytocin

Injection Oxytocin being sensitive to environmental factor is found to be degraded quickly, if exposed to adverse temperature condition, even before the labeled expiry date. Quality assurance of such sensitive product is critical at all level of supply chain right from procurement, warehousing, distribution and until the last mile. Ensuring proper storage condition is always a top priority for this life-saving product to be made available at the birthing center at all time. The product is very critical as it is an intervention in place currently for reducing maternal mortality.

Therefore, procure and dispense this product only if its storage condition is strictly in compliance with label condition, that is, store in 2-8 degree centigrade. If refrigerator is not available, it needs to be stored in cold chain with due precaution for avoiding adverse mix up with vaccine products.

Real Time Inventory Management System (IMS)

The Web-Based LMIS was introduced in 2008 replaced the quarterly paper-based reporting system to monthly, however it did not provide the real-time information needed to make an effective supply chain decision making. Realizing the need of real-time information on health commodities, Logistic Management Section took an initiative to make real time inventory management system up to the district level with customization of already in use IMS software. This is being online system, gives real-time information of stock status of health commodities of at different level of stores. This allows to make supply chain decision making. Training was provided to all provincial medical store and districts storekeepers with the financial supported by UNFPA/ADRA Nepal and Plan is to implement this new system from next Fiscal Year.

Manual Revision and Pull System Training

Training manual was revised in line to structural changes in Federal Nepal. Trainings for different levels were organized with an aim of improving knowledge, skill and attitude of the storekeepers and health workers at different levels so as to ensure the availability of adequate supply of medicine and health commodities in health facilities via pull system to provide effective health care service.

Conduction of basic level logistics training

LMS conducted basic level logistics training was conducted with support from UNFPA in Kapilvastu, Sindhuli and Rolpa. Similarly SAVE the Children also supported in Dolakha. Procurement and supply chain management was also conducted with support from USAID/GHSC-PSM in all districts.

Development of Basic Logistics Training Manual

LMS has developed Trainers' guide and participants handbook for Basic Logistics Training.

Conduction of eLMIS training:

LMS conducted TOT and roll out training on eLMIS Online and Offline in 22 districts of province 5&6 and in 23 health facilities of Surkhet and Bardiya district.

RDQA: LMS conducted routine data quality assessment as pilot project in three districts at Kavre, Kaski and Makwanpur. The main objective of data quality assessment is to monitor quality of LMIS data at facility level for data accuracy.

Disposal of Unusable Health Equipment and Commodities: A Best Practice

Unusable and/or expired health commodities are a major problem for Nepal's health system. Safe storage conditions for essential drugs and commodities are required to deliver quality health services to service delivery sites. In addition, "de-junking" of unusable commodities helps clear the way for usable commodities. For example, a major de-junking drive in 1994-97 freed up more than 125,000 square feet of free space and generated 25 million Nepali Rupees (NRs.) for the Government of Nepal's treasury.

LMS started several actions to disposal of unused, unwanted or expired have been carried out items. These activities include the provision of technical support in auctioning of unusable commodities for the District for saving space to store valuable lifesaving drugs.

f. Formation and action taken of Logistics Working Group (LWG)

An authentic Group was formation with 9 memberships chaired by Director of Management Division with representation of Divisions, Centers and External Development Partners at center level. The LWG addressed major issues regarding procurement and supply chain management of health-related commodities. The LWG members will be extend on the basis of area and necessary and also plan to extend the Regional level LWG.

8.4.4.5 Issues and Action Taken :

Issues	Action Taken	Responsibility
Low Budget in Drug Procurement and supply in local level	Budget will be revised as demand in next year.	MoHP/DoHS
Capacity building in procurement, forecasting, quantification and LMIS	LMS has planned to conduct that training at all provinces.	DoHS/MD/LMS
Not functioning of telemedicine program in rural areas	LMS will coordinate to start the well-functioning of telemedicine program	DoHS/MD/LMS
Management of Expired, Wastage and unused materials	LMS will collect those materials from all provinces and destroy or disposed as process.	DoHS/MD/LMS
Inadequate of HMIS/LMIS tools and late supply	Tools will be supplied in time and adequately	DoHS/MD/LMS/IHIMS
High demand of required equipments	LMS will demand budget for equipment procurement.	DoHS/MD/LMS

8.5 National Public Health Laboratory

8.5.1 Introduction

Laboratory medicine is a vital component of health care services. Nepal's healthcare system consists various levels of laboratories involved in diagnostic services as well as those involved in public health activities (surveillance, research, etc). National Public Health Laboratory (NPHL) is a centre under the Ministry of Health and Population (MoHP) and Division of Health Service (DoHS) that serves as national level referral lab which regulates the laboratory services in the country. It was established in 2024B.S. as Central Health Laboratory and began its function as National Public Health Laboratory (NPHL) since 2047B.S.

National Health Policy- 2071, National Health Laboratory Policy, 2069 and the Guideline for Health Laboratory Establishment & Operations- 2073 identify the National Public Health Laboratory (NPHL) as the central specialised national referral public health laboratory for the country and the regulatory body to licence public and private labs. NPHL is also a focal point for blood safety through its National Bureau of Blood Transfusion Services (NBBTS). Since 2075, NPHL was given the responsibility of National Coordination Centre for AMR.

NPHL monitors laboratories within the country through its external quality assurance of lab services and the quality control testing of samples and periodic supervision of both government and nongovernment laboratories. It conducts the National External Quality Assurance Scheme (NEQAS) programme to monitor testing quality.

NPHL is responsible for identifying and confirm the agents involved in public health threats, including those which may cause public health emergencies of international concern (PHEIC). Along with diagnostic facilities, NPHL conducts laboratory-based surveillance and plays a crucial role during the outbreaks of various emerging and re-emerging diseases for laboratory confirmation of outbreaks. It also operates as a quality assurance body, responsible for registration and licensing of private sector laboratories and blood centres. The National Bureau for Blood Transfusion Services (NBBTS) at NPHL under MoHP designated as a focal point for blood safety.

Each year various outbreaks and epidemics threaten global health. NPHL is responsible for diagnosing emerging and re-emerging infectious diseases and has established the National Influenza Centre (NIC) in April 2010 and its Bio-Safety Level-3 lab in January 2015. The National Influenza Centre functions through the National Influenza Surveillance Network (NISN) throughout Nepal. NPHL is able to diagnose influenza A (H1N3, H1N1, H5, H7), Influenza B, and other viruses including Respiratory Syncytial Virus (RSV), Hanta, Ebola, Crimean-Congo haemorrhagic fever (CCHF) dengue, chikungunya, zika, leptospira, and scrub typhus and many others if kits available. It is also measuring HIV viral load, Hepatitis B & C viral load and planning to carry out genotyping.

8.5.2 OBJECTIVES:

- To function as a national reference laboratory.
- To prepare and revise guidelines and mechanisms for procurement of standard laboratory equipment, reagents and chemicals.
- To affirm the government's commitment and support for the organization and management of efficient, cost-effective and sustainable health laboratory services.
- To strengthen laboratory services for supporting the diagnosis, treatment, surveillance, prevention and control of diseases, including services of BSL-III lab.

- To establish national standards for laboratory quality systems.
- To ensure the quality of health laboratories through a quality system.
- To empower the establishment, implementation and monitoring of the national health laboratory programme and the national regulatory mechanism for regulating health laboratories.
- To ensure adequate financial and human resources for health laboratory services.
- To monitor adherence to ethical values in laboratory practice, including patient confidentiality, adherence to professional codes of conduct and ethical research practices.
- To encourage research and collaboration to inform and improve the quality of health laboratory services.
- To act as a national reference laboratory, national centre for AMR and focal point for blood safety.
- To improve infection prevention and health care waste management practices.
- To improve access to health services, especially for unreached population.
- To strengthen health service networks including referral system.
- To strengthen social health protection mechanisms.
- To conduct surveys, research and studies in priority areas.
- Sickle cell screening support to endemic areas.
- Measuring HIV viral load, Hepatitis B & C viral load and planning to carry out genotyping.

8.5.3 NON-COMMUNICABLE DISEASE DEPARTMENT

Four sections (Haematology, Biochemistry, Endocrinology and Histocytopathology) are being run under non-communicable disease department. Both routine and specialized services are being provided from these departments. Acute leukaemia panel (flow cytometric technique), Haemoglobin electrophoresis for haemoglobinopathies (eg. thalassemia, sickle cell disease, etc.), coagulation factor assays and inhibitor assays, fertility panel and thyroid hormone panel including anti TPO and thyroglobulin are some of the specialized services being provided.

Besides diagnostic facilities, molecular tests related to haematology like (BCR-ABL fusion gene, Factor-V Leiden mutation) and NCD department in NPHL also monitors sentinel sites for Hemoglobinopathies that are situated in Nepalgunj, Bharatpur, Dhangadi and Butwal. Various research activities are also being carried out in these sections.

8.5.4 QUALITY CONTROL AND TRAINING SECTION:

Quality control section and training section carries out quality related activities and conducts training for lab personnel. Training for newly recruited lab personnel, bacteriology training, analyser application training and EID trainings are some of the regular trainings conducted. This section is also involved in supervision and monitoring of both government and nongovernment laboratories. Based on supervision and monitoring, license is provided for laboratory operation (as one of the five categories, A to E)

National EQAS (External quality assessment scheme) is also being conducted from this section since 1997. Proficiently test panel for biochemical tests, haematological tests and Gram stain are prepared and dispatched to participating laboratories. Feedback is provided based on the results. Samples are sent three times a year. Around 500 labs are enrolled in this program and the number is still increasing.

Likewise EQAS is also being run for Blood transfusion service sites for TTI screening tests (HIV, HBsAg, HCV and VDRL). Around 100 sites are enrolled in the program. EQAS for HIV test (DBS or

dried blood spot method) and for CD4 test is also conducted by NPHL.

8.5.5 NATIONAL BUREAU FOR BLOOD TRANSFUSION SERVICES:

The National Bureau for Blood Transfusion Services (NBBTS), which is based at NPHL, is the national authority for implementing the National Blood Programme (NBP). NBBTS works to ensure the safe, adequate and timely supply of blood and blood products to meet transfusion needs by developing policies, guidelines, protocols, standard operating procedures and related softwares. NPHL is the national reference laboratory for screening transfusion transmissible infections (TTIs) and is responsible for evaluating conformational testing and for sending proficiency panels to blood transfusion service centres (BTSCs) under the National Quality Assurance Scheme (NEQAS). It is also responsible for training BTSC staff and supervising monitoring licensing BTSCs and motivational program. Also, provide equipments to the BTSCs to initiate or enhance the related services.

8.5.6 HIV/HEPATITIS REFERENCE LABORATORY

HIV and Hepatitis Reference Laboratory is situated at Infectious Disease Block in National Public Health Laboratory, and is mainly focused on the Testing and monitoring the HIV and Hepatitis related programs and tests. It mainly comprised of Molecular Unit and Immuno-serology Unit where every day routine and molecular level tests from all over Nepal are performed and reported.

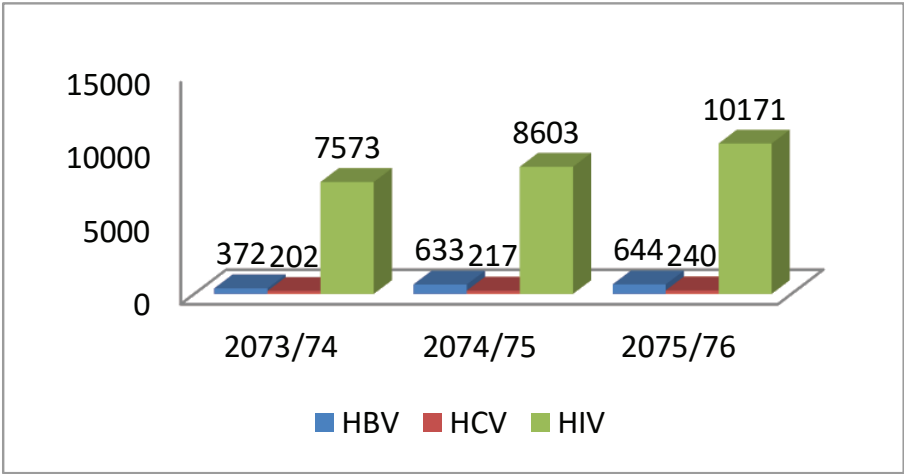
Molecular tests like HIV Viral load (Approx. 10,000/year), HBV Viral load (Approx. 1100/year), HCV Viral load (Approx. 600/year) and Early Infant Diagnosis of HIV (Approx 250/year) is conducted on routinely basis. In Immunoserology, CD4 testing by flowcytometry, HIV 1&2 Ab ELISA, HIVAg/AbCombi ECLIA, HBsAg ELISA, HCV Ab ELISA, HAV and HEV test by rapid diagnostic kits and HBeAg, HBeAb, HBcAb, HBsAb by ECLIA is also performed routinely in our laboratory. We have COBAS Ampliprep/COBAS Taqman and Rotorgene 6000 for molecular analysis, BD FACSCalibur and BD FACSCount for CD4 Testing and e411 ,Roche for ECLIA machine.

To assure our Quality of Reports, we have been participating in Proficiency Testing Program for HIV Viral Load and EID using Dried Tube Specimen by Centres for Global Health, CDC, USA, HBV and HCV viral load from NRL Australia, CD4 test EQAS from Siriraj Hospital, Bangkok and Serology EQAS from NRL, Australia.

Currently, National HIV EQAS program is also conducted and monitored by this department which includes retesting of the samples from different ART sites of Nepal.

NCASC and Global fund, LINKAGES Nepal (FHI360) and WHO has been supporting for several HIV related tests and program. HIV and Hepatitis Unit is actively conducting HIV related Trainings all over Nepal and have been doing research activities like HIV DR(PDR),IBBS survey for HIV by NCASC. We have been planning for Gene sequencing for HIV Drug resistance and HCV genotyping in coming future. Trend of the viral load tests on HBV, HCV and HIV are shown in figure 6.5.1

Figure 8.5.1: HIV Reference Unit (Viral load tests on HBV, HCV and HIV)

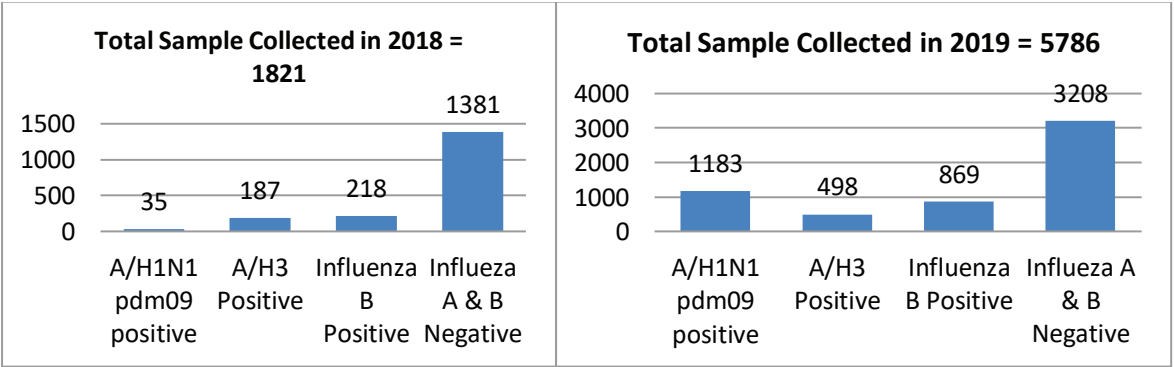


8.5.7 NATIONAL INFLUENZA CENTRE

National Influenza Centre is one of the newly established and highly equipped departments of National Public Health Laboratory (NPHL) designated by Ministry of Health and Population (MoHP) and recognized by World Health Organization (WHO) for the purpose of participating in WHO Global Influenza Programme. Upon such recognition by WHO, NIC has become member of the WHO Global Influenza Surveillance Network.

Influenza Surveillance was started since 2004 from Jhapa, eastern part of Nepal with the aim to identify the influenza viruses from suspected cases of influenza like illness (ILI) and immediate response to minimize the circulation of viruses during outbreak. Initially, specimens collected from suspected cases of ILI were performed by Rapid Diagnostic Test (RDT) for identification of influenza viruses. Later on, molecular diagnostic assay based influenza surveillance was started with the introduction of Real-Time PCR (RT-PCR) at National Public Health Laboratory (NPHL) from 2009. During pandemic influenza outbreak in 2009, NPHL had played a key crucial role together with Epidemiology and Disease Control Division (EDCD), Department of Health Services including international organizations (WHO, WARUN). NPHL has been designated as National Influenza Centre (NIC) on 19th April, 2010. Influenza virus isolation, identification and characterization by serological molecular diagnostic assay were successfully started within one year and 28 isolates were shipped to WHO Collaborating Centre Summary of the Influeza test done is as shown in figure 8.5.2 and figure 8.5.3 for 2017 and 2018 respectively

Figure 8.5.2: Total Influeza Tests done in 2017 Figure 8.5.3: Total Influeza Tests done in 2019



8.5.8 JAPANESE ENCEPHALITIS, MEASLES AND RUBELLA LABORATORY

The infectious and communicable diseases are of growing concern and continue to be a major public health problem worldwide. Among them, vaccine preventable diseases still have top most mortality rate worldwide among the children below 15 years. In order to reduce and control the mortality and morbidity of such vaccine preventable disease (Japanese Encephalitis, Measles, Rubella, etc.), Immunization Preventable Disease (IPD), a partnership between World Health Organization and Government of Nepal is working in close collaboration with National Public Health Laboratory (NPHL) under the Department of Health Services of Ministry of Health and Population (MoHP).

To achieve the goal of reducing morbidity and mortality due to vaccine preventable diseases, surveillance part is essential which can be best and effective with the maximum co-ordination with laboratory based results that is achieved from the better and efficient lab performance. Sample collection, labelling, proper documentation and storage are critical considerations because any results that laboratory generates will be affected and limited by the above factors.

For the effective and smooth performance, better flow of results and to help with the increasing work load for intensive surveillance program, WHO-IPD had supported two personnel, one Medical Microbiologist and one Laboratory Technician in National Public Health Laboratory. An accurate diagnosis in a timely manner using the most cost effective techniques is indispensable for the better surveillance. As the microbiologist is an integral part of the health laboratory team, the main responsibility is to communicate information promptly regarding the quality, quantity and result of collected and received specimen in laboratory along with the lab work performance regarding receiving of specimens, lab testing, storage of specimens, result reporting and documentation of the work performed which would be effective for the programme. Surveillance and rapid response depends upon the disease identification by laboratory with qualified manpower. The effective surveillance depends on the timely reporting and the analyses of the results. NPHL – JE/Measles lab has been accredited again by WHO during October 2018.

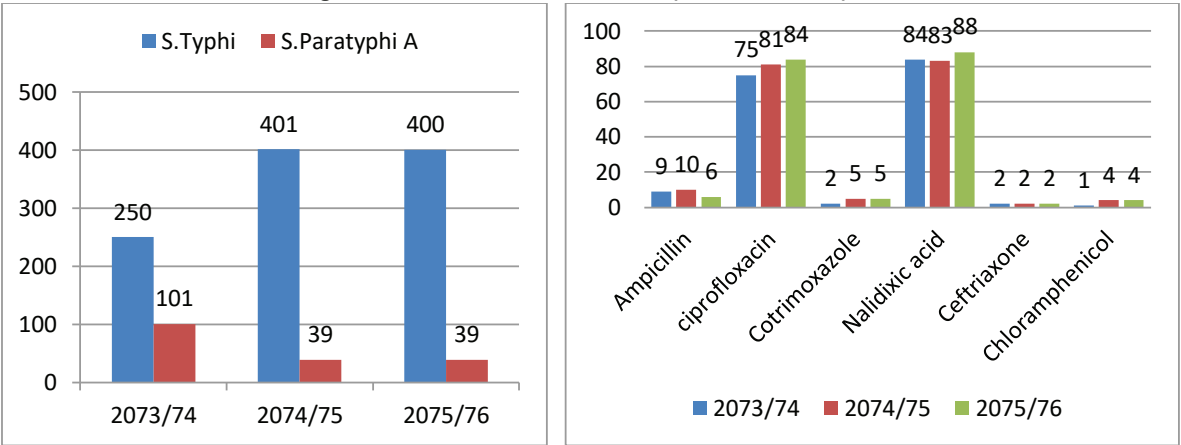
8.5.9 MAJOR ROUTINE ACTIVITIES OF NPHL:

- Routine and specialized diagnostic services including services of referral laboratory.
- Public health related activities (laboratory based surveillance [AES/Japanese encephalitis, measles/rubella, polio, antimicrobial resistance (AMR), influenza]), HIV reference unit, National Influenza Centre, BSL-3 laboratory and outbreak investigation)
- Training and workshops
- Logistics procurement and supply and laboratory refurbishment
- Supervision and monitoring, licensing lab & BTSCS.
- National External Quality Assurance Scheme (haematology, biochemistry, gram stain, microbiology, AMR on selected bacterial pathogens and TTIs)
- Polio containment and it's accreditation.
- Assisting MoHP for preparing medical laboratory related, policy, legislation and guidelines.
- Procurement of especial types of kits and reagents and equipment for provincial and local level government laboratories.
- General administration functions.

8.5.10 AMR (Antimicrobial Resistance) SURVEILLANCE ACTIVITIES

NPHL conducts laboratory surveillance on various disease pathogens including on measles-rubella, Japanese encephalitis, influenza and antimicrobial resistance surveillance to monitor the burden of these diseases and to inform disease control strategies. Trend of the enteric fever cause and AMR are as shown in figure 8.5.4

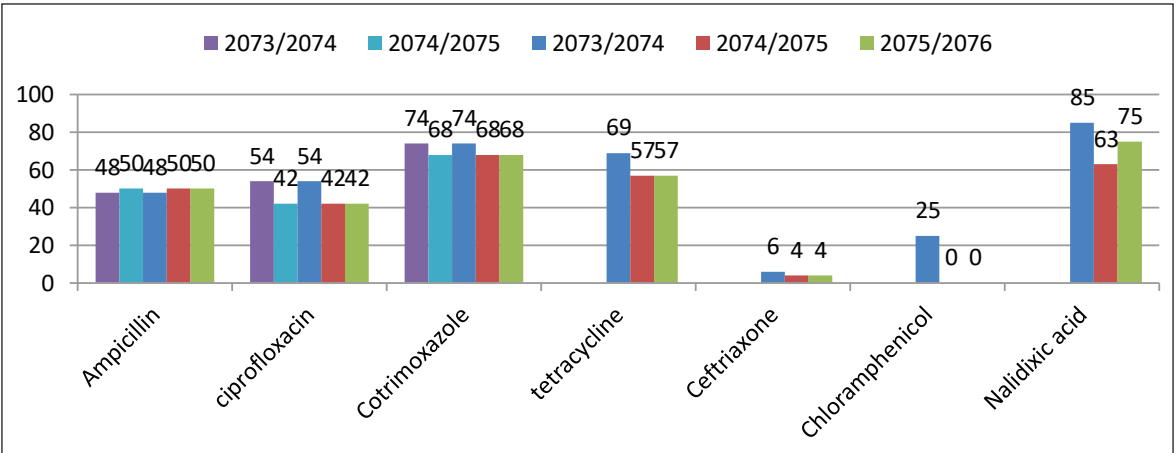
Figure 8.5.4: Trend of enteric fever (cause and AMR)



Salmonella

- S.Typhi s predominant than S.Paratyphi A till date however, the prevalence of S. Paratyphi A is increasing annually indicating changing epidemiology.
- Infection is higher in 20-29 years age group in both sexes.
- Resistance to fluoroquinolones and third generation cephalosporin is increasing
- MDR trend is decreasing from 8% in2012 to 1% by 2019.

Figure 8.5.5: Trend of AMR in bacterial diarrhea



Shigellasp

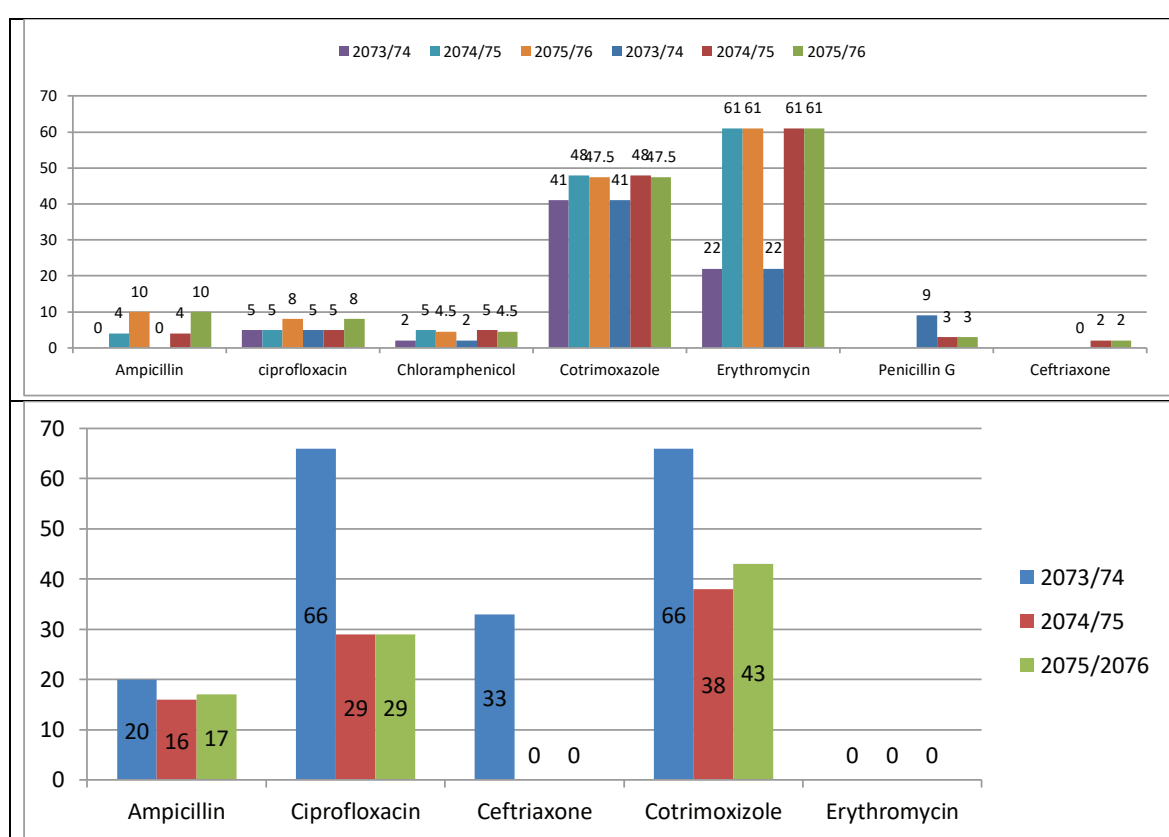
- Shifts in the prevalent serogroups have been observed
- Before 2005 Shigelladysenteriae was prevalent but Shigella flexneri predominated afterwards.
- In 2018, 31% Shigella isolates were MDR and the most common resistant type was simultaneously resistant to Beta lactams/Fluoroquinolones and Tetracyclines.

- All isolates are sensitive to Chloramphenicol, Gentamicin and Cefixime.

Vibrio spp

- Shift in serotype observed.
 - ☞ 2003-2004: *V. cholerae* O1 Ogawa
 - ☞ 2005-2006: *V. cholerae* O1 Inaba
 - ☞ 2007: All serotypes *V. cholerae* O1 Eltor Ogawa, Inaba&Hikojima
 - ☞ Since 2008-2015 : *V. cholerae* O1 Ogawa
- In 2016 outbreak 169 cholera positive cases were isolated and reported (Mostly from lalitpur district) of which only two were O1 Inaba rest all were of Ogawa serotype.
- Only 2 *V. cholerae* was reported in past year.

Figure 8.5.6 : AMR in respiratory infections



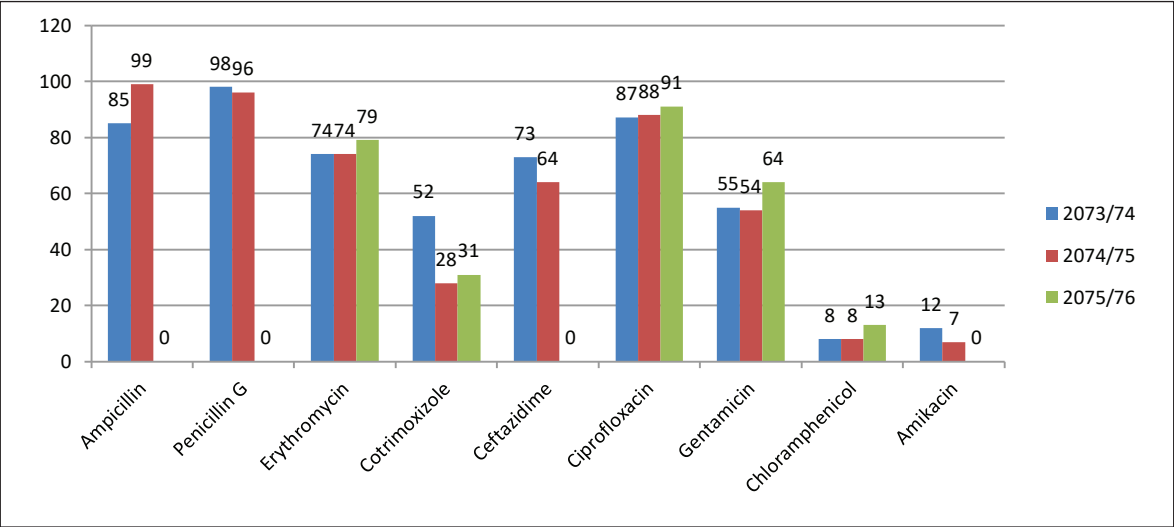
Streptococcus pneumonia

- Infection is higher in elderly patients (above 60 years of age)
- 2 % isolates were resistant also to third generation Cephalosporin (ceftriaxone)
- All the isolates are sensitive to doxycycline.

Haemophilus influenzae

- Least isolated due to its fastidious nature
- Cotrimoxazole resistance is increasing from 2% in 2005 to 42% in 2018.
- Elderly are most commonly affected (50% from patients above 60 yrs)

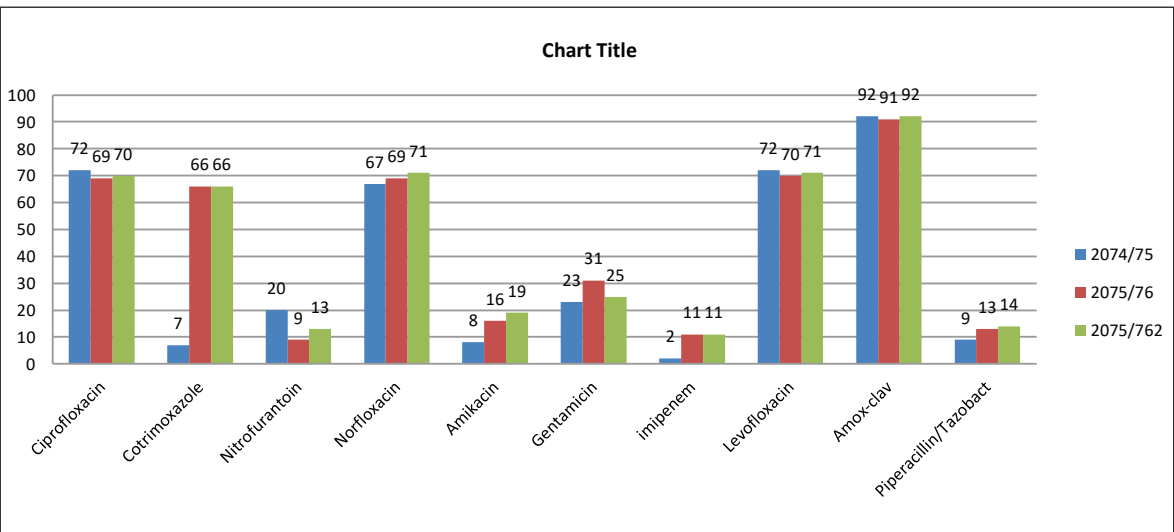
Figure8.5.7: AMR in MRSA



Methicillin resistant S.aureus

- Resistance to Gentamicin increased from 41% in 2013 to 64 % by 2018 .
- Resistance to chloramphenicol fluctuated between 9%-15% in recent years.
- Vancomycin is the drug of choice

Figure8.5.8: AMR in ESBL producing E.coli

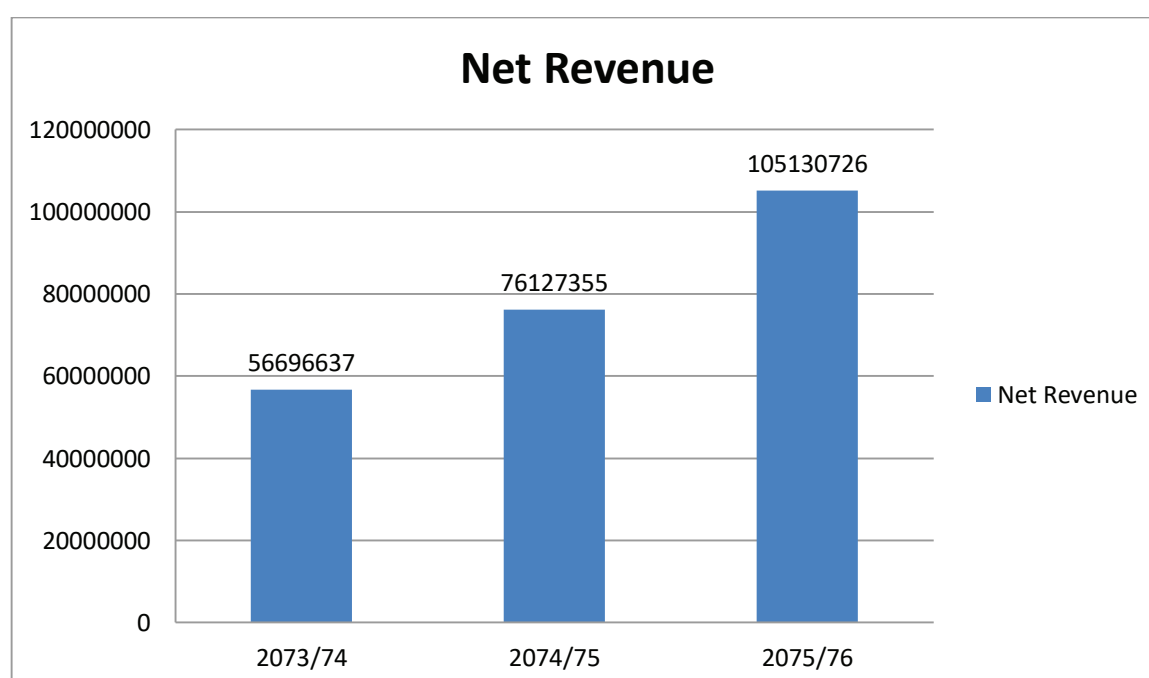
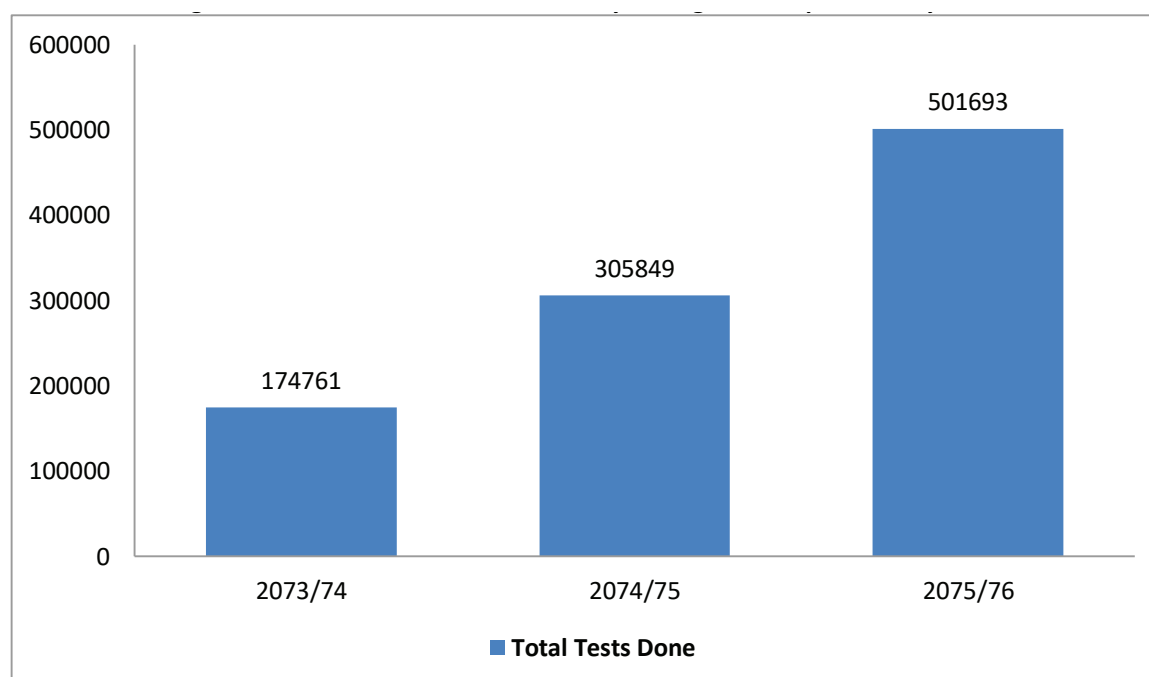


ESBL E.coli

- Increasing resistance against carbapenems (Imipenem,meropenem) is of major concern.
- Beta lactam-Beta lactamase Inhibitor Combination drugs are also becoming less effective.
- Among the commonly used drugs, nitrofurantoin shows less resistance.

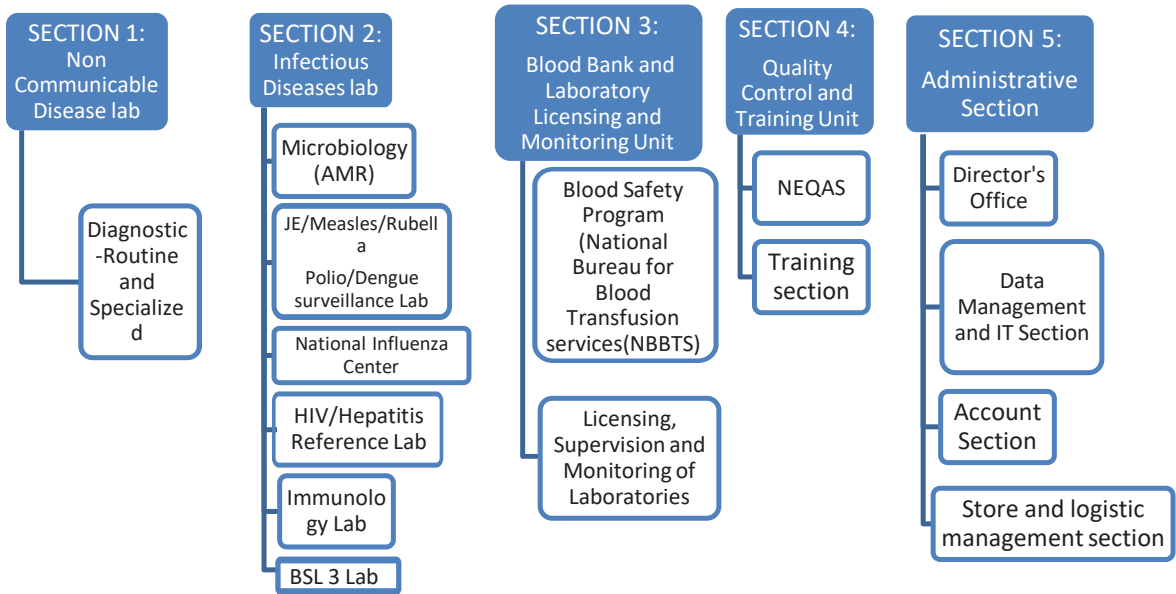
8.5.11 REVENUE GENERATION

NPHL generates revenue from different laboratory testing services. There is increasing trend on revenue generation and laboratory services provided in comparison with previous years.

Figure 8.5.9: Total number of laboratory testing services provided by NPHL**Figure 8.5.10: Trend of revenue generation from laboratory service at NPHL (amount in Nrs.)**

Source: NPHL/DoHS

8.5.12 Working Structure of NPHL



8.5.13 CHALLENGES

- The major challenges for Nepal’s health laboratories are lack of appropriate laws and bylaws most needed for laboratory standardization and accreditation.
- Insufficient budget allocation for quality assurance activities of medical laboratories which is causing low quality laboratory services in government based laboratories.
- Lack of scholarships for higher education and advance level trainings for laboratory personnel, lack of pro-research environment and inadequate number of functional skilled human resources.
- Implementation of Health Laboratory Guideline 2073.
- Prevention of out sourcing clinical sample outside country.
- Establishment of PPHL (Provincial Public Health Lab.) and Decentralization of public health and diagnostic services.
- Strengthening of Diagnostic Service.
- Strengthening NEQAS.
- Vendor licensing for equipment.
- KIT and reagent validation.
- Regulation of biomedical equipment.
- Strengthening research activities.

8.6 Personnel Administration

8.6.1 Background

Human resources are the pivotal resource for health care delivery. Human resource management involves the planning, motivation, use, training, development, promotion, transfer and training of employees. The proper placement and use of human resources is crucial for effective quality health care delivery. DoHS's Personnel Administration Section (PAS) is responsible for routine and programme administrative functions including upgrading health institutions, the transfer of health workers, the upgrading of health workers up to the 7th level. According to delegated Authority of Ministry capacity building and the internal management of human resources. The objectives of PAS are listed in Box 8.6.1.

Box 8.6.1: Objectives of the Personnel Administration Section

The main objective of the section is to mobilize human resource to deliver quality health services. The specific objectives are as follows:

- To transfer and manage all posts up to 7th level according to the delegated authority o ministry.
- To place health staff at sanctioned posts under DoHS.
- To manage human resources at the different levels under DoHS.
- To take disciplinary action according to the law.
- To manage and update personnel information of all levels and institutions under DoHS.
- To manage the posting and transfer of medical officers who completed their studies under government scholarships.
- To execute organisation and management (O&M) surveys to establish and extend the structure of health institutions and organizations under DoHS.
- To recommend to MoHP for approval special leave and education leave requests by health workers.

8.6.2 Routine activities

The number of sanctioned and fulfilled posts under DoHS of fiscal year 2075/76 is given in Table 8.6.2.1

The routine responsibilities for personnel administration are as follows:

- According to the Health Service Regulations, 2055 and MoHP policy, DoHS is responsible for the transfer of the health workforce up to the 7th level.
- DoHS manage the upgrading of its employees to the 7th level twice a year.
- DoHS work to maintain the professional discipline of its employees.
- DoHS approve house leave, sick leave, delivery leave and other types of leave. It recommends to MoHP for the approval of special and education request by up to 7th level employees.
- DoHS manage the retirement of staff.
- The approval of resignations of staff above the 6th level is made through MoHP.

Table 8.6.2.1: Type and number of DoHS workforce, fiscal year 2075/76

SN	Types of human resources	Grade/level	Sanctioned	Fulfilled
1	Director General (DG)	12 th	1	1
2	Director	11 th (PHA)	2	2
3	Director	11 th (PHA/HI)	1	0
4	Senior Health Administrator	9/10 th	3	3
5	Senior Computer Officer	Gazetted II	1	1
6	Senior Community Nursing Administrator	9/10 th	2	2
7	Senior Public Health Administrator	9/10 th	8	3
8	Chief and Deputy Chief Medical Officer	9/10 th	1	2
9	Senior Consultant Dermatologist	9/10 th	1	1
10	Senior Consultant Gynaecology/Obstetrics	9/10 th	1	1
11	Director and Deputy Director Senior Demographer	Gazetted II	1	1
12	Under Secretary	Gazetted II	1	1
13	Under-Secretary (Finance)	Gazetted II	1	1
14	Section Officer	Gazetted III	7	7
15	Account Officer	Gazetted III	2	2
16	Legal Officer	Gazetted III	1	1
17	Pharmacist	7/8 th	2	2
18	Senior Public Health Officer	7/8 th	9	9
19	Medical Officer	8 th	7	7
20	Electrical Engineer	Gazetted III	1	0
21	Senior Community Nursing Officer	7/8 th	7	5
22	Senior Nursing Officer	7/8 th	5	5
23	Entomologist	7/8 th	1	0
24	Statistics Officer Demographer	Gazetted III	5	5
25	Veterinary Doctor	Gazetted III	1	1
26	Computer Officer	Gazetted III	3	3
27	Mechanical Engineer	Gazetted III	1	1
28	Nayab Subba (Clerk)	Non gazetted I	8	7
29	Health Assistant /Public Health Inspector	5/6 th	6	6
30	Biomedical Engineer	7/8 th	2	0
31	Architect Engineer	7/8 th	1	0
32	TB/leprosy Assistant	5/8 th	1	0

33	Cold Chain Assistant	4/5 th	3	3
34	Lab Assistant	4/5 th	2	2
35	Light Vehicle Driver	Not classified	7	7
36	Office Assistant (Peon)	Not classified	8	8

Source: PAS, DoHS

8.6.3 New initiatives

The following new initiatives were taken from the fiscal year 2072/73:

- File tracking system.
- Digital attendance introduced within DoHS.
- An online calendar of operations (online action plan) of divisions and DoHS introduced.

8.6.4 Issues and recommendations

Table 8.6.4.1: Issues and Recommendations.

Issues	Recommendations
Insufficient information for strategic placement and transfers	Develop a scientific health workforce transfer criteria and a time-bound transfer management system from district to central level with the decentralization of authority.
Lack of functional database of DoHS personnel	Develop a mechanism for the timely recruitment of contract-based health workers (ANMs and SBAs) to ensure 24/7 services.
Weak management of staff on long leave	Functionalise coordination mechanisms between agencies concerned with producing and deploying human resources including induction training (academia, councils, training centres, MoHP)
Placement of scholarship doctors in Tarai and mountain districts	Authorize DoHS to place doctors at PHCCs.
The one-door placement of medical officers	Develop and implement an incentive package to retain doctors at PHCCs and in remote areas.
Human resource placement in rural and remote facilities	Effectively implement the time-bound transfer of personnel starting from district to central level with the decentralization of authority.
Monitoring of doctors in PHCCs and district hospitals	Initiate an e-attendance system in PHCCs and 50 bed hospitals and then scale-up to all facilities and institutions
Weak coordination between MoHP, department and districts for personnel management	MoHP and MoFALD to work together to fill health worker posts in urban health clinics

8.7 Financial Management

8.7.1 Background

An effective financial support system is imperative for efficient health service management. The preparation of annual budgets, the timely disbursement of funds, accounting, reporting, and auditing are the main financial management functions needed to support the implementation of health programmes. DoHS's Finance Administration Section (FAS) is the focal point for financial management for all DoHS programmes. The financial management objectives and targets are given in Box 8.7.1.

Box 8.7.1: Health financial management objectives and targets

Objectives:

- To support all programmes, divisions and centres for preparing their annual budgets
- To obtain and disburse programme budgets
- To keep books of accounts and collect financial reports from all public health institutions
- To prepare and submit financial reports
- To facilitate internal and external auditing
- To provide financial consultations.

Target —To achieve 100 percent expenditure of all budgets in accordance with programme work plans within a specified times as per financial rules and regulations of the government and to maintain the recording and reporting system accurately and on time.

8.7.2 Achievements in the fiscal year 2075/76

Out of total National Budget of Rs. 1,315,161,700,000 a sum of Rs. 34,082,300,000 (2.59%) was allocated for the health sector during the fiscal year 2075/76. Of the total health sector budget, Rs. 7,639,936,209 (22.42%) was allocated for the execution of programs under the Department of Health Services Network (Table 8.7.1).

Table 8.7.1: Health budget details, FY 2075/76 (NPR)

Budget	Total	Recurrent	%	Capital	%	Financing	%
National budget	1,315,161,700,000	845,447,500,000	64.28	313,998,200,000	23.88	155,716,000,000	11.84
Health budget	34,082,300,000	25,511,200,000	74.85	8,571,100,000	25.15	0	0.00
Province budget	4,184,700,000	4,184,700,000	100.00	0	0.00	0	0.00
Local Level budget	18,152,700,000	18,152,700,000	100.00	0	0.00	0	0.00
Health budget under DoHS	7,639,936,209	6,797,436,209	88.97	842,500,000	11.03	0	0.00

Table 8.7.2: Allocation of health budget by source, FY 2075/76

Budget	Total	GoN	%	Donor	%
Health budget under DoHS	7,639,936,209	4,528,836,209	59.28	3,111,100,000	40.72

Table 8.7.3: Regular programme recurrent budget, releases and expenditure by programme activities, FY 2075/76

Budget Code No	Programme budget	Total budget (in NPR)		Release budget (in NPR)		Expenditure (in NPR)	
		Amount	%	Amount	%	Amount	% (a)
3700123	Department of Health	167,954,975	22.78	153,903,938	28.03	153,903,938	28.03
3700124	Department of Health	255,000,000	34.58	122,825,740	22.37	122,825,740	22.37
3700143	District Health Offices	258,478,000	35.06	255,230,277	46.49	255,230,277	46.49
3700213	Health Training Centres programmes	55,902,000	7.58	17,035,711	3.10	17,035,711	3.10
Total		737,334,975	100	548,995,666	100	548,995,666	100

Table 8.7.4: Central level recurrent budget allocation by source and programme activities, FY 2075/76

Budget Code No	Programme budget heading	Total budget allocation by sources					
		GoN	%	Donor	%	Total	%
3701133	Tuberculosis Control Programmes	437,401,234.00	11.89	117,300,000.00	4.45	554,701,234	8.78
3701143	National HIV/AIDS Control Programmes	164,800,000.00	4.48	359,300,000.00	13.62	524,100,000	8.30
3701153	FP/MCH Programmes	54,100,000.00	1.47	425,700,000.00	16.14	479,800,000	7.60
3701163	Integrated CHD Programme	561,700,000	15.27	1,427,700,000.00	54.13	1,989,400,000	31.50
3701193	Epidemiology Programme	352,700,000.00	9.59	65,900,000.00	2.50	418,600,000	6.63
3701203	Leprosy Control Programme	27,000,000.00	0.73	0.00	0.00	27,000,000	0.43
3701213	Indent Procurement	107,500,000.00	2.92	36,000,000.00	1.36	143,500,000	2.27
3701223	Hospital Construction /Management Information System	1,171,900,000.00	31.87	141,500,000.00	5.37	1,313,400,000	20.80
3701233	NHEICC programmes	83,800,000.00	2.28	29,800,000.00	1.13	113,600,000	1.80
3701263	Health Laboratory Services	163,300,000.00	4.44	0.00	0.00	163,300,000	2.59
3701363	PHCRD programmes	481,100,000.00	13.08	5,000,000.00	0.19	486,100,000	7.70
3701243	National Health Training Centre programmes	72,400,000.00	1.97	29,200,000.00	1.11	101,600,000	1.61
Total		3,677,701,234	100	2,637,400,000	100	6,315,101,234	100

Table 8.7.5: Central level recurrent budget released by source and programme, FY 2075/76

Budget Code No	Programme budget heading	Released Budget By Source					
		GoN	%	Donor	%	Total	%
3701133	Tuberculosis Control Programmes	310,396,679.45	6.73	0.00	0.00	310,396,679	5.78
3701143	National HIV/AIDS Control Programmes	158,743,517.07	3.44	265,130,002.40	35.06	423,873,519	7.89
3701153	FP/MCH Programmes	50,290,415.00	1.09	280,876,390.00	37.14	331,166,805	6.17
3701163	Integrated CHD Programme	524,206,592.21	11.36	58,304,438.97	7.71	582,511,031	10.84
3701193	Epidemiology Programme	237,488,637.93	5.15	11,601,761.00	1.53	249,090,399	4.64
3701203	Leprosy Control Programme	15,690,346.00	0.34	0.00	0.00	15,690,346	0.29
3701213	Indent Procurement	82,341,012.77	1.78	14,894,968.00	1.97	97,235,981	1.81
3701223	Hospital Construction /Management Information System	2,494,254,630.00	54.05	87,888,790.81	11.62	2,582,143,421	48.07
3701233	NHEICC programmes	71,723,000.58	1.55	11,872,566.00	1.57	83,595,567	1.56
3701263	Health Laboratory Services	160,394,255.10	3.48	0.00	0.00	160,394,255	2.99
3701363	PHCRD programmes	442,799,230.00	9.59	0.00	0.00	442,799,230	8.24
3701243	National Health Training Centre programmes	66,764,517.38	1.45	25,743,782.00	3.40	92,508,299	1.72
Total		4,615,092,833	100	756,312,699	100	5,371,405,533	100

Table 8.7.6: Central level recurrent budget expenditure by source and programme, FY 2075/76

Budget Code No	Programme budget heading	Released Budget By Source					
		GoN	%	Donor	%	Total	%
3701133	Tuberculosis Control Programmes	310,396,679.45	6.73	0.00	0.00	310,396,679	5.78
3701143	National HIV/AIDS Control Programmes	158,743,517.07	3.44	265,130,002.40	35.06	423,873,519	7.89
3701153	FP/MCH Programmes	50,290,415.00	1.09	280,876,390.00	37.14	331,166,805	6.17
3701163	Integrated CHD Programme	524,206,592.21	11.36	58,304,438.97	7.71	582,511,031	10.84
3701193	Epidemiology Programme	237,488,637.93	5.15	11,601,761.00	1.53	249,090,399	4.64
3701203	Leprosy Control Programme	15,690,346.00	0.34	0.00	0.00	15,690,346	0.29
3701213	Indent Procurement	82,341,012.77	1.78	14,894,968.00	1.97	97,235,981	1.81
3701223	Hospital Construction /Management Information System	2,494,254,630.00	54.05	87,888,790.81	11.62	2,582,143,421	48.07
3701233	NHEICC programmes	71,723,000.58	1.55	11,872,566.00	1.57	83,595,567	1.56
3701263	Health Laboratory Services	160,394,255.10	3.48	0.00	0.00	160,394,255	2.99
3701363	PHCRD programmes	442,799,230.00	9.59	0.00	0.00	442,799,230	8.24
3701243	National Health Training Centre programmes	66,764,517.38	1.45	25,743,782.00	3.40	92,508,299	1.72
Total		4,615,092,833	100	756,312,699	100	5,371,405,533	100

Table 8.7.7: Central level capital budget allocation by source and programme, FY 2075/76

Budget Code No	Programme budget heading	Total budget allocation by source					
		GoN	%	Donor	%	Total	%
3701134	Tuberculosis Control Programmes	110,400,000	39.84	35,100,000	11.83	145,500,000	25.36
3701144	National HIV/AIDS Control Programmes	0	0.00	13,000,000	4.38	13,000,000	2.27
3701154	FP/MCH Programmes	5,200,000	1.88	0	0	5,200,000	0.91
3701164	Integrated Child Health Programme	58,000,000	20.93	108,500,000	36.58	166,500,000	29.02
3701194	Epidemiology Programme	2,600,000	0.94	0	0	2,600,000	0.45
3701204	Leprosy Control Programme	1,300,000	0.47	0	0	1,300,000	0.23
3701214	Indent Procurement	31,100,000	11.22	140,000,000	47.20	171,100,000	29.82
3701224	Hospital Construction /Management Information System	5,600,000	2.02	0	0	5,600,000	0.98
3701234	NHEICC programmes	500,000.00	0.18	0.00	0	500,000	0.09
3701244	National Health Training Centre	2,100,000	0.76	0	0	2,100,000	0.37
3701264	Health Laboratory Services	34,800,000	12.56	0	0	34,800,000	6.07
3701364	Primary Health Care Division programmes	25,500,000	9.20	0	0.00	25,500,000	4.44
Total		277,100,000	100	296,600,000	100	573,700,000	100

Table 8.7.8: Central level capital budget released by source and programme, FY 2075/76

Budget Code No	Programme budget heading	Released budget by source					
		GoN	%	Donor	%	Total	%
3701134	Tuberculosis Control Programmes	78,575,471.00	53.66	0.00	0	78,575,471	27.35
3701144	National HIV/AIDS Control Programmes	0.00	0.00	13,000,000.00	9.23	13,000,000	4.53
3701154	FP/MCH Programmes	4,989,831.00	3.41	0.00	0	4,989,831	1.74
3701164	Integrated Child Health Programme	4,444,606.00	3.04	7,062,500.00	5.01	11,507,106	4.01
3701194	Epidemiology Programme	199,520.00	0.14	0.00	0	199,520	0.07
3701204	Leprosy Control Programme	498,552	0.34	0.00	0	498,552	0.17
3701214	Indent Procurement	15,246,836.50	10.41	120,796,387.96	85.76	136,043,224	47.35
3701224	Hospital Construction /Management Information System	4,787,934.00	3.27	0.00	0.00	4,787,934	1.67
3701234	NHEICC programmes	375,900.00	0.26	0.00	0	375,900	0.13
3701264	Health Laboratory Services	32,623,028.00	22.28	0.00	0	32,623,028	11.36
3701364	Primary Health Care Division programmes	4,689,984.60	3.20	0.00	0.00	4,689,985	1.63
Total		146,431,663.10	100.00	140,858,887.96	100.00	287,290,551.06	100.00

Table 8.7.9: Central level capital budget expenditure by source and programme, FY 2075/76

Budget Code No	Programme budget heading	Released budget by source					
		GoN	%	Donor	%	Total	%
3701134	Tuberculosis Control Programmes	78,575,471.00	53.66	0.00	0	78,575,471	27.35
3701144	National HIV/AIDS Control Programmes	0.00	0.00	13,000,000.00	9.23	13,000,000	4.53
3701154	FP/MCH Programmes	4,989,831.00	3.41	0.00	0	4,989,831	1.74
3701164	Integrated Child Health Programme	4,444,606.00	3.04	7,062,500.00	5.01	11,507,106	4.01
3701194	Epidemiology Programme	199,520.00	0.14	0.00	0	199,520	0.07
3701204	Leprosy Control Programme	498,552	0.34	0.00	0	498,552	0.17
3701214	Indent Procurement	15,246,836.50	10.41	120,796,387.96	85.76	136,043,224	47.35
3701224	Hospital Construction /Management Information System	4,787,934.00	3.27	0.00	0.00	4,787,934	1.67
3701234	NHEICC programmes	375,900.00	0.26	0.00	0	375,900	0.13
3701264	Health Laboratory Services	32,623,028.00	22.28	0.00	0	32,623,028	11.36
3701364	Primary Health Care Division programmes	4,689,984.60	3.20	0.00	0.00	4,689,985	1.63
Total		146,431,663.10	100.00	140,858,887.96	100.00	287,290,551.06	100.00

Table 8.7.10: Cumulative financial irregularities up to 2075/76 (NPR In,000)

Irregularity amount to be regularized	Irregularity clearance	Percent
2,18,01,50,000	1,44,53,16,000	66.29

Table 8.7.11: Irregularity clearance status of last three years FY 2073/74 - 2075/76 (NPR In ,000)

Fiscal Year	Total irregularity amount	Irregularity clearance	Clearance %
2075/76	2,18,01,50,000	1,44,53,16,000	66.29
2074/75	3527321	14,39,096	40.80
2073/74	4,25,95,14	1,92,02,95	45.08

Source: Finance Section, DoHS

8.7.3 Issues of financial management

Following major Issues of financial management are given below table:

Problems and constraints
Delay in approval of organizational structure and functionality has affected in the health budget allocation, release and disbursement to the local level health institutions.
Still remain to ensure the rational allocation of health budget to the Provinces and local level programs and availability of human resources.
Mismatch in the allocation of health budget to the LGs in the certain levels.
No single platform for the planning and budgeting to ensure harmonization of budget planning and program implementation across the three layers of government.
Due to newly formed federal structure the health facility capacity remain limited to improvement of the planed budget activities and utilization of allocated budget.
Lack of clarity "On and Off" health budget reporting mechanism in the changed context including expendityre reporting at the local level.
Non-release of committed EDPs budgets in time.
Difficulty in keeping books of accounts and reporting according to differing software e.g. GGAS, TABUCUS, LMBIS and RMIS
Difficulty in financial reporting procedures and reimbursement from External Development Partners (EDPs) due to lack of trained manpower and physical facilities

8.8 Medico-Legal Services

Medico-legal field or field of Forensic Medicine in Nepal is still waiting for its proper identity. This field has great wish to grow up in normal way to address and to provide help for Nepali people as there is high degree suffering in society because of improper and inadequate medico-legal service to needy population. This service sector which is supposed to be developed by state is not only ignored but also not adequately recognized and remained for long time as an unidentified or unrecognized sector. As a result of improper, incomplete and nonscientific application of forensic evidences the justice is suffering directly and "Rule of law" or "Law and order" are also suffering indirectly. There are more than enough examples of several year imprisonments for an innocent person and release as reward for a criminal in court cases related with crime against human body.

Constitution of Nepal 2072 in its article 35 guarantees Right to Health for all Nepali citizen and in articles 20, 21 and 22 Right to justice, Right of victim of crime and Right against Torture guarantees and in violation of such fundamental rights there are provisions of proper remedy or compensation. There are other articles like article 42 Right to social justice, article 44 Right of consumer which are partially or completely related with medico-legal field for their proper implementation in real life situation. For effective application of above constitutional rights, medico-legal sector in Nepal must be in properly functional state.

Time has compelled to recognize medico-legal field and it is shown by other way with spontaneous appearance of more than four dozens of Nepali doctors specialized in the field of forensic. Now it is high time for Nepal Government to facilitate the environment to utilize those experts in medico-legal field for providing their specialist service to Nepali people.

Few incidents have coming up with the support and advocacy by MELESON (Medico-legal Society of Nepal), a registered professional society of practicing Nepali Forensic Medicine specialists in this country. Some of the positive outcome can be listed as follow:

1. Ministry of Health has created few posts for consultants in this field at four hospitals of the country.
2. A historical first National Medico-legal Workshop was held on this year at Kathmandu which was organized by Ministry of Health.
3. Six types of medico-legal examination and reporting formats are prepared and prescribed by Nepal Government with initiation of Ministry of Law and Justice last year.
4. National Health Training Center from Department of Health requested to MELESON to prepare six various types of Standard Operating Procedures (SOP), Reference Manuals and Training Manuals for standard medico-legal examination and reporting procedures. This task was completed by MELESON successfully and following SOPs are approved by Ministry of Health and Population.
 - a) SOP and manuals for autopsy work
 - b) SOP and manuals for injury examination
 - c) SOP and manuals for sexual offence cases examination
 - d) SOP and manuals for age estimation
 - e) SOP and manuals for examination of victims of torture
 - f) SOP and manuals for forensic identification of skeletal remains
5. There are initiations from various medical colleges to have permission for routine medico-legal services to public from their hospitals. Request for permission of Medico-legal services by some of the medical colleges are now positively taken by Ministry and needful activities are on the

process.

6. During last fiscal year, Cabinet of Ministries of Nepal has passed a Medico-legal Services Operation Guideline 2075 which is waiting its implementation.
7. According to new guideline for medico-legal services a Central Medico-legal Services Operation Committee is formed at MoHP and first two meetings have started initial discussion.
8. Recently developed and updated Minimum Standards for Health Facility included the requirements related with medico-legal services.
9. Public Health Act 2075 has included few sections related to medico-legal service and newly developing Public Health Regulation in its drafting phase has been trying to elaborate more relevant clauses in medico-legal service sector.

Though there are many problems in health care service delivery system in the country, the medico-legal service sector which is in pathetic condition must be addressed to keep minimum standard. There are suggestions provided from the National Medico-legal Workshops 2074 and 2075 for very basic and minimum care in forensic medicine sector. Proper implementation of the provisions given by new legal provisions, guideline and standards must be implemented to keep this sector for elimination of existing malpractice and sub standards in medico-legal service sector of the country. If those provisions are implemented step by step, it may take no longer to achieve minimum standard in this service field. A separate Section or Division or Unit through O & M at Ministry and similar structures at all Provinces seems to be necessary establishment to take responsibility for the proper implementation of newly emerged and planned thoughts and idea for upliftment of medico-legal service standards.

8.9 Monitoring and Evaluation

8.9.1 Background

Access and operation of the health information is improved through the use of Information Communication Technology (ICT), a direction provided by Nepal Health Sector Support (NHSS). It also stresses better and interoperable routine health information systems, prioritises surveys and research. Correspondingly, it endeavours for improved and integrated health sector reviews at different levels that feed into the planning and budgeting process. In the direction of accomplishing universal health coverage, the NHSS and the Sustainable Development Goals (SDGs) emphasise monitoring and reducing the equity gap in the health outcomes at different population sub-groups. The details can be obtained from result frame work of National Health Sector Strategy 2015-2020 .

The outputs linked to the stated outcome 9 are as follows:

- Integrated information management approach practiced
- Survey, research and studies conducted in priority areas
- Improved health sector reviews with functional linkage to planning process.

8.9.2 Major Progress in FY 2075/76 (2018/19)

Development of Guideline

In line with the 2017 National eHealth Strategy, the MoHP has drafted national eHealth Guideline to provide a framework for standardization of eHealth systems in Nepal. The guideline defines the necessary steps and standards to be followed during the design, implementation, monitoring and review of eHealth systems.

Integrated information management

- With regards to the information management in the health sector, the Cabinet has decided to establish an institutional mechanism for ensuring monthly reporting of the health facilities in the national HMIS database by the concerned Local, Provincial and Federal Governments. Further, the mechanism is also for ensuring regular, timely and complete reporting of other information from health facilities to the Local Government, from Local Government to Health Offices, from Health Offices to Health Directorates and from the Directorates to the Department of Health Services.
- Health Sector M&E in Federal Context' is the Monitoring and Evaluation (M&E) guideline for the three levels of government and was developed last year. It has been a guiding document for provincial and local governments to generate, use, share and report health sector data.
- The MoHP continued to prioritise developing the eHealth system so that various health information systems are interoperable. The Health Facility Registry, a tool that keeps track of all health facilities within the country, public and private, as well provides information on which services are offered has been updated. The registry has an interface that allows other information systems to connect to it in order to keep their individual lists of health facilities up-to-date and synchronized with the MoHP.
- The MoHP continues to expand the electronic reporting of service data from health facilities. This year 1400 public health facilities submitted HMIS monthly reports electronically. As health posts and primary health care centres are now being managed by the local government, the

MoHP is focusing on enhancing their capacities on health information management, including the use of the DHIS2 platform and all 753 local governments reported the health facility based service statistics electronically to the national database (HMIS). This has been a milestone for the continuous flow of data from local governments to the national HMIS system. The HMIS e-learning modules for the orientation of health workers, statisticians, computer operators and programme managers have been developed and are available on the DoHS website (dohs.gov.np)

- The web-based Routine Data Quality Assessment (RDQA) tool and the e-learning package have been updated incorporating feedback from the users and is made available on the MoHP website (www.rdqa.mohp.gov.np). The tool comprises of two domains viz., 'data verification' and 'system assessment'. Using data from the HMIS, the tool is able to calculate quality metrics by verifying the data under the 'data verification' domain; and the five functional areas of Monitoring & Evaluation (M&E) system are assessed under the 'system assessment' domain. The RDQA baseline score was obtained from five learning lab sites of Nepal. In data verification domain 90-110% score on all indicators selected for verification was considered as the benchmark for accuracy. Findings generated from RDQA in data verification domain from 45 health facilities bare that more than half of the health facility were able to meet the benchmark in sub domain register vs monitoring sheet, 46.7% and 13.3% of the health facility meet the point of reference in register vs tally and monitoring sheet vs tally respectively. On an average 2.5 to 3 score on system assessment was considered to have achieved benchmark in RDQA until the next RDQA instance. Results from system assessment domain revealed that 80 percent of the health facility were able to meet the yardstick in data management process, more than half meet the benchmark in availability of indicators definition and reporting guideline. Whereas the use of data for decision making, monitoring and evaluation function and capabilities domain were still the areas of improvement for most of the health facilities.
- Web-based digital dashboards have been developed to monitor major health indicators including the NHSS Results Framework and health-related SDG indicators.

Electronic Health Records

MoHP has drafted a guideline for implementation of electronic health records (EHR) at health facilities. The MoHP alongside the MoSD at the provincial level, have prioritized EHR at hospitals. To date the following hospitals have started EHR :

- Province 1: Mechi, Illam, Pachthar, Dhankuta, Bhojpur, Taplejung Hospitals.
- Province 2: Gajendra Narayan Singh Hospital
- Bagmati Province: Nuwakot Hospital, DolakhaCharikot Hospital
- Gandaki Province: Dhaulagiri Hospital, Pokhara Academy of Health Sciences
- Province 5: Gulmi, Rapti Academy of Health Sciences
- Karnali Province: Salyan and Dailekh Hospitals
- Sudurpaschim Province: Doti and Bayalpata Hospitals

Surveillance systems

Maternal and Perinatal Death Surveillance and Response (MPDSR) Facility-based MPDSR has been expanded from 77 hospitals in FY 2018/19 to an additional 16 hospitals in FY 2019/20. Community-based MDSR has been expanded from 11 districts to an additional seven districts (Taplejung, Rautahat, Nuwakot, Myagdi, Palpa, Dailekh and Bajhang) in FY 2019/20. Bagmati province initiate two district Ramechhap and Kavrepalanchowk for community based MPDSR in FY 19/20 from their budget. FWD is updating the web-based MPDSR recording and reporting tools and

planning to use a mobile application to report deaths from the community. MoHP's 2020 target is to have Community-based MPDSR in 20 Districts and Facility-based MPDSR in all public 110 hospitals.

Early Warning and Reporting System (EWARS)

EWARS is a hospital-based sentinel surveillance system where the sentinel sites (hospitals) send weekly reports (including zero reports) on six epidemic prone, vector-borne, water and food borne diseases in order to detect outbreaks. EWARS started in 1997 with 8 sentinel sites and expanded to 24 sites in 1998, 26 sites in 2002, 28 sites in 2003, 40 sites in 2008, 82 sites in 2016 and 118 sites in 2019. A total of 36 (private hospitals and medical colleges) were included as sentinel sites across Nepal in 2019. EWARS sentinel sites are gradually reporting in the DHIS2 platform, which will contribute to building better linkages with the HMIS.

8.9.3 Survey, research and studies

MoHP is planning to conduct the second Nepal Health Facility Survey (NHFS) in FY 2019/20. The initial consultation with supporting partners has been initiated and the sub-national level consultation was held in Gandaki Province in May 2019. Data collection is planned for February-May 2020 and the report is expected to be finalized in November 2020. Nepal Health Research Council (NHRC) has conducted a number of researches/studies in 2018/19, the key research findings are

Studies	Key Findings	Policy Recommendations
NCD STEPS survey 2019	• 28.9 % of the adults aged 15 to 69 years were currently using tobacco (smoked/smokeless). • 24.2% of the adults aged 15 to 69 years were using tobacco on daily basis. • Average age at initiation of smoking (years) among those who smoke daily was 17.1 years (17.7 years in male and 18.4 years in female). • 21% prevalence of alcohol user. • Only 3% of the sample population met the intake of WHO recommended fruits and vegetables per day. • Salt intake was found to be 9.1 grams per day which is almost twice the WHO recommendation • 6% of women of age 30-49 had done the cervical test in the last five years. • Mean BMI: 22.7 (22.6 for men and 22.8 for women), Overweight: 24% and Obese: 4%. • Raised BP: 25% (Males-30%, females-20%) • 10% measured to have raised BP and/ or on treatment /medication • 21% of people measured to have raised blood glucose and/ or on medications • Among the surveyed population only 7% are member of health insurance scheme	• As the prevalence of NCD risk factors is found high, there should be effective enforcement of NCDs risk factor prevention and control programmes

Population based cancer registry	• From January to May 2019 a total of 702 cancer cases from Kathmandu Valley. 256 new cases of cancer from Siraha, Saptari, Dhanusha and Mahottari and 23 new cases from East and West Rukum were identified. • In 702 cases from Kathmandu Valley, cancer incidence is higher among females comparing to the males (379 Vs 323). The higher incidence is found among the age group of 70-74 years. • In male the top leading cancer site is lungs followed by lip and oral cavity. • In females, breast followed by lungs, cervix uteri.	
Bardiya Municipality of	• The prevalence of Sickle Cell disorder is found 11.3% among 1 to 29 years Tharu population (Sickle cell trait 10.7% and Sickle cell diseases 0.7%)	• There is need of counselling to unmarried people for their marriage to avoid Sickle cell in their future generation
Mapping the availability of Ayurveda and other complementary medicine service centres in Nepal	• Most of the government institution T&CM in Nepal were Ayurvedic Centres Acupuncture was commonly practiced in combination with Ayurveda or Naturopathy as an adjuvant therapy in most centres. • T&CM were commonly practiced by qualified and registered doctors in their respective system. There were also practices done by the registered assistants with diploma or certificate degrees.	• Create national level information of different types of T&CM practices that can be available to the public would be useful in bringing all traditional system under single umbrella where they could be recognized, regulated and connected with each other to deliver better impact on population health in Nepal. • There is a need to develop conceptual models or frameworks for each system, create definite regulations policies, planning, and building network infrastructure required for the overall developments of all the existing T&CM in Nepal. • Further, there is a growing demand for complementary medicine with the expanding morbidity and mortality of Non-Communicable Diseases. Many patients seek complementary medicine along with the conventional medicine for the treatment of Non-Communicable Diseases. • In this scenario research on identifying the main scientific, policy, and practice issues related to CAM research and explores and translates of validated therapies into conventional medical practice to reduce burden of Disease due to Chronic Non-Communicable disease is very crucial

Supporting Programs

Population based study on selected chronic disease in Nepal	• High prevalence of non-communicable diseases (COPD: 11.7%, Diabetes: 8.5%, CKD: 6.0% and CAD: 2.9%). • Most of the behavioral and biological risk factors were more prevalent among men than women. Other factors such as high LDL cholesterol, low HDL cholesterol, overweight, obesity, waist-hip ratio and abdominal obesity were noted high especially among females.	• Effective health promotion and chronic disease prevention program • Effective rehabilitation programs to lessen the effect for those who are already alcohol dependent and effective awareness and prevention programs should be started and strengthened to advocate the risks associated • BP screening programs should be deployed in larger numbers catering to a greater coverage. • Special interventions need to be designed for women to help counter issues related to body mass which have long term health implications.
Quality of essential medicines in public health care facilities of Nepal	• Out of 244 batches of 20 generic collected, 37 batches were found substandard. • Out of identified substandard medicines, 23 (62.16%) batches of medicines were supplied by Government of Nepal and 14 (37.83%) batches of medicine samples were purchased from local resources • Among 62 health facilities, only 13% were found to follow the medicine storage guidelines	• Temperature and humidity records exceeded the recommended range in both health facilities and Regional Medical Stores. • There should be provision to assess the quality of essential medicines supplied in health facilities. • Stringent rules and regulations should be made along with their effective implementation to prevent substandard/counterfeit medicines from entering into pharmaceutical supply chain. • All the infrastructures required for storage of medicines should be established and maintained in all Regional medical stores and health facilities. • DDA should strengthen its resources to ensure quality of medicines that are widely being used in pharmaceutical market of Nepal.

NHRC has plan to conduct the following studies in the coming months of FY 2019/20:

- Community based Intervention for Prevention and Control of Non-Communicable Disease Risk Factors (CIPCoN): Baseline Survey in province 2.
- Community based Intervention for Prevention and Control of Non-Communicable Disease Risk Factors (CIPCoN): End line Survey in Dhankuta and Illam Districts.
- Assessing the status of Menstrual Health and Hygiene Management among adolescent girls in

Nepal

- Population Based Cancer Registry in Nepal
- National Mental Health Survey
- Nepal Clinical Trial Registry (NPCTR)
- Burden of Diseases (BoD) study in Nepal
- Assessment of Residual Pesticide levels in commonly consumed fruits and vegetables and their Health Risks in Kathmandu Valley
- Assessment of Residual Pesticide levels in commonly consumed fruits and vegetables and their Health Risks in Kathmandu Valley
- Assessment of impacts of air pollution on human health in selected urban areas of Nepal
- Assessing effects of climate change on spatio-temporal distribution of vector-borne diseases in Nepal

NHRC has provided ethical approval for the following major studies in FY 2018/19

- Transmission Assessment Survey (TAS-II) in 12 districts of Nepal Factors associated with willingness to pay for Social Health Security Scheme among the residents of Baglung Municipality
- Identifying barriers to accessibility and availability of Safe Abortion Services among young women in Makawanpur
- Cost analysis of diagnosis and treatment of tobacco related cancer in selected hospitals of Nepal

8.9.4 Policy / Technical Briefs

With the objective of translating the evidence into action, policy briefs have been developing using secondary data. The following briefs have been developed:

- Hand in hand in health care: partnership management Visiting service providers in family planning
- Organizational capacity assessment and its utilization in Nepal Minimum Service Standards for Health Facilities
- Analysis brief on the progress of top and bottom 10 districts in RMNCH indicators
- Improving quality of health management information system through web based data quality assessment (RDQA) tool in learning lab sites.
- Generating evidence for better health decision: Use of Health Management Information System Data
- Stock take of health information management and M&E in the Constitution, Acts, Regulations, Policies, Strategies and Cabinet Decisions

8.9.5 Health sector reviews with functional linkages with the planning processes

Based on the last year's feedback the MoHP prepared a guideline and tools for the health sector review at all three levels of government. The objective was to standardise the review process at the local and provincial level and link the review at the sub-national level with the federal level review and planning. The guidelines and tools have been distributed and shared through the MoHP website. The guideline has been instrumental not only to standardise the review process but also in drawing lessons from the sub-national reviews feeding into the federal review and planning.

8.9.6 Challenges

- Limited availability of quality data to meet the health sector data needs at local, province, and

federal levels

- Limited use of evidence based decision making at all levels
- Limited use of integrated information management leveraging the ICT at all levels to sustain the good practices and achievements of the health sector

8.9.7 Way Forward

- Ensure compliance of timely reporting from health facilities on monthly basis.
- Digitize HMIS recording registers to facilitate on time reporting, improving data quality and use of data at the point of data generation.
- Standardize the M&E orientation package for induction training to different health cadres and roll out.
- Finalize and share eHealth Guideline and EHR guideline with stakeholders to facilitate standardization and interoperability with the national database.
- Digitize and integrate Ayurveda Information Management System with the national database. Ensure functional and reliable data sources for all the NHSS and SDG indicators.
- Effective implementation of the guideline 'Health Sector M&E in Federal Context, 2075. Implementation of 'Health Facility Registry' at all levels.
- Develop and operationalise the central standard data repository.
- Standardise, develop, strengthen, and institutionalise e-health initiatives at all levels. Institutionalize and regularize of producing national health accounts.

HEALTH COUNCILS

9.1 Nepal Nursing Council

9.1.1 Introduction

Nepal Nursing Council (NNC) is established under Nepal Nursing Council Act 2052 (1996). It came into force on 2053-03-02 (16 June 1996). NNC is an autonomous body formed to maintain quality nursing and midwifery education for the provision of quality nursing and midwifery services to the public.

9.1.2 The main functions of the council are:

- Register the nurse and midwife through licensing examination and manage the registration of qualified nursing/midwifery professionals.
- Formulate policy required to operate the nursing and midwifery profession smoothly and to provide better care to the public.
- Inspect, monitor and recognition to nursing and midwifery academic institutions and monitor the quality of nursing and midwifery services for better nursing care.
- Maintain the standardization in nursing and midwifery education through evaluating and reviewing the nursing and midwifery curriculum, the terms and conditions of admission and examination systems.
- Formulate professional code of conduct of the nursing and midwifery professionals and to take action against those professionals who violate such code of conduct.
- Develop the scope of practice for nursing and midwifery professionals to determine the work limit of nursing and midwifery professionals.
- Publish the annual Journal of the Nepal Nursing Council.

As of June 2019 there were 277 nursing and 3 midwifery courses running in Nepal among nursing college, Proficiency level nursing 121, B. Sc. nursing 50, Bachelor in nursing 45, master level 12 and 49 Auxiliary nurse-midwife (ANM).

Table 9.1: Nursing and Midwifery education programs

S.N.	Nursing education programs	Number
1	Auxiliary nurse Midwife (ANM)	49
2	Proficiency certificate level (PCL)	121
3	B.Sc. nursing	50
4	Bachelor in nursing science (BNS)	45
5	Master in nursing (MN/MSC)	12
Total		277
1	Bachelor in midwifery	3

The NNC had registered 88,675 Nepali nurses (PCL 55,534 and 33,141 ANM) and 843 foreign nurses till 2019 June.

Table 9.2: Categories of registered Nurses

SN	Categories of nurses	Number
1	Nurses	55,534
2	ANM	33,141
Total		88,675
1	Foreign nurses	843

9.1.3. Major activities carried out by NNC in fiscal year 2075/76

- Completed “midwifery educators’ training” for two batch 14 participants in each batch with help of UNFPA and GIZ.
- Develop the code of conduct for nurses and midwives.
- Started specialized online registration for master level of nursing.
- Expansion of bachelor level of midwifery education.
- Initiation bachelor level nursing education (oncology major subject).
- Approved curriculum for PCI midwifery prepared by CTEVT and MoHP.
- During the 2076 the council held three national licensing examinations for nursing graduates.
- Prepared the proposed draft of NNC act according federal system and sent for Amendment.
- Revised the different tools such as accreditation, monitoring, feasibility, self assessment to the all level of education.
- Developed the scope of practice for midwife.
- Developed of nursing and midwife regulation.

9.1.4 Ways forward

- Preparation for the Registration and license examination of bachelor level midwives and prepares guideline for licensing exams.
- Revised minimum requirements for different level of nursing course such as proficiency certificate level of nursing, bachelor in nursing, masters of nursing.
- Amendment of NNC act as per.
- Development of rules regulations of midwifery education and practice according to the federal democratic republic of Nepal.
- Maintain the online and up to date information of previously registered nurses
- Development the scope of practice for different level of nurse.
- Separate the licensing system for PCL and bachelor level nursing program.

9.2 Nepal Ayurvedic Medical Council

9.2.1 Introduction

The Nepal Ayurvedic Medical Council (NAMC) is the autonomous body to regulate and control Ayurvedic medicine in Nepal. It was established under the Ayurveda Medical Council Act, 2045. The council is the regulatory and legislative body for Ayurvedic courses, human resources, institutions, practitioners and traditional healers in Nepal. All Ayurveda practitioner and educational institutions have to register with the council. The council has developed a code of ethics for Ayurvedic doctors and minimum requirements for Ayurvedic educational institutions. The council's main committee consists of an Ayurvedic doctor nominated by the government as chairperson, three doctors nominated by the government, the DoA director, three doctors elected by registered doctors one campus chief nominated by the government and one registrar nominated by the government. The council registers eligible Nepali practitioners. Also, foreigners who want to practice Ayurveda medicine in Nepal, should be provisionally registered with the council (for one year at a time). However it is not possible for foreigners to register to established private clinics in Nepal. The main functions and objectives of the council are listed below

9.2.2 Functions and objectives of the council

- Arrange for the smooth provision of Ayurveda treatment
- Develop the system of use of Ayurvedic medicines
- Determine the qualification of doctors and to register them
- Advise the government on the production, sale and distribution of Ayurvedic medicines.
- Suggest to the government for making arranging research on Ayurveda.
- Recognise appropriate Ayurveda educational institutions in Nepal.
- Determine the curriculum, terms admission and examination system policies and essential infrastructures of educational institutions.
- Recognise the educational qualifications granted on Ayurveda, modern medicine and surgeon and paramedics.
- Prepare a code of conduct for Ayurvedic doctors and to monitor its implementation.

9.2.3 The number of registered members, institutions and courses are given below:

MD & Bachelor Level Programme

- Tribhuvan University, IOM, Ayurveda Campus, Kirtipur (With MD)
- Mithila Ayurveda College & Research Center, Janakpur, Dhanusha (Affiliated by NSU)
- Nepal Ayurveda Medical College, Birgunj, Parsha (Affiliated By T.U.)
- Nepal Sanskrit University, Kendriya Ayurveda Vidhyapeeth, Bijauri, Dang.
- Patanjali Ayurveda Medical College & Research Centre, Dhulikhel, Kabhre. (Affiliated By NSU)

Certificate Level Programme (AHA)

- NSU, Janta Vidhayapeeth, Bijauri, Dang
- Dhanwantari Ayurbigyan Adhyan Sansthan, Baphal, Kathmandu (Affiliated by CTEVT)
- Himalayan Ayurveda College, Baneshwor, Kathmandu. (Affiliated by CTEVT)

Under CTEVT, Ayurveda Health Worker (AAHW)

- Sailaja Acharya Politechnical Institute, Sishwani, Morang.
- Jagadamba Medical Institute, Rajbiraj, Saptari.
- Modern Institute of Health Science, Gaighat, Udayapur.
- Ayurvedic Medical Institute, Janakpurdham, Dhanusha.
- Shankar Technical Training Centre, Janakpur, Dhanusha.
- National Institute of Science & Technology, Bharatpur, Chitwan.
- Bardiya Medical Institute, Gulariya, Bardiya.
- Institute of Community Service Assistant, Dhangadhi, Kailali.
- Dadeldhura Paramedical Campus, Dadeldhura.
- White Park College, Dadeldhura.
- Rastriya Prabidhik Sikhsalaya, Surkhet.
- Triyuga National Education Academy, Udayapur, Gaighat.
- Ilam Technical Institute, Ilam.
- Bagalamukhi Technical Institute, Itahari.

(NAMC- Nepal Ayurvedic Medical Council , MD - Master of Medicine, BAMMS- Bachelor of Ayurveda & Modern Medicine & Surgery , BAMS- Bachelor of Ayurveda Medicine & Surgery, AHA- Ayurved Health Assistant; AAHW- Auxiliary Ayurveda Health Worker)

9.2.4 Statistics of registration persons (up to date 2075/12/26)

SN	Subject	Number
1	MD/MS/PG	97
2	BAMS/equivalent	708
3	Ayurveda B. Pharmacy	5
4	AHA/Equivalent	1,515
5	AAHW /TSLC	2,272
6	Traditional healers	19
7	Academic institutions	22
8	Foreigner practitioners	4

Source: NAMC

9.3 Nepal Health Research Council

9.3.1 Introduction

Nepal Health Research Council (NHRC) is the national apical body for promoting health research across the country. NHRC was established in 1991 by an Act of Parliament and was given the responsibility to promote and coordinate health research for improvement of the health status of people of Nepal. The major focus of NHRC is on research regulation, evidence generation, translation of evidence into policy and practice, and capacity building of national scientists in the areas of health research and evidences. NHRC serves as the main national institution responsible for technical and ethical review of proposals submitted by individual health researchers, national authorities, NGOs, INGOs and universities. After appropriate review, Ethical Review Board (ERB) of NHRC approves these proposals. In its role of generating evidences, NHRC carries out research on its own on national health issues aligning with the national health priorities. The capacity building roles of NHRC encompasses providing education, organizing trainings on various aspects of health system research to national scientists with special emphasis on promoting the research competency of young researchers. NHRC has been providing health research grants to the researchers in order to enhance the research activities throughout the country. NHRC also conducts workshops and dissemination programs to facilitate uptake of research findings by the policymakers into health system policies and practices. Similarly, NHRC facilitates access to research finding from different research reports, journals, books, magazines etc. through the library digital data base and the NHRC Journal.

9.3.2 Major Activities in the fiscal year 2075/76

9.3.2.1 Research Project/Activities

Nepal Health Research Council conducted different research activities with support of Government of Nepal and other agencies in last fiscal year. The research activities conducted by NHRC during the FY 2075/76 are listed below:

- Population Based Prevalence Survey of Selected Non-Communicable Diseases in Nepal
- Population Based Cancer Registry Nepal
- Population Based Screening of Sickle cell disorder in Tharu community of Bardiya district
- National Mental Health Survey, Nepal
- Verification of Disbursement Linked Indicators
- Non Communicable Disease Risk Factors: STEPS Survey Nepal 2018
- Quality of Essential Medicines in Public Health Care Facilities of Nepal
- Eco-Bio-Social Drivers for Effective Aedes Vector Prevention & Control along a Climatic gradient in Nepal – NAECO
- Validation of the Accuracy of the Recording and Reporting of the Newborn Health Service Provision in a Tertiary Hospital in Nepal
- Exploring the opportunities, challenges and feasibilities in integrating the Complementary and Alternative Medicine in Nepal
- Establishing of Nepal Clinical Trials Registry (NCTR)
- Review of Existing Diseases Surveillance System in Nepal from Climate Change Perspective
- Enhancing Capacity on Evidence Based Programming on Health (NOREC)
- Exploring the Social Determinants of Menstrual Health of Adolescent Girls in Nepal
- Assessment of Residual Pesticide Levels in Fruits and Vegetables both Produced and Imported in Nepal and their health Risks

- Community Based Intervention for Prevention and Control of Non-Communicable (NCDs): A Type 2 Hybrid Effectiveness Implementation Study
- Entomological Capacity Building for Control and Prevention of Vector-Borne Diseases in Nepal

9.3.2.2 Publication

NHRC published a number of reports during the last fiscal year, apart from the peer reviewed index journal, Journal of Nepal Health Research Council. The list below summarizes major publications of the NHRC during the FY 2075/76. (Reports are available online: <http://nhrc.gov.np/reports>)

- Jha, AK; Ojha, SP; Dahal, S; Dhimal, M; BC, RK; Jha, BK; Pradhan, A; Labh, S; (2018) A report on pilot study of national mental health survey, Nepal. Kathmandu: Nepal Health Research Council: 2018
- NHRC (2018). Interim Report of Population Based Cancer Registry in Nepal: Kathmandu: Nepal Health Research Council: 2018
- Karki S; Dhimal M; Pandey AR; Jha AK; Evaluation of Electronic Medical Recording System in Trisuli District Hospital: Nepal Health Research Council, 2018
- Dhimal M, Chalise B, Jahan I, Thapa S, Neupane T, Timsina A, Jha BK, Bista B, Pandey AR, & Jha AK., School Based Health Workers in Nepal: Supporting Evidence Based Decision Making. Kathmandu, Nepal Health Research Council and GiZ; 2018
- NHRC (2018). Annual Report of NHRC 2074-75. Kathmandu: Nepal Health Research Council: 2018
- NHRC (2018). Abstract Book: Fifth National Summit of Health and Population Scientists in Nepal. Kathmandu: Nepal Health Research Council: 2018
- Nepal Health Research Council (NHRC), Ministry of Health and Population (MoHP) and Monitoring Evaluation and Operational Research (MEOR). Nepal Burden of Disease 2017: A Country Report based on the Global Burden of Disease 2017 Study. Kathmandu, Nepal: NHRC, MoHP, and MEOR; 2019.
- Journal of Nepal Health Research Council, 2019, volume 17, Number 2, Issue 43
- Journal of Nepal Health Research Council, 2019, volume 17, Number 1, Issue 42
- Journal of Nepal Health Research Council, 2018, volume 16, Number 4, Issue 41
- Journal of Nepal Health Research Council, 2018, volume 16, Number 3, Issue 40

9.3.2.3 Training and Workshop

NHRC conducted 14 trainings on three different topics in the last fiscal Year. Altogether 5 trainings on Health Research Proposal Development for six days each, while 5 trainings on Data Management and analysis also of 6 days each, similarly 4 trainings on Scientific Writing of 3 days each were organized in NHRC building. Total 381 trainees were involved in the workshop organized by NHRC in Fiscal Year 2075/76.

9.3.2.4 Fifth National Summit

Fifth National Summit of Health and Population Scientists in Nepal were held on 10-12 April, 2019 under the theme of 'Research for Equity and Development in the Federal Context'. The summit focused on research conducted on the national health priority areas of Nepal. Beside the priority areas, this summit also focused on bringing public private partnership in health research promotion and role of digital health and big data for promotion of research, innovation and development. Health and population scientists can have a significant contribution to generate evidences, which in turn provides an insight into the need for quality research in the country within the context of changing health systems. The initial tracking of the available evidences become immense in

developing and promoting further actions for successfully organizing a sustainable health system at the federal, provincial and the local governments.

9.3.2.5 Ethical Clearance of Research Proposals

Ethical Review Board (ERB) of NHRC received 962 health research proposals for ethical clearance in the FY 2075/2076. For this, 38 ERB meetings were held to provide ethical approval for the submitted proposals in the FY 2075/76. Total 760 research proposals got ethical approval in last fiscal year with 154 proposals in process and rest is in pending and withdraws. 36 research studies were monitored among approved research proposals along with monitoring of Research Centers. Similarly, research on trend analysis of research proposals submitted for ethical review is on finalized stage for publication. New National Ethical Guidelines for Health Research in Nepal has been drafted.

9.3.2.6 Institutional Review Committees (IRCs)

There are 42 IRCs established until the last fiscal year across the country to promote health research at institutional level especially in medical colleges, health science universities and colleges. Every year, team of NHRC inspects the Institutional Review Committees approved by NHRC. During the FY 2075/76, NHRC conducted monitoring of 10 approved IRC. NHRC have been started online IRC registration from last fiscal year.

9.3.2.7 Knowledge Management

The Knowledge Management project of the NHRC aims to facilitate translation of research evidence into health policy and practice. The Knowledge Management activities of the NHRC during the FY 2074/75 are as follows:

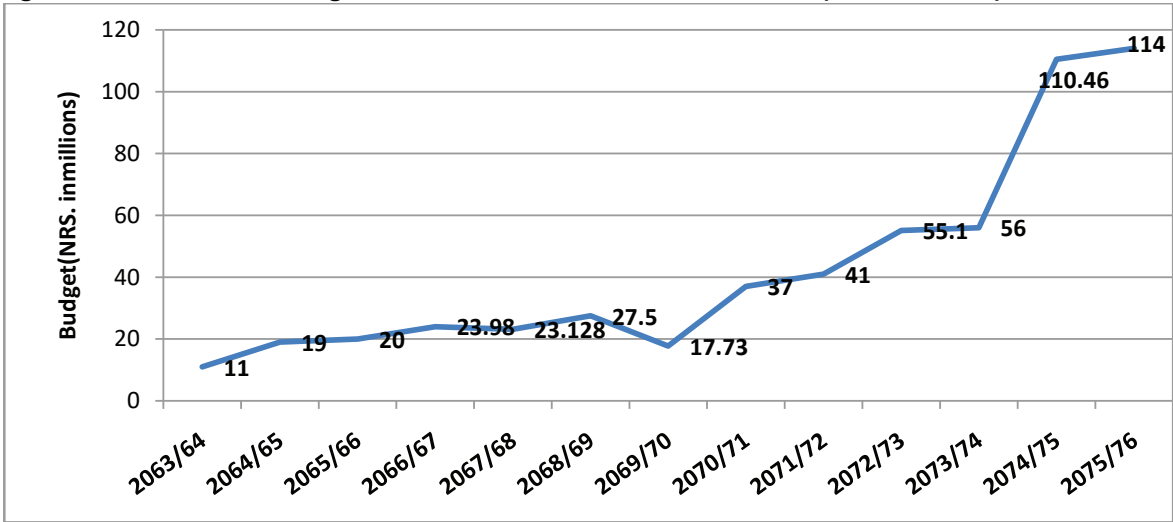
Health Research Priority Areas of Nepal 2019: Health research areas in Nepal have been set through rigorous and continuous process of review of different national documents, reports, health sector strategies, global action plan, global strategies, health research prioritization of WHO, several survey results and current scenario of diseases in the country. After review, the health research areas were discussed and finalized through workshops, consultative meetings as well as expert meetings and past/present policy maker's meetings. In the course of finalization there has been involvement of all the departments, divisions, centers, and hospitals within the MoHP including Directors and other representatives as well as representatives from various hospitals, I/NGO's and civil society. Ultimately, the following areas have come out and are listed as below.

Priority Health Research Areas 2019

- Health systems research
- Non communicable disease
- Communicable/Infectious disease
- Newborn and child health
- Maternal and Reproductive health
- Mental health and substance abuse
- Injuries, Accidents and violence
- Nutrition and food safety
- Pollution
- Environmental and Occupational health
- Ayurveda and Alternative Medicine
- Geriatric health
- Miscellaneous and Sectors beyond health

9.3.2 Financing Research

Figure 1: Total Research Budget of NHRC between 2063/64 to 2075/76 (NPR in Million)



The above figure illustrates the total research budget of NHRC between 2063/64 to 2075/76. The Government of Nepal (GoN) covered the major source of research budget. In addition to this, External Development Partners are other imperative sources of budget for research in NHRC.

9.3.4 National Dissemination Workshops

NHRC organized national dissemination workshop of the published studies on 08 April 2019 at NHRC training hall Kathmandu. There were more than 70 participants from Ministry of Health and Population, Government Departments, Non-Government Organizations, Academic Institutions and individual researchers. The program was held in the presence of Chief Guest Honorable Deputy Prime Minister and Minister of Health and Population Mr. Upendra Yadav. The purpose of the dissemination workshop was to inform policymakers, researchers and community with the evidence obtained from the studies conducted by NHRC. Ten research reports were produced and distributed to the participants.

9.4 Nepal Medical Council

9.4.1 Introduction

Nepal Medical Council (NMC) is a regulatory organization established by an Act of Parliament (NMC Act 2020) that comprises 19 members. NMC is empowered to protect and promote the health and safety of the public by ensuring proper standards in the training and practice of modern medicine, registering doctors and regulate their practice and ensuring that individual professionals have a fair and unbiased hearing at any disciplinary inquiry. The community and patients occupy a supreme position in the conduct of its multiple duties.

9.4.2 Progress of Nepal Medical Council:

9.4.2.1 Licensing Examination

Nepal Medical Council conducts Licensing Examination for undergraduates (MBBS & BDS) and Special Examination for postgraduates (MD, MS & MDS) every four months round the year to certify medical and dental practitioners.

9.4.2.2 Registration Status

The major function of Nepal Medical Council is to register and maintain proper archives of medical/dental practitioners as NMC Registered doctors, who have duly graduated in MBBS/ Diploma from Nepal or abroad.

9.4.2.2.1 National Doctors

The data of registered national doctors till 2076 B.S. (2019 A.D.) in Nepal Medical Council were as follows:

UNDERGRADUATE				POSTGRADUATE			
Program	Number of Male	Number of Female	Total Number	Program	Number of Male	Number of Female	Total Number
MBBS	15,485	7,661	23,146	MD/MS	5,530	2,228	7,758
BDS	1,118	2,082	3,200				
Total	16,603	9,743	26,346				

Source: NMC

9.4.2.2.2 Foreign National Doctors (FND)

The provision of temporary registration to foreign doctors is on the basis of recommendation of Government of Nepal, Medical Colleges or organizations related with healthcare and their academic qualification. In fiscal year 2075/76, total number of 185 foreign doctors has been registered at Nepal Medical Council to provide health services in various parts of the country.

9.4.2.2.3 Eligibility Certificate Issuance

Eligibility Certificates were provided as per the NMC regulations to those who possess minimum qualification to pursue Medical Degree/ Diploma from abroad. NMC has granted Eligibility Certificates as below mentioned data:

Health Councils

SN	Country	UG Eligibility	PG Eligibility	SN	Country	UG Eligibility	PG Eligibility
1	Australia	1	2	9	Pakistan	10	37
2	Bangladesh	361	9	10	Philippines	60	2
3	China	75	45	11	Russia	7	0
4	Egypt	0	5	12	Thailand	0	1
5	Germany	2	1	13	Ukraine	2	2
6	India	35	65	14	UK	1	1
7	Japan	0	4	15	USA	1	66
8	Kyrgyz	2	0	Total		557	240

Source: NMC

9.4.2.2.4 Ethical Cases

Nepal Medical Council has been playing crucial role in enforcing code of conduct and developing guidelines and protocols related with medical and dental professions. In order to maintain standard of conduct in health services, Code of Ethics & Professional Conduct 2017 was developed and implemented.

Investigating complaints, registered against the medical services/ doctors and provision of enacting penalty or recommending concerned bodies for legal actions in case of any disobedience/ fraudulent found, also lies under the sphere of Nepal Medical Council. The complaints filed against the misconduct related with medical profession have been operating in following procedure:

No. of complaints	Processed & finalized	Withheld	Under process
51	27	12	12

Source: NMC

9.4.2.2.5 Accreditation Standards:

Following accreditation standards has been formulated and being implemented:

- Accreditation Standards for MBBS (Bachelor in Medicine & Bachelor in Surgery) - 2017
- Accreditation Standards for Bachelor of Dental Surgery (BDS) – 2017
- Regulations for Postgraduate Medical Education (MD/ MS) - 2017
- Regulations for Postgraduate Dental Education (MDS Program) – 2017
- Regulations for Subspecialty Postgraduate Medical Education (DM, MCh) – 2017

9.4.2.2.6 Continuing Professional Development (CPD):

- Nepal Medical Council has been emphasizing on upgrading medical education and skills of NMC registered doctors and making strategic plans for its implementation, therefore, NMC successfully conducted and completed first phase of Training of Trainers (TOT) program to produce competent Human Resources for the effective implementation of Continuing Professional Development (CPD) program and has planned to conduct TOT programs in every Provinces of the country.

- In order to pilot the CPD program, Nepal Medical Council have started accrediting CPD activities conducted by different organization and granting credit points to participants of such accredited programs.
- Council has developed and launched software to enroll different organizations and NMC registered doctors in the online system and make CPD accreditation system accessible in the country.

9.4.2.2.7 Revision of Directives:

- The provisions mentioned under Clause No. 14 of Accreditation Standards for MBBS Program 2017 and Clause No. 13 of Accreditation Standards for the BDS Program has been amended as 'candidates enrolled as medical graduates and have completed six months of their mandatory internship from Nepal as well as from abroad both can appear in the licensing examination.
- The council has fixed the age of the faculties teaching clinical, dental and basic sciences. The maximum age limit for clinical subjects is 73 years and the maximum age limit for dental and basic science is 75 years
- NMC has revised its service fees with the approval from Ministry of Health & Population and is in implementation.

9.4.2.2.7 Recent Activities:

- To cope with pace of Information Technology (IT) system, convenience and effective service delivery online service system has been installed with an appropriate action plans.
- Nepal Medical Council has obtained membership of International Association of Medical Regulatory Authorities (IAMRA).
- Council has decided to provide 'service award' to its staff every year during NMC annual program.
- Nepal Medical Council has been coordinating with Government of Nepal, Academies, Universities, Colleges and other stakeholders to fulfill its responsibilities effectively.

9.5 Nepal Health Professional Council

9.5.1 Introduction

Nepal Health Professional Council (NHPC), Nepal has been established to make more effective the health services in Nepal, to mobilize the services of health professionals except the qualified doctors and nurses to be registered with the Medical Council in a managed and scientific manner and make provisions on the registration of their names according to their qualifications, according to “Nepal Health Professional Council Act 2053” by the Government of Nepal and is enacted on 2053/11/3 by the Parliament in the twenty fifth year of reign of His Majesty King Birendra Bir Bikram Shah Dev.

According to article 20 of the Act, “After one year of the commencement of this Act, no person other than a registered health professional shall be entitled to carry on the health profession, directly or indirectly”. Therefore all health professionals are requested to register in the Council and renew it on every five years according to the rule 36 of “Nepal Health Professional Council” regulation.

9.5.2 Functions, duties and powers of Council

According to the article 4(1) of the Act

The Council established pursuant to article 3 shall consist of the members as follows:

- A person nominated by the Government of Nepal from amongst the persons who, having obtained at least bachelor degree in a subject related with health profession, have been involved in the health service for at least five years - Chairperson
- Chairperson of Paramedicals' Association of Nepal (PAN) or a representative designated by him/her - Member
- Chairperson of Nepal Pharmaceuticals Association or a representative designated by him/her - Member
- Chairperson of Nepal Radiological Society or a representative designated by him/her - Member
- Three registered health professionals nominated by the Government of Nepal from the pathology, physiotherapy and public health, on recommendation of the Paramedicals' Association of Nepal (PAN) . - Member
- Four health professionals elected by the registered health professionals from amongst themselves, as prescribed - Member
- Dean of the Institute of Medicine or a representative designated by him/her - Member
- Representative, Nepal Medical Council - Member

All together there will be 13 council

According to the article 9 of the Act, the functions, duties and powers of the Council shall be as follows:

- To make necessary policies for smoothly operating the health profession related activities.
- To determine the curriculum, terms of admission and policies on examination system of educational institutions imparting teaching and learning on health profession and evaluate and review the related matters.
- To determine the qualifications of health professionals and to provide for the registration of the names of health professionals having required qualifications.

9.5.3 Registration levels and its qualification requirements

According to the qualification of health professionals, the NHPC will register into respective groups.

- The health professional with Master degree will be registered into “Specialization” category of the related subject.
- The health professional with Bachelor degree will be registered into “First Class” (A) category of the related subject.
- The health professional with proficiency certificate level or equivalent will be registered into “Second Class” (B) category of the related subject.
- The health professional with only one year study or course on health education or related field will be registered into “Third Class” (C) category of the related subject.

Note:

All persons who want to pursue Bachelor or Master degree study in foreign countries should apply for a letter of consent at the Council. In order to get a letter of consent for Bachelor/Master study, the person should already have passed the entrance examination of any university. All those, who have not yet any Bachelor degree need not to fulfil the requirement of entrance examination.

9.5.4 Subject committees of the Council

For the registration of health professional, the council has 9 different subject committees:

- Public Health subject committee,
- Medicine subject committee,
- Laboratory Medicine subject Committee,
- Radiology subject committee,
- Physiotherapy and Rehabilitation subject committee,
- Ayurveda subject committee,
- Dental subject committee
- Optometry Science Subject committee
- Miscellaneous subject (Homiyo, Yunani, Naturopathy etc.) committee\

Registration process

Each individual or institution shall fill appropriate registration form and submit the application to the Council along with supporting documents and bank voucher. The Council will forward this application to the respective subject committee. After evaluation of the application, the subject committee will forward the application to the Council with its recommendation. The Council meeting will make a decision and finally award the registration certificate. The NHPC has now started online application system for registration and also started an entrance exam of the applicant. The Council will now award the registration certificate only after passing of this exam.

Table 9.5.5 Total number of Health Professionals Permanent Registered**Table 9.5.5.1 Summary of registration in NHPC up to 2076 Ashadh 31.**

2	Health Education	30	76	16	
3	Primary Health Care		1		
4	Medicine			15297	57942
5	Medical Microbiology	138	139		
6	Health Lab	34	2627	7053	16962
7	Radiography		619	1761	
8	Radiotherapy	1	7	9	
9	Cytology	1	3		
10	Hematology	20	8		
11	Biochemistry	194	83		
12	virology	10			
13	Nuclear Medicine		1		
14	Ayurved			181	1159
15	Homeopath		151	44	
16	Unani)		13		
17	Acupuncture	3	10	91	51
18	Physiotherapy	183	1337	104	75
19	Community Base Rehabilitation		1		
20	Prosthetic & Arthritic		12		1
21	Dental Science			1248	779
22	Naturopathy	1	48		
23	Yoga	3	9		1

26	Clinical Psychology	20			
27	Speech and Hearing	9	69	1	
28	Forensic Medicine			3	
29	Perfusion Technology	3	7		
30	Anaesthesia	1	62		
31	Cardiology Tech.		4		
32	TCM AMT	3			
33	Occupational Therapy		1		
34	Renal Dialysis		4		
Sub Total		1778	9880	26923	76970
Total		1,15,551			

Note:

- Registration procedure in online system.

Note:

- Registration procedure in online system.
- Licensing examination on the process.
- Description collection of institutes in online on the process.

Table 9.5.5.2 Summary of Student Intake number 2076 Ashadh 31

1	MPH	20	10	B.Sc. Medical Biochemistry	20
2	BPH	40	11	B. Optometry	20
3	B.Sc. MLT	20	12	PCL GM/ CMA	40
4	BPT	30	13	CMLT	30
5	CPT	40	14	PCL Radiography	30
6	M.Sc.MLT	5	15	PCL Dental Science	40
7	M.Sc. Medical Microbiology	5	16	PCL Ophthalmology	40
8	B.Sc. Medical Microbiology	20	17	TSCL MLT	40
9	M.Sc. Medical Biochemistry	5			

Source: NHPC

Source: NHPC

9.6 Nepal Pharmacy Council

9.6.1 Introduction

The Nepal Pharmacy Council is hereby (NPC) established in order to make effective the pharmacy business by managing and operating it in a scientific manner and also provide for the registration of names according to the qualification of pharmacists and pharmacy assistants. The functions, duties and powers of NPC are as follows:

9.6.2 Functions and Duties:

- Established in accordance with Nepal Pharmacy Council
- Function is to work for quality assurance and accreditations of pharmacy institutions to produce quality pharmacy human resources as per the need of county.
- Nine members committee and a registrar appointed by GoN.
- Provision of registration of Pharmacist and Pharmacy Assistant.

9.6.3 Infrastructure and Facilities:

- A shared space in National Medicine Laboratory about 800 sq.ft.
- Managed by own financial resource.
- No budget allocation from the government.

9.6.4 Regular Activities:

- Licensure examination (three times a year).
- Registration of Pharmacist and Pharmacy Assistant after passing out the licensure examination.
- Inspection of pharmacy teaching institutions.
- Accreditation of pharmacy teaching institutions.
- Permission for starting a new college after from universities and CTEVT.
- Monitoring and supervision of pharmacy colleges

9.6.5 Specific Activities:

- Revision on the existing guidelines for college.
- Directives for improvement of infrastructure and facilities.
- Code of Ethics for publishing pharmacy text book.
- Issuing “No Objection Letter” for foreign study.
- Routine visit of Pharmacy institutes.
- Information update and use of IT in documentation.

9.6.6 Approved Colleges of fiscal year 2074/75

- Master Program College:- 3 Approved one.
- Bachelor Program College:- 23.
- Diploma Program College:- 36 (CTEVT).

NATIONAL HEALTH INSURANCE

10.1 Introduction

The Health Insurance Program (HIP) is a social security program of the Government of Nepal that aims to enable its citizens to access to quality health care services minimizing a financial burden on them. Health Insurance Board (HIB) is responsible to carry out the health insurance program in Nepal. Although good progress has been made on improving access, much remains to be done. Out-of-pocket expenditure still puts vulnerable households at risk of catastrophic spending and prevents them from using services. Health insurance program is a family-based program. The family has to pay contribution amount to enroll in the program. The enrollment is voluntary now. The households, communities and government are directly involved in this program. The HIP helps to prevent people from falling into poverty due to health care costs i.e. catastrophic expenditure due to accidents or disease by combining prepayment and risk pooling with mutual support. This program also advocates towards quality health services. This program attempts to address barriers in health service utilization and ensure equity and access of poor and disadvantaged groups as a means to achieve Universal Health Coverage. The HIP is started firstly from Kailali district on 25th Chaitra, 2072 and then expanded in other parts of country in phase wise manner.

10.2 Objectives:

- Ensure access to quality health service (equity and equality).
- Protect from financial hardship and reduce out-of pocket payments.
- Extent to universal health coverage.

10.3 Main features of Health Insurance

It is a voluntary program based on family contributions. Families of up to five members have to contribute NPR 3,500 per year and NPR 700 per additional member.

- Government bears contribution amount for ultra-poor, MDR TB, Leprosy, HIV /AIDS and disable people's families having a poverty identity card and red card respectively.
- Insurees have to renew their membership through annual contributions.
- Benefits of up to NPR 100,000 per year are available for families of up to five members with an additional NPR 20,000 covered for each additional member. The maximum amount available per year is NPR 200,000.
- Government bears contribution amount for up to 70 years old citizens and Benefits of up to NPR 100,000 per year.
- Insurees have to choose their first service point. Insurees can access specialized services elsewhere that are not available at the first service point on production of a referral slip from their first contact point.
- It is cash-less system for members seeking health services.
- The program is IT-based with enrolment assistants using smart phones.
- HIB acts as the service purchaser while government and listed private hospitals provide the services.

10.4 Program Implementation Status

The health insurance program in present framework is started from Kailali district on 25th, Chaitra, 2072. Then it is expanded to Ilam and Baglung district on FY 2073/74. The end of FY 2074/75 the program is implemented in 36 districts of the country. Till the end of FY 2075/76 the program is implemented in 46 districts of the country and next 7 districts are in pipe line. HIB is planning to implement this program all over the country as well. The list of HIB program launched districts is as shown in Table 10.1.

Table 10.1: List of districts implementing National Health Insurance program till FY 2075/76

SN	Name of Province	Districts
1	Province 1	Ilam, Jhapa, Sunsari, Bhojpur, Khotang, Solukhumbu, Sankhuwasabha
2	Province 2	Rautahat, Mahottari, Parsa, Dhanusa, Siraha
3	Bagmati	Bhaktapur, Makawanpur, Chitawan, Sindhuli, Ramechhap
4	Gandaki	Baglung, Myagdi, Kaski, Gorkha, Tanahun, Syanja
5	Province 5	Palpa, Bardiya, Arghakhanchi, Kapilvastu, Rolpa, Rukum east, Pyuthan, Banke
6	Karnali	Jajarkot, Surkhet, Rukum west, Jumla, Kalikot, Mugu, Humla, Dolpa
7	SudurPaschim	Kailali, Achham, Baitadi, Bajura, Bajhang, Kanchanpur, Darchula

10.5 Enrollment and Health service utilization Status of fiscal year 2075/76

There were 13,507 people insured in FY 2072/73 and 228,113 people were insured in FY 2073/74 and 1,130,575 people were insured in the FY 2074/75. A total of 147,938 peoples reenrolled 16,40,879 peoples are active members and 507,059 peoples are drop out of Insurees respectively in the health insurance program at the end of FY 2075/76. Among them 293,958 people are insured on the basis of ultra-poor category whose contribution is paid solely by Nepal Government in FY 2075/76. The population coverage in health insurance seemed to be around 14 percent of total population among implemented districts. Among the total insures, about 708,406 people have taken health services from listed health facilities in health insurance program in FY 2075/76. Based on the number of enrollments Jhapa, Chitwan, Palpa and Sunsari are leading top four districts, followed by Kaski and Kailali, present the enrollment status as shown in Table 10.2.

Table 10.2: Summary of numbers of enrollment by district by province

S. N.	Province	Name of District	Nos. of Insurees	Drop out of Insurees	Active Members of Insurees	No. service takers
1	Province 1	Ilam	67073	17556	49517	25198
2		Jhapa	243061	51962	191099	89851
3		Sunsari	151621	24343	127278	48203
4		Bhojpur	19776	6295	13481	2928
5		Khotang	23907	8019	15888	2169
6		Solukhumbu	5201	2825	2376	640
7		Sankhuwasabha	6883	0	6883	113
8	Province 2	Rautahat	9870	3256	6614	2728
9		Mahottari	10821	3747	7074	1059
10		Parsa	13938	3182	10756	1838
11		Dhanusa	3483	11	3472	304
12		Siraha	6839	11	6828	288
13	Bagmati	Bhaktapur	90512	16041	74471	43802

14	Gandaki	Makawanpur	95832	16252	79580	40308
15		Chitawan	214103	55110	158993	110228
16		Sindhuli	52743	12889	39854	11070
17		Ramechhap	22882	5672	17210	4428
18		Baglung	48934	12548	36386	16129
19		Myagdi	16545	4553	11992	7362
20		Kaski	120730	32412	88318	56848
21		Gorkha	40970	12877	28093	12879
22		Tanahun	65132	16495	48637	22794
23		Syanja	34034	12	34022	3659
24	Province 5	Palpa	147817	17766	130051	73835
25		Bardiya	78813	22742	56071	16205
26		Arghakhanchi	37057	10735	26322	8658
27		Kapilvastu	41391	8220	33171	6483
28		Rolpa	20395	8780	11615	2053
29		Rukum east	4815	2355	2460	223
30		Pyuthan	33142	9269	23873	6952
31		Banke	18183	81	18102	1870
32	Karnali	Jajarkot	34400	11735	22665	6655
33		Surkhet	39743	13623	26120	15766
34		Rukum west	41972	14543	27429	16400
35		Jumla	32445	10755	21690	9258
36		Kalikot	29546	14866	14680	3678
37		Humla	2843	0	2843	1
38		Dolpa	1253	0	1253	2
39		Mugu	1383	0	1383	1
40	SudurPasc him	Kailali	122494	24333	98161	27971
41		Achham	23682	9183	14499	1394
42		Baitadi	9523	4326	5197	1695
43		Bajura	24686	11042	13644	2117
44		Bajhang	27654	6637	21017	1934
45		Kanchanpur	5682	0	5682	295
46		Darchula	4129	0	4129	134
Total			2147938	507059	1640879	708406

Gender wise Insurees Trend since FY 2072/073- 2075/076

serial no.	Fiscal year	No. of Total Insurees	Gender wise distribution		
			Male	Female	Others
1	2072/73	12623	5972	6647	4
2	2073/74	228113	107804	120277	32
3	2074/75	1130575	533829	596633	113
4	2075/76	1640879	782143	858449	287

Source: IMIS 2075/76 Ashadha 31

10.6 Opportunities in HIP program

- The program is addressed in Constitution of Nepal 2072, in Art no.51 of State's guideline principle
- Health Insurance Act 2074 has envisioned the compulsory enrollment of people working in formal sector.
- High political commitment.
- Designed as tool for providing equitable and quality health service.
- Health system strengthening (generic prescribing, hospital pharmacy, gate keeping system)
- Sustainable approach to provide social health security to Nepalese people.

10.7 Challenges in HIP program

- Meeting the expectation of insured people.
- Raising the number of enrollment and renewal.
- Availability and accessibility of quality health service
- Strengthening of insurance management information system (IMIS)
- Identification of target group and their enrollment (ultra-poor etc)
- Poverty card related issues.
- Fragmented social health security program (within MoHP and beyond

DEVELOPMENT PARTNERS SUPPORT

The outcomes discussed in the previous chapters are the results of combined efforts of the Ministry of Health and its development partners (multilateral, bilateral and international organizations and national NGOs). The Department of Health Services acknowledges its partnership with these organizations and their large contributions to Nepal’s health sector. This chapter lists the programme focus of these organizations and their contact details. Partners have also provided technical assistance in their areas of expertise.

Development partners support the government health system through a sector-wide approach (SWAp). The SWAp now supports the implementation of the new Nepal Health Sector Strategy (NHSS, 2016–2021). The Joint Financing Arrangement (JFA) has been signed by various partners and the government. The JFA describes in detail the arrangement for partners’ financing of the NHSS. The JFA elaborates the pool funding arrangement and parallel financing mechanism as bilaterally agreed between the government and the donor partners. This time the World Bank has allocated all its commitment through a Program-for-Results, a tool which disburses fund against a verifiable set of results, called Disbursement Linked Results (DLRs). DFID and GAVI are also disbursing part of their commitments against some DLRs identified and agreed with the Ministry of Health and Population (MoHP). The matrix below provides contributions of various partners for supporting the NHS

Development Partners Contributing to Health Sector in Nepal

11.1 MULTILATERAL ORGANIZATIONS

Organization	Major program focus	Geographical coverage	Health sector budget for FY 2018/2019	Contact details
UNFPA	Sexual Reproductive Health and Right, Family Planning, Midwifery Education, RH morbidities, Adolescent Sexual Reproductive Health, Health Response to Gender Based Violence (GBV) and Emergency preparedness & response.	Provincial presence: 2, 5 and Sudur Paschim of 19 districts,	Total allocated budget of all programs activities: US\$ 4,896,000 Total expenses of all programs activities: US\$ 5,319,000 The amount includes the additional purchase of amount US\$ 1,756,000	Office address: UNFPA Nepal Jhamsikhel, Sanepa, Lalitpur Tel: +977 1 5523880 Fax: +977 1 5523985 Email: Nepal.office@unfpa.org registry-np@unfpa.org Web: http://nepal.unfpa.org/
UNICEF	1) Maternal and newborn health 2) Child Health including immunization 3) Adolescent Health 4) Health System Strengthening including emergency response 5) Nutrition	District number: 18 District number: 77 District number: 18 District number: 18 District number: 41	Total allocated budget of all programs activities: US \$ 3,405,554 Total expenses of all programs activities: US \$ 3,405,554	Office address: UNICEF Nepal, UN House, Pulchowk, Lalitpur Tel:5523200 Fax: 5527280 Email: kathmandu@unicef.org Web: http://www.unicef.org/nepal
WHO Nepal	- Vaccine preventable disease surveillance and technical support to strengthen immunization coverage - Strengthen public health emergency preparedness and response – support to establish health emergency operation centers (HEOCs) and strengthening hub-hospital networks with adequate	National	Allocation (Award): 8.1m Expenditure: 6.65 m	Dr Jos Vandelaer WHO Representative WHO Country Office for Nepal UN House, Pulchowk, Lalitpur Email: vandelaerjo@who.int Phone: + 977-1-552199 Fax: + 977-1-5527756

Organization	Major program focus	Geographical coverage	Health sector budget for FY 2018/2019	Contact details
	stockpiles - Support implementation of package of essential noncommunicable (PEN) diseases interventions and development and update of national protocols and frameworks - Technical support to achieve and sustain communicable disease elimination and control targets – Malaria, Lymphatic filariasis, Trachoma, Kala-azar, Leprosy and Tuberculosis			
The World Bank Group	To improve efficiency in public resource management systems of the health sector in Nepal	Nationwide	Total disbursed Budget US\$29.5 million	Office address: The World Bank Group Yak and Yeti Complex Durbar Marg, Kathmandu Tel: 977-1-4236000 Fax: 977-1-4225112 Email: infonepal@worldbank.org Web: https://www.worldbank.org/en/country/nepal
United Nations World Food Programme	1. Emergency Nutrition Response Programme: The Emergency Nutrition Response Program was implemented with the following key objectives. - To prevent malnutrition among pregnant and lactating women and children aged 6-59 months. - To prevent deterioration of MAM children aged between 6 - 59	Emergency Nutrition Response Programme was implemented in five districts of Province 2 (Rautahat, Sarlahi, Mahottari, Siraha and Saptari) Maternal and Child Health and Nutrition Programme is being implemented in five	Total expenses US \$ 701091	Office address: Patandhoka Road Chakupat-10, Lalitpur 44600 Tel: 977-01-5260607 Fax: 977-1-5260607 Email: wfp.kathmandu@wfp.org

Organization	Major program focus	Geographical coverage	Health sector budget for FY 2018/2019	Contact details
	months into SAM. - To create awareness among the public regarding malnutrition, and - To enhance knowledge on maternal, infant and young child feeding practices. The major activities implemented were: - Blanket Supplementary Feeding Programme - Nutrition screening through MUAC - Nutrition education 2. Maternal and Child Health and Nutrition Programme: United Nation World Food Programme is continuously supported government of Nepal in the implementation of the Maternal and Child Health and Nutrition Program. The program major focused was to improve the nutrition status of Pregnant and Lactating women (PLW) and the children of age 6 to 23 months. The program major focus is to enhance maternal, infant and young child nutrition practices and support to enhance the basic health services along with the distribution of super cereals for the PLW and children of age 6 to 59 months.	districts of Province 6 (Mugu, Jumla, Humla, Dolpa and Kalikot)		Web: www.wfp.org

11.2 BILATERAL ORGANIZATIONS

Organization	Major program focus	Geographical coverage	Health sector budget for FY 2018/2019	Contact details
Department for International Development (DFID)	- Health system strengthening, including health policy, planning and budgeting, health governance and devolution (federalism), improving evidence science and accountability on health including monitoring, evaluation, surveillance and research, and social accountability in the health sector; - procurement and public financial management; - improving access to medicines including safe motherhood and family planning, gender, equity and social inclusion; and - health infrastructure and hospital retrofitting (Nepal Health Sector Programme 3 and Nepal Family Planning Project)	Nationwide	<u>Total Allocated budget of all programme activities:</u> £12,350,000 financial aid and £10,200,000 Technical assistance <u>Total Expenses of all programme activities:</u> £5,000,000 financial aid disbursed, and £8,100,000 FA is planned to disburse by Nov 2019 (subject to achievement of Disbursement Linked Indicators) and £8,500,000 technical assistance	<u>Office address:</u> DFID Nepal, British Embassy, Lainchaur, Kathmandu, PO Box 106, Nepal Email: nepal-enquiries@dfid.gov.uk <u>Web:</u> https://www.gov.uk/government/world/organisations/dfid-nepal
German Technical Cooperation - GIZ Support to the Health Sector Programme (S2HSP)	- Nationwide implementation of National Health Insurance - Strengthening the health management of selected sub national government units as a part of federal health system - Improve the capacity of selected health sector professionals	District number: Nationwide (43 of 77 districts already implemented NHI) District number: 5 (6 municipalities: Madhyapur Thimi, Nilkantha, Bidur, Nepalgunj SMC, Godawari and Dhangadi)	<u>Total allocated budget of all programs activities:</u> US \$2,854,332 <u>Total expenses of all programs activities:</u> US \$2,636,592	<u>Office address:</u> Milap Road, Sanepa, Lalitpur SMC, Ward no.2, Province 3, Nepal Tel: +977 1 5013088 Fax: +977 1 5013078 Email: paul.rueckert@giz.de

Organization	Major program focus	Geographical coverage	Health sector budget for FY 2018/2019	Contact details
	• Harmonization of various health information system as the first element of a future national health information platform • Implementation of relevant approaches and strategies for dissemination on health promotion targeting for adolescents (10-19 years) on reproductive health topics	District Number: Nationwide District number: 10 (Major support at federal level) District number: 2 (Kailali, and Nuwakot)		Web: www.giz.de/nepal
German Financial Cooperation - KfW	• Maintenance of medical equipment ◦ Multiyear contract outsourcing of maintenance • Sector Support/Pool Fund ◦ Budget Support through national systems • Support to Social Marketing—Nepal CRS ◦ Procurement of OC and EC • Reconstruction of 3 earthquake damaged District Hospitals • Improvement of Mother Child Care in Remote Areas ◦ Construction, medical equipment and e-health components, particularly to strengthening the referral system in and around Dadeldhura	• National level • National level • National level • Gorkha, Ramechhapp, Dolakha • Province 7	Disbursement Euro 4.77 million or USD 5.34 million	Office address: KfW Kathmandu Büro Office of German Development Cooperation Sanepa, Lalitpur, Tel: 00977 1 5523228 Fax: 00977 1 5535693 Email: shanker.pandey@kfw.de kfw.kathmandu@kfw.de Web: www.kfw.de
USAID	• Maternal Newborn and Child Health	District number: 47 districts through different projects (Suaahara II, and SSBH project)	Total Allocated Budget of all programs activities: US \$43,082,322	Office address: USAID/Nepal c/o U.S. Embassy Building, Maharajgunj G.P.O Box: 295 Tel: 01-4234000 Fax: 01-4007285 http://nepal.usaid.gov
	• Family Planning & Reproductive Health	District number: all 75 districts through different projects (GGMS, GHSC-PSM, Suaahara II, SSBH, FACT, Redbook and BA project)	Total Expenses of all programs activities: US \$43,082,322	

Organization	Major program focus	Geographical coverage	Health sector budget for FY 2018/2019	Contact details
	HIV/AIDS and STI	District number: 17 districts (Linkages project)		
	Water Sanitation and Hygiene program	District number: 42 districts through different projects (SUAHARA, SafaaPani, Swachhta project)		
	Global Health Supply Chain program	District number: Stores at central, Lumbini and Karnali Pradesh level and the health offices there in (22 districts, 4 LLGs and 23 health facilities) through GHSC-PSM Project		

11.3 INTERNATIONAL NON-GOVERNMENT ORGANIZATIONS

Organization	Major program focus	Geographical coverage	Health sector budget for FY 2018/2019	Contact details
Adventists Development and Relief Agency (ADRA) Nepal	- Family Planning and Adolescent Sexual and Reproductive Health (UNFPP and FPSSP) - Health System Strengthening - Women's Health and System Strengthening Project - Integrated Management of Neonatal and Child Health	District number: 9 District number: 1 District number: 4 District number: 1	Total allocated budget of all programs activities: US \$3117,445.00 Total expenses of all programs activities: US \$2423,472.00	Office address: Nirbhawan, Sanepa, Lalitpur - 3 Tel: 01-5555913, 5555914 Fax: 01-5554251 Email: info@adranepal.org Web: www.adranepal.org

Organization	Major program focus	Geographical coverage	Health sector budget for FY 2018/2019	Contact details
Ipas Nepal	- To create an enabling environment that supports women and girls' access to high-quality abortion and contraceptive care. - To ensure high-quality abortion and contraceptive care are available, accessible, and acceptable to women and girls of Nepal. - To ensure women and girls have the social support, knowledge, and self-efficacy to access safe abortion and contraception.	District number: 28	Total allocated budget of all programs activities: US \$: 1,820,409 Total expenses of all programs activities: US \$: 1,820,409	Office address: Baluwatar, Kathmandu Do Cha Marg, Ward No: 4 Tel: 01-4420787 Fax: 01-4425378 Email: ipasnepal@ipas.org Web: http://nepal.ipas.org/
Birat Nepal Medical Trust (BNMT Nepal)	- Tuberculosis - Sexual and Reproductive Health Rights (SRHR) including Menstrual Health - Mental Health and Psychosocial Support Services (MHPSS) - Water Sanitation and Hygiene	District number: 17 District number: 1 District number: 1 District number: 1	Total allocated budget of all programs activities: US \$ 1,179,555.02 Total expenses of all programs activities: US \$ 1,086,066.40	Office address: Lazimpat – 2, Kathmandu, Nepal. Tel: 977 1 4436434, 4428240 Fax: 977 1 4439108 Email: bnmtnepal@bnmt.org.np Web:
CARE Nepal/ NURTURE	1) Capacity building and Health system strengthening 2) Maternal, newborn, child health, family planning 3) Health governance and accountability 4) Infrastructure and equipment support to birthing center	District number: 7	Total allocated budget of all programs activities: US \$: 870820.00 Total expenses of all programs activities: US \$: 842252.00	Office address: Samata Bhawan Dhobighat, Lalitpur Tel: +977-01-5522800 Fax: +977-01-5521202 Email: carenepal@np.care.org Web: WWW.carenepal.org
FHI 360 Nepal	USAID- and PEPFAR-funded LINKAGES Nepal - HIV and sexually transmitted infection (STI) prevention education, referral and follow-up through online and offline platforms - Condom promotion and distribution - HIV testing and counseling (HTC) services (index testing, online-to-offline, HIV self-testing, community-led testing, enhanced	17 districts, 131 local bodies (5 metropolitan cities, 8 sub-metropolitan cities, 70 municipalities and 48 rural municipalities)	Total allocated budget: US\$ 3.6 million Total Expenditure: US\$ 2,055,028	Gopal Bhawan, Anamika Galli, Baluwatar, Kathmandu -4, Nepal Tel: +977.1.4437173 Fax: +977.1.4417475 Email: bhshrestha@fhi360.org www.fhi360.org/countries/nepal

Organization	Major program focus	Geographical coverage	Health sector budget for FY 2018/2019	Contact details
	- peer outreach) - STI examination and treatment services - Referral to and linkages with antiretroviral therapy (ART) services - Care, support and counseling for adherence and retention - Gender-based violence (GBV) screening and referral for prevention and mitigation services - Stigma and discrimination reduction - Demonstration/pilot study on HIV self-testing and pre-exposure prophylaxis (PrEP)			
	- Technical support to National Center for AIDS and STD Control(NCASC) and National Public Health Laboratory (NPHL) - Support to national networks of key populations and people living with HIV	Lalitpur district		
		National level		
	- UK aid- funded Fleming Fund Country Grant for Nepal - Support to Antimicrobial Resistance Containment Multispectral Steering Committee (AMRSCC), National Technical Working Committee-AMR (NTWC) and Technical Working Groups (TWGs) - Develop/Update AMR National Action Plan/Protocols/Guidelines/Standard Operating Procedures - Capacity building: hands-on skill-based trainings and onsite coaching/mentoring for lab professionals from AMR sentinel laboratories - Linking national reference laboratories with External Quality Assurance in improving the performance - Procurement and supply of equipment and supplies	16 laboratories/surveillance sites (12 human health and 4 animal health sector)	Total allocated budget: US\$ 1.8 million Total Expenditure: US\$ 174,685	

Organization	Major program focus	Geographical coverage	Health sector budget for FY 2018/2019	Contact details
	- Renovation of selected laboratories - Establishment and functioning of AMR/AMU surveillance in AMR sentinel laboratories (Recording and reporting, Analysis and Dissemination of the results for evidence-based policy and planning)			
Helen Keller International (HKI)	- Suaahara II (Good Nutrition) Program - SABAL - Nutrition - Community Resilience Program - Nutrition - Child Feeding ARCH 3.0 - Study on relationship between maternal exposure to Mycotoxins on birth	District number: 42 District number: 6 District number:1 District number:1	Total allocated budget of all programs activities: US \$16,834,102. Total expenses of all programs activities: US \$14,509,827.	Office address: Green Block, Ward No. 10, Chakupat, Patan, Lalitpur, Nepal Tel: 5260247 Fax: 5260245 Web: www.hki.org
International Network for Rational Use of Drugs (INRUD, Nepal)	- Monitoring prescribing practices and availability of free drugs at PHC outlets to improve rational use of medicines / Standard Treatment Protocol adherence. - Provides technical support to DoHS/MoHP to the set activities since 2009-10.	Different districts.	Allocated Budget: MoHP/DoHS	Office address: 304 Surya Bikram Gyawali Marg, Baneswor, Kathmandu Tel: 4115636 Fax: 4115515 E-mail: kumudkafle@gmail.com Web: www.inrud-nepal.org.np
United Mission to Nepal (UMN)	- Community Health: Integrated components on MCH, Nutrition, WASH, FP, ASRH, HIV and health system strengthening - Maternal and child Health - Mental health	District number: 10 District number: 2 District number: 5	Total allocated budget of all programs activities: US \$521517	PO Box: 126 Thapathali, Kathmandu Tel: 4228118, 4268900 Fax: 4225559

Organization	Major program focus	Geographical coverage	Health sector budget for FY 2018/2019	Contact details
	• ASRH and HIV	District number: 2	Total expenses of all programs activities: US \$580,087	Email: communications@umn.org.np Web: umn.org.np
One Heart World-Wide (OHW)	• 1) Maternal and Neonatal Health	District number: 13 (Taplejung, Panchthar, Ilam, Terhathum, Sankhuwasabha, Bhojpur, Khotang, Okhaldhunga, Solukhumbu, Sindhupalchok, Ramechhap, Nuwakot, Dhading)	Total allocated budget of all program's activities: US \$ 1,458,960 Total expenses of all program's activities: US \$1,158,000	Office address: PO Box 3764, House No. 496, Dhara Marg, Maharajgunj, Kathmandu, Nepal Tel: +977-1-4416191/4417547 Email: ohwnepal@oneheartworldwide.org Web: www.oneheartworldwide.org
Plan International Nepal, Country Office	• Maternal and Newborn Health: Repair & maintenance of birthing centres, equipment & furniture support to birthing centre; strengthen outreach clinics. • Early Childhood Development: a) Parenting Education to pregnant women, mothers of less than five years of children and other care takers of family on responsive care and early stimulation for early childhood development; safety and security including establishment of child play corner. a) Reflection Dialogue and Action at community level to address social determinants on early childhood development. b) Support on development of National Early Childhood Development Strategy at national level and strengthening ECD Caucus. • Community based nutrition program- Assessment of nutritional status of children less than five years, healthy baby competition, food demonstration, establishment of nutrition and	District number: 5 (Sunsari, Sindhuli, Makawanpur, Bardiya, Jumla)	Total Allocated Budget of all programs activities: Rs. 41,576,403 Total Expenses of all programs activities: Rs. 40,867,663	Office address: Maitri Marga, Bakhundole, Lalitpur Sub-metropolitan City Ward no. 3, Nepal Tel: +977-1-5535580, 5535560 Email: Shanti.Upadhyaya@plan-international.org Web: www.plan-international.org/nepal

Organization	Major program focus	Geographical coverage	Health sector budget for FY 2018/2019	Contact details
	WASH corners.			
Population Services International Nepal (PSI Nepal)	Women’s Health Project (WHP) - Improve knowledge and access to Long Acting Reversible Contraception (LARC) and Safe abortion Services through private and public sector: Provider training, onsite quality assurance, distribution of commodities and equipment, and information sharing through community level mobilization and mass media. Adolescent Youth Project (AYP) - Increase knowledge and use of family planning products and services among adolescents and youth (15-24) from private sector service sites Health and Hygiene Activity (HHA) - Support infection prevention at public facilities through provider behavior change related activities and counseling for personal WASH related hygiene behavior change among public facility clients.	Province: 1, 2, 3, 4, 5 & 7 District number: 30 Province: 5, 7 District number: 7 Province: 6 District number: 5 Total Province: 1, 2, 3, 4, 6 & 7 District Number: 35 (7 districts overlapping in WHP and AYP)	Total allocated budget of all programs activities: US \$3,965,796 Total expenses of all programs activities: US \$3,635,712	Office address: Pulchowk, Krishnagali, Lalitpur, Nepal Tel: 5553190. 5550620 Fax: 5550619 Email: info@psi.org.np Web:www.psi.org
FAIRMED Foundation Nepal	1) Neglected Tropical Diseases 2) Maternal and New Born Health 3) Health system strengthening, and behavior change at community level 4) Disability Inclusiveness	District number: 3 (Kapilvastu, Sindhupalchowk and Baglung)	Total allocated budget of all programs: US \$509,778 Total expenses of all programs: US \$435,107	Office address: FAIRMED Nepal, Kalika Marg, Sanepa 2 Lalitpur, P O Box 10047 Tel: 5013180 Email:nepal@fairmed.ch Web:www.fairmed.ch.

Organization	Major program focus	Geographical coverage	Health sector budget for FY 2018/2019	Contact details
Nick Simons Foundation International (NSFI)	• Hospital Support Program - Rural Staff Support Program	District number: 18	Total allocated budget of all programs activities: US \$ 3,396,420.00	Office address: Box 8975, EPC 1813 Sanepa 2, Lalitpur Tel: 5520322, 5550318 Fax: 977-1-5554250 Email: nrshrestha@nsi.edu.np Web: nsi.edu.np
	• Hospital Support Program - Rural Staff Support Partnership Program	District number: 12		
	• Hospital Support Program - Hospital Strengthening Management Program	District number: 77	Total expenses of all programs activities: US \$ 2,436,401.00	
	• Training (AAC, DBEE, MLP, SBA, ASBA, OTTM, PEC)	District number: 77		

11.4 Non-Governmental Organizations

Organization	Major program focus	Geographical coverage	Budget for health sector for FY 2018/2019	Contact details
NTAG - Nepali Technical Assistance Group	• Maternal and child nutrition	• 42 districts (Suahara-II)	Total allocated budget of all programs activities: NRS. 101,316,364	Office address: Ukti Marga, Maitighar, Kathmandu, Nepal GPO Box 7518 Tel: 977-1-4224884/ 4223477/4221133 Email: info@ntag.org.np / deepakthapa@ntag.org.np Web: http://www.ntag.org.np
	• Multi-sectoral training to health workers, FCHVs and others	• 77 districts (NVA Program)		
	• Promotion and advocacy of National Vitamin A Program	• 6 districts	US \$885,400	
	• Research and surveys	• 3 districts	Total expenses of all programs activities: NRS. 66,564,558	
Marie Stopes International through implementing partner Sunaulo Parivar Nepal		• Province # 2 and # 6	US \$581,705	Office address: Baluwatar, Kathmandu Tel: 01- 4419376 Fax: 01- 4420416 Email: Anne Lancelot anne.lancelot@mariestopes.org.np
	Sexual reproductive Health	Static Center: 31 Districts	Total allocated budget of all program activities: NPR 467,111,428	
	• Family planning (static and outreach services which includes full range of FP methods)	Steri Outreach: 9 steri team		
	• Safe Abortion Services	LARC Outreach: 13 LARC team	Total expenses of all program activities:	
	• Training on reproductive health			
	• Contraceptive social marketing			

Organization	Major program focus	Geographical coverage	Budget for health sector for FY 2018/2019	Contact details
Nepal Red Cross Society (NRCS)	Adolescent Sexual Reproductive Health	MS Ladies: 19 districts	NPR 448,919,597	KP Upadhyay kp.upadhyay@mariestopes.org.np Web: www.mariestopes.org.np
Nepal Red Cross Society (NRCS)	- Preventive health (Major focused: capacity building of community and community based institutions through RMNCAH, WASH, NCD, Community BASED Health and First Aid) - Curative health services (Major focused: Eye health through Surkhet and Janaki Eye Care Hospitals, and nationwide Blood and Ambulance Services) - Emergency Health services (Major focused: Red Cross Emergency Clinic, Rural Emergency Trauma System Strengthening, E-WASH and Emergency health preparedness and response)	District number: 11 District number: 77 District number: 77 (Need based in emergency)	Total allocated budget for FY 2018/2019 of all health programs: US \$ 2,860,289 Total expenses of all programs activities: US \$ 2288231.2	Office address: Nepal Red Cross Society, National Headquarters, Kalimati, Kathmandu, Nepal Tel: +977 1 4270650 Fax: +977 1 4271915 Email: umesh@nracs.org.np health@nracs.org Web: www.nracs.org
Family Planning Association of Nepal (FPAN)	- Integrated SRH services including sexuality counseling, contraceptives, obstetrics, gynecological, STIs, HIV, safe abortion and sexual/gender-based violence. - Comprehensive Sexuality Education/Gender Equality and Empowerment of Youth and Women. - Comprehensive abortion Care (Safe abortion Service). - Provide Minimum Initial Service Package (MISP) in disaster effected area.	District Number 33 District Number 33 District Number 27 District Number 28	Total allocated budget of program activities US \$ 4461844 Total expenses of program activities US \$ 4350298	Office Address: Family Planning Association of Nepal Central Office, Pulchowk, Lalitpur P. O. Box 486, Kathmandu, Nepal Phone : 977-1-5010240, 977-1-5010104 Fax : 977-1-5010248 Email : fpandg@fpan.org.np Website http://fpan.org
Nepal Red Cross Society (NRCS)	Preventive health (Major focused: capacity building of community and community based institutions through RMNCAH, WASH, NCD, Community BASED	District number: 11	Total allocated budget for all health programs:	Office address: Nepal Red Cross Society, National Headquarters, Kalimati, Kathmandu, Nepal

Organization	Major program focus	Geographical coverage	Budget for health sector for FY 2018/2019	Contact details
	Health and First Aid) • Curative health services (Major focused: Eye health through Surkhet and Janaki Eye Care Hospitals, and nationwide Blood and Ambulance Services) • Emergency Health services (Major focused: Red Cross Emergency Clinic, Rural Emergency Trauma System Strengthening, E-WASH and Emergency health preparedness and response)	District number: 77 District number: 77 (Need based in emergency)	US \$ 2,860,289 Total expenses of all programs activities: US \$ 2288231.2	Tel: +977 1 4270650 Fax: +977 1 4271915 Email: umesh@nracs.org / health@nracs.org Web: www.nracs.org
PHASE Nepal	• Basic Essential Primary Health care. • Maternal and Child Health • Community awareness program • Traditional healers Training	District: 7 District: 7 District: 7 District: 7	Total Expenses of all programs activities: US \$ 571,502.00	Office address: PHASE Nepal Dadhikot, Bhatkapur Tel: 016634038/89/11 Email: info@phasenepal.org Web: www.phasenepal.org
Medic Mobile	• Design, configuration and implementation of an open-source mHealth toolkit for community-based maternal and child health care coordination. Use cases that are currently deployed in Nepal in partnership with municipalities and NGO partners include: a) Antenatal care b) Postnatal care c) MPDSR (in those districts where Community based MPDSR has been implemented)	District number: 14	Total allocated budget of all programs activities: US \$617,392 Total expenses of all programs activities: US \$528,021	Office address: Medic Mobile Inc. Pvt Ltd. Chakupat, Lalitpur Tel: +977 9802024110 Email: nitin@medicmobile.org www.medicmobile.org

Organization	Major program focus	Geographical coverage	Budget for health sector for FY 2018/2019	Contact details
Netherlands Leprosy Relief (NLR Nepal)	NLR has adopted the three zero strategies (zero transmission, zero disabilities, and zero exclusion) as major pillars and set the main targets of this project period. NLR focuses on; 1. Reducing disease burden due to leprosy, promotion & demonstration on effectiveness of preventive measure in leprosy through PEP interventions. 2. Disability prevention and management. 3. Inclusive Development through integrated approach.	Two provinces – Province no 1 and Sudur Pachim Pradesh (23 districts) Both of these provinces include both high and low endemic districts in relation to burden of disease caused by leprosy and disability.	Rs. 2,47,50,000 (225,000 USD)	Himalaya Dev Sigdel Country Director Phone: 01 4784296 Mobile: 9846024430 email: himalaya.sigdel@nlrnepal.org.np web: http://www.nlrnepal.org.np
The Leprosy Mission Nepal	1. Specialist tertiary care and technical support for leprosy/Lymphatic filariasis and disability control programs through Anandaban Hospital, Lele and Satellite Clinics. 2. Reconstructive surgery fixing leprosy deformities, regenerative therapy (L-PRF), complication (reaction and neuritis) management, (WHO) referral relapse confirmation, physiotherapy services and provides supportive appliances including orthosis/prosthesis 3. Internationally recognized clinical research through Microbacterium Laboratory in Anandaban Hospital and social research activities through Community based Inclusive Development projects 4. Essential technical training on leprosy and disability to global (Bangladesh, Sri	Tertiary Care hospital in Anandaban, Lele: 1 Satellite clinics (2): Biratnagar and Butwal Partner's sites: 3 districts (Banke, Surkhet, Pokhara-Green Pasture's Hospital) Self help groups: 18 districts CBID and other projects: Butwal, Kapilvastu, Dhading, Banke, Biratnagar, Morang,	Total Expenditure for all program activities for 2018: Nepali Rs. 212,142,438 Total Expenses for all program activities for 2019: NRs. 182,166,300	Country office address: Tikabhairab Road, Satdobato, Lalitpur (977) 01-5151371 Country Director: Shovakhar Kandel E-mail: shovakhark@tlmnepal.org Website: www.tlmnepal.org

Organization	Major program focus	Geographical coverage	Budget for health sector for FY 2018/2019	Contact details
Handicap International	Lanka, Netherlands, Mozambique etc.) and national level governmental and non-governmental health professionals through Training Unit, Lele 5. Community based Inclusive Development (CBID) projects with a focus on economic empowerment, livelihood support, stigma and discrimination reduction and social integration of people affected by leprosy, other disabilities and marginalized people in several districts.	Sunsari, Rautahat, Bare, Parsa, Chitwan, Rupandehi, Bardiya, Lalitpur, Parasi, Morang, Rupandehi and Kathmandu.		
	Physical Rehabilitation Activity(PRA)	All over Nepal with specific focus on Karnali Pradesh	-	Office address Handicap International 233 Sallaghari Marg, Bansbari, Kathmandu.
	Strengthening Health Sector Preparedness and Response Capacity in Earthquake Affected and Disaster Prone Districts in Nepal ➤ Health and Rehabilitation ➤ Health Sector Disaster Preparedness	Bagmati Province: Dolakha, Sindhupalchowk, Rasuwa, Nuwakot and Dhading Gandaki Province: Gorkha Province 5: Dang and Banke Sudurpashchim Province: Dadeldhura and Kailali	Total Budget: NPR.38,200,880 Total Expenses: NPR.41,701,088	Contact person: Willy Bergogne Country Director Tel: +977-1-4374609 E-mail: info@nepal.hi.org Web: www.hi.org
	Task Shifting of Basic Physiotherapy and Rehabilitation Services Through Integration of Basic Physiotherapy Skills into Mid-Level Providers Training for Paramedics in Nepal ➤ Health and Rehabilitation	Province No. 2: Dhanusha Bagmati Province: Dolakha and Dhading	Total Project Budget £.150,000 Total Expenses: £.150,000	

Organization	Major program focus	Geographical coverage	Budget for health sector for FY 2018/2019	Contact details
	Facilitate for access of Women and Children with Disabilities/Impairments to Healthcare and Social Protection ➤ Health and Rehabilitation ➤ Inclusive Livelihood ➤ Inclusive Education ➤ Disaster Preparedness	Six of the most 2015 earthquake affected districts: Sindhupalchowk: Chautara Sangachokgadhi Municipality Dhading: Nilkantha Municipality Dolakha: Bhimeswor Municipality (Charikot) and Jiri Municipality(Jiri) Nuwakot: Bidur Municipality Rasuwa: Gosainkunda Rural Municipality Gorkha: Gorkha Municipality	Total Project Budget NPR.62754689.00	

Source: Respective EDPs, INGOs and NGOs

ANNEXES

ANNEX 1 Major activities carried out in FY 2075/76**Family Welfare Division Immunization and Child health sections program activities:**

SN	Activities	Unit	Targets	Achieved	%
1	Provincial level ToT about National immunization program and micro planning for EPI focal person and health worker.	No. of times	7	7	100
2	FIPV launching and starting in routine immunization	No. of times	1	1	100
3	Training about Importance Child health Card/Immunization card and its retention	No. of times	1	1	100
4	Workshop to review and update injection safety policy, Multi-dose Vial vaccine policy, school td, Rota Vaccine Usage guideline, vaccine disposal policy and cod chain policy, DQSA Guideline	No. of times	1	1	100
6	Training about "Khop Kit Bag "and its guideline to immunization focal person of province and palika level.	No. of times	2	2	100
7	Planned and announced for MR-SIA campaign .	No. of times	1	1	100
8	Produced and supplied full immunization certificate according to the immunization Act..	No. of times	1		100
9	Conduction of Outbreak Response Immunization in major measles outbreak area	No. of times	1	1	100
10	Advocacy meeting about sustainable Immunization Programme with the members of the parliament, Policy makers, private sectors and civil society	times	1	1	100
11	Certification of Rubella and Congenital Rubella syndrome control by WHO SEARO.	No. of times	1	1	100
12	Ventilator training for staff working in NICU	No. of times	3		
13	Provincial level workshop on CBIMNCI program Orientation and planning	No. of times	7	7	100
14	Facility based IMNCI training to health workers of district hospital	No. of times	4	5	120
15	NePeriQIP onsite mentoring for programmed implemented hospital	No. of times	3	3	100
16	SNCU level 2 training for Medical officer and paramedics/nursing	No. of times	7	7	100
17	FBIMNCI training to Medical officer	No. of times	3	3	100
18	Work shop about Early Childhood Development	No. of times	1	1	100
19	Workshop with TU/CTEVT/PU/ curriculum committee about inclusion and revised CBIMNCI/FBIMNCI content in respected curriculum	No. of times	1	1	100

IMNCI Program

S.No.	Activities	Unit	Targeted	Completed	%
1	Comprehensive Newborn Care (Level II) Training for Medical Officers	batches	6	5	83
2	FBIMNCI Training for Medical Officers	batches	3	3	100
3	FBIMNCI Training for Nursing staffs and Paramedics	batches	6	6	100
4	Ventilator training for NICU staffs	batches	3	0	0
5	CBIMNCI related guideline revision	times	1	1	100

Annex 1 Major Activities Carried out in FY 2075/2076

6	Workshop with curriculum development center to include/ revise IMNCI protocol	times	1	1	100
7	Early Childhood Development Workshop	times	1	1	100
8	CBIMNCI orientation and planning to provinces	times	7	0	0
9	Free Newborn Care Program	Times	1	1	100
10	Development of IMNCI Training Manuals (Guidelines, Handbooks etc.)	Times	1	1	100
11	Quality Improvement Mentorship	Times	20	0	0
12	Procurement of CBIMNCI medicines	Times	1	1	100
13	Procurement of SNCU/ NICU equipment	Times	1	1	100
14	Monitoring and supervision	Times	-	-	100

Nutrition

SN	Activities	Unit	Targets	Achieved	%
1	National Nutrition Review, Advocacy and workshop with participation of health workers and allied representatives of all provinces	No. of times	1	1	100
2	Regular operation of nutrition technical committee (NUTEC) meeting (SUAHARA 1)	No. of times	1	1	100
3	Operation of Nutrition Rehabilitation Home for management of malnourished children (through 8 hospitals: Bheri, Seti, Mahakali, Dhaulagiri, Lumbini Zonal Hospital, Rapti Sub Regional, MP Surkhet and Kanti Children Hospital).	No. of times	1	1	100
4	Formation of Province level Multi-sector nutrition and food security steering committee and training, orientation to the stakeholders on it	batch	1	0	-
5	Update on National nutrition policy (as per data of National micronutrient survey status)	No. of times	1	1	100
6	Review of Multi-Sector Nutrition Program (15 District - Taplejung, Sankhuwasabha, Solukhumbu, Bhojpur, Dolakha, Sindhupalchok, Rasuwa, Rupandehi, Nawalparasi, Gorkha, Lamjung, Syangja, Myagdi, Baglung and Nuwakot)	No. of times	1	1	100
7	Training to social development/Administrative officer and local health coordinator (15 District - Taplejung, Sankhuwasabha, Solukhumbu, Bhojpur, Dolakha, Sindhupalchok, Rasuwa, Rupandehi, Nawalparasi, Gorkha, Lamjung, Lamjung, and Njungle).	No. of times	1	1	100
8	Nutrition lobby program(Breastfeeding, up to 6 weeks maternal safety benefits, etc.)	No. of times	1	1	100
9	Training and Monitoring to Center-level concerned Government, Inspectors, private sector stakeholders regarding the sale and distribution of breast milk substitute act	No. of times	1	1	100
10	Guideline preparation, updating and printing National Guidelines on Nutrition Fortification, Child Nutrition Week, Nutrition Campaign, Day and Special Programs and School Health and Nutrition, Adolescent Nutrition Guideline	No. of times	1	1	100
11	Comprehensive Nutrition Specific Intervention package and integrated nutrition-related behavior change communication and training materials, guideline preparation, printing and distribution (UNICEF)	No. of times	1	1	100
12	Training of trainers for Comprehensive Nutrition Specific Intervention (IYCF-MNP, IMAM, Adolescent IFA, SBCC etc.) - Center level	No. of times	1	1	100

Annex 1 Major Activities Carried out in FY 2075/2076

13	Monitoring and Supervision of Nutrition Program	No. of times	1	1	100
14	Capacity building for nutrition related stakeholders regarding disaster risk reduction	No. of times	1	1	100

Family Planning

SN	Activities	Unit	Targets	Achieved	%
1	Family Planning (FP) current users	Couple	3010000	2505645	83
2	VSC expected new acceptors	Couple	42300	27150	64
3	IUCD expected new acceptors	Couple	48000	22615	47
4	Implant expected new acceptors	Couple	95000	100896	100
5	FP program strengthening through DMT, EC, MEC wheel	District	15	13	87
6	Micro-planning and response actions implementation in low CPR districts	District	3	3	100
7	Support to satellite clinic for LARC methods	Time	306	306	100
	Printing of DMT, MEC WHEEL, PARTOGRAPH	Time	3	3	100
10	Support to Institutional Clinic	District	24	24	100

Epidemiology and Disease Control Division of all sections program activities:

S N	Activity	Unit	Annual Target	Achieve	%
Epidemic Disease Control					
1	HR and travel costs for Health team of 4 including 2 doctors at Tribhuvan International Airport	No. of times	1	1	100
2	Hiring of staff for official work on agreement	No. of times	1	1	100
3	Cost for RRT mobilization and intra sect oral coordination for outbreak control and disaster management	No. of times	3	3	100
4	Supervision and monitoring for prep Preparedness of disaster management activities	No of times	3	3	100
5	Monitoring of food quality of restaurants located in highway	No. of times	3	3	100
6	Planning meeting at regional level on vector borne disease control, disaster and epidemic and surveillance activities.	No of times	5	5	100
7	Emergency preparedness plan meeting for hospital	No. of times	3	3	100
8	Orientation to health workers on scrub typhus, malaria, kalaazar including other vector borne diseases	No of times	5	5	100
9	Interaction program and health message promotion regarding cold and its effects in Terai areas	No. of times	1	1	100
10	Interaction program with related stakeholders on effect and management of radio nuclear and biochemical disaster	No. of times	1	1	100
11	Purchase of RRT deployment kits	No. of times	1	1	100
12	purchase and deployment of medicine and necessary equipment for epidemic and disaster management in related district	No of times	1	1	100
13	Purchase of diphtheria antitoxin, ARV and other vaccine	No. of times	1	1	100
14	Activities to manage sickle cell anemia in affected districts	No. of times	1	1	100
15	1 day regional level interaction program to RHD, chiefs of Medical Colleges, chiefs of Regional/Sub-Regional/Zonal Hospitals, NPHL, directors of various divisions of DoHS on sickle cell anemia and thalassemia	No. of times	1	1	100

Annex 1 Major Activities Carried out in FY 2075/2076

S N	Activity	Unit	Annual Target	Achieve	%
16	Various activities to strengthen the implementation of IHR	No of times	3	3	100
17	Form Highway RRT to rescue the casualties in accidents in major highways, orient the highway RRT and prepare Highway RRT mobilization guidelines	No of times	1	1	100
Malaria control					
1	Evaluation of surveillance conducted by EDCD	No. of times	1	1	100
2	Conduct annual national review meetings	No. of times	1	1	100
3	Capacity Building orientation for medical recorders of new and existing sentinel sites and people from EDCD to strengthening the reporting system	No. of times	1	1	100
4	Quality control of 5000 pcs of malaria slides at central level & monitoring of the blood slide samples examined at districts for quality assurance	No of times	12	10	83
5	Multi-sector advocacy meetings at national levels to secure support for Malaria elimination	No. of times	1	1	100
6	Strengthen Malaria technical working group (TWG)	No. of times	3	3	100
7	VAT and other tax for GF/SCI funded capital items and activities	No of times	3	3	100
8	Procurement of Insecticide for Indoor residual spraying for malaria control in endemic districts	No. of times	1	1	100
9	Procurement of LLIN for malaria endemic districts	No. of piece	1	1	100
10	Procurement of medicines and medical goods for malaria diagnosis and control	No. of times	1	1	100
11	Procurement and supply of spare parts for Hudson pump repairmen	No of times	1	1	100
12	Procurement of microscopy for diagnosis of malaria		1	1	100
Kala azar control					
1	National review meeting on Kalaazar	No. of times	1	1	100
2	Orientation to medical college, private hospitals, teaching hospitals on treatment procedure and on active case detection orientation to district with kalaazar case.	No. of times	1	1	100
3	Case base surveillance and active case finding of Kala-azar in districts	No of times	1	1	100
4	Procurement and supply of medicines and medical goods for Kala-azar control	No of times	1	1	100
5	Procurement of Insecticide for Indoor residual spraying in Kala-azar affected districts	No of times	1	1	100
Natural disaster management					
1	Orient RRT on RH promotion in emergency and natural disaster for preparation of district level contingency planning	No. of times	4	4	100
Lymphatic Filariasis elimination					
1	Printing of IEC material for LF program	No. of times	1	1	100
2	Surveillance of LF	No. of times	1	1	100
3	Technical support from central level to districts regions in LF elimination programme	No. of times	1	1	100
4	preparation of documentary on LF	No of times	1	1	100
5	Technical & financial support by LSTM/DFID in LF elimination	No. of times	1	1	100

Annex 1 Major Activities Carried out in FY 2075/2076

S N	Activity	Unit	Annual Target	Achieve	%
6	Financial and technical support from RTI/USAID on LF elimination	No. of times	1	1	100
7	Procurement of DEC Tablet for LF MDA	No of Piece	1	1	100
Zoonotic Disease					
1	Surveillance in districts having zoonotic disease outbreaks	No. of times	5	5	100
2	Orientation to the medical officers and paramedics on rational use of ARV and case management of dog bites and poisonous snakebites	No. of times	5	5	100
3	Training and orientation to health workers regarding snake bites	No. of times	5	5	100
4	Procurement and supply of ASVS for around 2000 persons to districts	No of item	1	1	100
5	Procurement of ARV (Cell culture vaccine) for approx 50,000 persons.	No of item	1	1	100
Dengue Control					
1	Orientation on Dengue and chikungunya fever and mosquito larva search and destroy campaign	No. of times	3	3	100
2	National review meeting on dengue	No. of times	1	1	100
3	Orientation to medical college, private hospitals, teaching hospitals on management of dengue case	No. of times	1	1	100
4	Procurement of RDT including G6PD for diagnosis of vector borne diseases	No. of times	1	1	100
Disease Surveillance and EWARS					
1	Orientation on EWARS to doctors, health workers and medical recorders of sentinel sites	No. of times	3	3	100
2	Technical review on EWARS for medical recorders of sentinel sites	No. of times	2	2	100
3	Revision of EWARS guideline 2009	No. of times	1	1	100
4	Evaluation of different disease surveillance activities being conducted by EDCC	No of times	3	2	66
Water quality surveillance					
1	Preparation of documentary for activities conducted according to Surveillance guideline 2070	No of times	2	2	100
2	Workshop on water safety surveillance at Provincial level	No of times	5	5	100

Leprosy Control and Disability Management Section program activities:

S N	Activity	Unit	Annual Target	Achieve	%
1	Purchase of dermatoscope and camera	Set	2	2	100
2	Contract of driver and office Assistant	Persons	2	2	100
3	Cooperation with Ayurveda & other medical system for leprosy control program	Times	1	1	100
4	Coordination meeting of Steering, Technical and coordination committees with leprosy and disability related partners	Times	3	3	100
5	Celebration of World Leprosy Day	Times	1	1	100
6	Printing of annual report, program implementation guideline and bulletins	Times	4	4	100
7	Technical monitoring and case validation	Times	10	10	100
8	Trimester review meeting	Times	2	2	100

Annex 1 Major Activities Carried out in FY 2075/2076

S N	Activity	Unit	Annual Target	Achieve	%
9	Strengthening & monitoring of Prevention of Impairment and Disability (POID)	Times	7	7	100
10	Surveillance for leprosy and disability prevention	Times	2	2	100
11	In depth review of national leprosy program	Times	1	1	100
12	Leprosy orientation for health workers of mini leprosy elimination campaign and skin camp.	Times	24	16	66
13	Conduct reconstructive surgery camp in coordination with supporting partners.	Times	5	5	100
14	Transportation for the distribution/management of MDT	Times	3	3	100
15	Grant to National Disable Fund (Purchase and distribution of assistive devices)	Times	1	1	100
16	Cooperative grant for national seminar of dermatologists	Times	1	1	100
17	Grant for leprosy affected of KhokanaArogya Ashram	Times	3	3	100

Nursing and Social Security Division of all Sections program activities:

S.N.	Activities	Unit	Targets	Achieve	%
1.	Bi-Annual FCHV Review	District	77	77 district	100.00
2	Provincial level Health Orientation for Cooperative representatives and it's members	Times	7	7 Provinces	100.00
3	Provision of free treatment to impoverished citizens as "Bipanna Nagrik Aaushadi Programme", release of budget as per quarterly	Times	3	0	0
4	Provision of free treatment to "Jaan Andolan Gaita" citizens, release of budget as per quarterly	Times	3	Budget released as per in 3 quarter	100.00

Source: NSSD, DoHS

Curative Service Division of all sections program activities:

1.	NCD program MTOT	Places	1	1	50
2.	Social Audit TOT	Times	1	1	100
3.	Conduct reconstructive surgery camp in coordination with supporting partners in the Centre and province level	Times	7	7	100
4.	Coordination meeting of Steering, Technical and coordination committees with leprosy and disability related partners	Times	3	3	100
5.	Mental Health TOT	Times	1	1	100
6.	Celebration of World Leprosy Day	Times	1	1	100
7.	Surveillance for leprosy and disability prevention	Times	2	0	0
8.	Peer group Discussion for STP	Times	1	1	100
9.	Strengthening & monitoring of Prevention of Impairment and Disability (POID)	Times	5	4	80
10.	Monitoring and technical support for disability programs	Times	15	12	80
11.	Development and distribution of disability related IEC materials	Times	1	1	100
12.	Preparation, printing and distribution National Guideline on disability & rehabilitation	Times	1	1	100
13.	National Workshop on Disability Management	Times	1	1	100
14.	Technical monitoring and case validation	Places	10	10	100
15.	Continue medical education for doctors on leprosy program	Times	2	2	100
16.	Purchase of drugs for leprosy complication management	Times	1	1	100

Annex 1 Major Activities Carried out in FY 2075/2076

17.	Program monitoring and supervision	Places	10	10	100
18.	Grant for strengthening of referral Centre for specialized service	Places	3	3	100

- Curative Service Division renewed 60 hospitals of 51-100 Bedded

National Tuberculosis Control Center program activities:

SN	Activities	Unit	Target	Achievement	Achieved %
1	Procurement of equipments for Cultrue DST lab expansion	Pieces	3	2	66.67
2	Procurement of GeneXpert machine	Pieces	18	13	72.22
3	Construction of Chest Hospital	percent	60	60	100.00
4	Procurement of Equipment for Prevalance Survey	Pieces	1	1	100.00
5	PME workshop of NTP at national level	Times	3	1	33.33
6	Basic ZN Microscopy Training	Times	4	4	100.00
7	Procurement of N95 Mask and personal protection utilitise	Pieces	11044	3000	27.16
8	Nutritional support to MDR patients	person	60	12	20.00
9	Cultrue DST lab Training	Times	1	1	100.00
10	Supply of TB Drug to Medical Store and District	Times	3	3	100.00
11	Broadcasting of TB Related message by National level Television	Times	200	100	50.00
12	Revision of Guideline and Recording and Reporting form	Times	2	2	100.00
13	Commemoration of World TB day	Times	1	1	100.00
14	Conditional grant to Kalimati Chest hospital	Times	3	3	100.00
15	Procurement of Consumable and Chemical for sputum Microscopy	Times	1	1	100.00
16	Procurement of Second Line Drug	Times	1	1	100.00
17	Procurement of Falcon Tube	Times	1	1	100.00
18	Procurement of HR for National Reference Laboratory	Times	6	6	100.00
19	GeneXpert Management Training	Times	9	6	66.67
20	Procurement of Consumable and Chemical for C/DST	Times	1	1	100.00
21	Procurement of Digital Xray Film	Pieces	1200	1600	133.33
22	Internet Installation to DR/GeneXpert Center	Institut	60	23	38.33
23	Procurement of First Line Drug TB	Times	1	1	100.00
24	LQS Training to Lab Personnel	Times	4	4	100.00
25	Clinical Management Training to Medical Officer	Times	5	3	60.00
26	Procurement of Cartridge for GeneXpert Machine	Pieces	47000	21500	45.74
26	Transportation of TB Drug to Medical store and District Store	Times	20	20	100.00
28	Courier service for Culture /DST test	Times	5000	3150	63.00
29	Supervision to TB Treatment Center	Times	90	60	66.67
30	Procurement of Liquid media	Times	1	1	100.00
31	Interaction with Stakeholder on TB Program	Times	10	2	20.00
32	TB Program monitoring from Province	Times	30	30	100.00
33	National PME workshop on TB Program	Times	2	1	50.00
34	DR TB Basic Training	Times	4	1	25.00

Annex 1 Major Activities Carried out in FY 2075/2076

National AIDS and STI Control Center program activities:

SN	Activities	Unit	Targets	Achievement	%
1	Procurement of viral load machine, reagents and accessories	Time	1	1/2	50
2	IBBS study among male labor migrants throughout the country	event	1	0	0
3	DHIS -2 tracker training to ART counselor	lot	2	2	100
4	Early warning indicator workshop for capacity building to ART counselor	lot	2	0	0
5	Procurement of HIV test kits	event	1	1	100
6	Procurement of the ART drugs	event	1	1	100
7	Procurement of STI/OIs drugs	event	1	1	100
8	Procurement of nutrition pitho	event	1	0	0
9	Procurement of the CD4 reagents	event	1	1	100
10	Capacity building training on HIV recording and reporting to ART counselor	lot	1	1	100
11	HIV guideline update and print	event	1	0	0
12	AIDS conference	event	1	0	0
13	PMTCT guideline update and print	event	1	1	100
14	STI syndromic case management training	lot	4	4	100
15	Training to medical officer on Hepatitis c	lot	1	0	0
16	CMT training manual print	event	1	0	0
17	DHIS-2 strengthening training	lot	1	1	100
18	AIDS day celebration	event	1	1	100
19	CMT training to MO, and ART counselor	lot	3	3	100
20	Meta analysis on MSM/TG	event	1	1	100
21	Meta analysis on PWIDs	event	1	1	100
22	Logistic data review	lot	1	1	100
23	PMTCT TOT	lot	3	3	100
24	Monitoring and supervision for HIV program	event	12	12	100

Source: NCASC

National Health Training Center program activities:

SN	Activities	Unit	Targets	Achieved	%
1	Pediatric Nursing Care Training	Person	70	73	104
2	X-ray User Maintenance Training	Person	10	10	100
3	Anesthesia Assistant Training (HA, SN)	Person	10	10	100
4	Palliative Care Training (Doctors, Nurses)	Person	58	67	115
5	Induction Training for newly appointed health officers	Person	160	180	112
6	Medico-legal Training (Doctors)	Person	100	75	75
7	Safe Abortion Training	Person	40	39	97.5
8	Basic IUCD Training	Person	30	30	100
9	Transaction Accounting and Budget Control System Training	Person	100	40	40
10	Screening of pre-cancer/lesion VIA/CRAYO for HW training	Person	50	51	102
11	Gender Based Violence Training for Health Service Providers	Person	100	100	100
12	Lab users maintenance Training	Person	10	10	100
13	Cold chain users maintenance training	Person	10	10	100
14	ICU training (nurses)	Person	30	30	100
15	Trainer's review and refresher meetings	Batch	5	5	100
16	Mental Health training for MO/HA(Prescriber)	Person	25	25	100
17	Training Need Assessment (TNA)	Batch	5	5	100
18	Trainer's pool preparation for different training	Batch	5	5	100
19	TOT for Infection prevention and control (central and provincial)	Person	25	42	168
20	CTS Training	Person	32	50	156

Annex 1 Major Activities Carried out in FY 2075/2076

21	Operation Theater Technique and Management(OTTM) (nurse)	Person	40	33	83
22	Diploma Training in Biomedical 24 and continuation of 2073/74 (24)	Person	48	48	100
23	Rural Ultrasound training (SN)	Batch	3	3	100
24	SBA	Person	100	117	117
25	NICU management training (MO, SN) level 2	Person	50	52	104
26	ASBA Training	Person	20	16	80
27	PPIUCD Training (Nursing staff)	Person	20	31	155
28	NSV Self Paced Learning Approach	Person	10	0	0
29	Vasectomy Training (MO, Group wise) 12+5 days	Person	50	46	92
30	Minilab Training (MO/SN) 12 / 5 days	Person	60	48	80
31	Implant Training (Nursing staff / paramedics)	Person	100	90	90
32	CoFP (FP service provider)	Person	48	51	106
33	ASRH Training	Person	90	95	105
34	Printing training materials of different training	Times	6	6	100
35	Transportation of training materials of different training in training sites	Times	5	5	100
36	Follow up Enhancement Program	Times	7	5	71
37	Training materials development and revision	Times	10	15	150
38	To Ton NCDs (PEN Package) for MO/HW	Person	75	124	165

National Health Education Information and Communication Center program activities:

SN	Activities	Unit	Targets	Achieved	%
1	Communication program for Control of risk factors of NCDs including tobacco control	times	12578	7270	58
2	Health promotion program's national commitment message dissemination on Merobarsha pratibaddhata; swasthya prati jimmewar : samriddhiko aadhar	times	2250	2250	100
3	Communication program and daily monitoring of newspaper about epidemic disease control and prevention.	times	4500	4500	100
4	Broadcasting of Jeevan chakra and public health debate through NTV.	times	820	820	100
5	Airing of health messages and public health radio program through Radio Nepal	times	2032	2032	100
6	Continuation and implementation of Health news desks	times	1	1	100
7	Conduction of health literacy campaign program	times	10	10	100
8	Dissemination of messages and information through popular online media	times	30	30	100
9	Publication of health related messages and notices through national newspapers	times	35	35	100
10	SMS, Apps and IVR services through information technology center	times	3	1	33
11	IEC/BCC material development technical assistance, coordination, supervision and template development and distribution in provincial and local level	times	1000	10	1
12	Awareness communication program for FP, SM and neonatal health	times	50000	50000	100
13	Awareness and orientation package development on anti-microbial resistance	times	7000	5775	83
14	Communication programme on child health nutrition promotion	times	5000	4996	100
15	Dissemination of public health messages through nepal television and radio nepal during epidemic outbreak and disaster.	times	865	570	66
16	Risk communication program during epidemic outbreak and disaster.	times	1000	986	99

Annex 1 Major Activities Carried out in FY 2075/2076

17	Production and dissemination of maternal service communication program	times	100000	97935	98
18	Health promotion brain death, kidney and organ donation related communication program with the coordination of organ transplant centre.	times	6000	4969	83
19	Health awareness and communication program on mental health and birth defect	times	3000	3000	100
20	Broadcasting of health messages and information through national private televisions	times	2300	2300	100
21	Hiring of communication officer, secretariat assistant and driver for golden 1000 days promotion program.	times	3	3	100
22	Communication program for golden 1000 days promotion.	times	5000	4767	95
23	Supervision and facilitation of health promotion program in provincial and local level	times	139	114	82

National Public Health Laboratory program activities:

SN	Activities	Unit	Targets	Achieved	%
1.	Procurement of Real Time PCR machine for Non-communicable diseases	Piece	1	1	100
2.	Procurement of barcode machine and PVC card printer	Piece	2	2	0
3.	Construction of waiting room for patients	Site	1	1	96.88
4.	Procurement of server for National Blood Program software	Piece	1	1	49.5
5.	Procurement of fully automated biochemistry analyzer and haematology analyzer machine	Piece	2	2	76.46
6.	Procurement of equipment for establishment of molecular bacteriology lab	Piece	1	1	75.37
7.	Training on equipment application for equipment distribution those were procured on FY 2074/75	Person	30	30	96.58
8.	Hiring microbiologists to operate regional based labs in Koshi, Janakpur, Seti, Bheri and Pokhara	Person	5	20	96.33
9.	Training on bacteriology for Medical laboratory Technicians to operate bacteriology lab in District Hospitals.	person	20	20	98.43
10.	Quality control management for all laboratories and BTSCs in Nepal.	number	3	3	99.96
11.	Procurement of equipments and kits chemicals for National Influenza Centre	time	3	3	99.71
12.	Publication of guidelines and brochures	Time	1	1	91.76
13.	Development of Health Laboratory Registry System software	Time	1	1	88.14
14.	Accreditation of laboratory	time	1	1	34.49
15.	Barcode management for laboratory service security and quality	Piece	3	3	44.28
16.	Transportation of laboratory related equipment and chemicals to Health Post, District Hospitals, Zonal Hospital and Regional and Sub-regional Hospitals	Piece	3	3	100
17.	Training program on accreditation related biosafety and biosecurity for laboratory staffs	time	3	3	47.28
18.	ToT training on operating specialized laboratory services for Provincial Laboratory based staffs	Person	14	14	99.67
19.	Operation of diagnostic services in epidemic situation	Time	3	3	93.34

Annex 1 Major Activities Carried out in FY 2075/2076

20.	Operation expenses for NBBTS and for quality improvement in blood transfusion services	time	3	3	97.99
21.	Research programs in NPHL	time	3	3	56.27
22.	Participation of International Quality Control Program	Time	3	3	61.89
23.	Management of sickle cell disease surveillance	Time	3	3	95.89
24.	Monitoring and evaluation of government based hospitals, private hospitals and blood transfusion service centres	Times	600	600	99.85
25.	SMO contract of Medical Lab Technologist for sickle cell program in Koshi, Lumbini, Seti, Bheri Hospitals and NPHL	Time	5	5	87.22
26.	Viral load test for Hep B and C	Time	3	3	100

Management Division of all Sections program activities:

SN	Activities	Unit	Targets	Achieved	%
1	Repair and maintenance of physical infrastructure under the department of health services	Times	8	8	100
2	Arrangements of spare parts not listed in repair and maintenance of tools and equipment as per the need	Times	3	3	100
3	Repair and maintenance of Medical and cold chain tools and equipment including reimbursement of remaining expenses	Times	3	3	100
4	Human resource Management: Store Assistant- 2, Civil and Mechanical Engineer- 2, Data Analyst- 1, Office Assistant- 3, Computer Assistant -1, Driver -4, Sweeper (part-time) - 3	Person	16	16	100
5	Human Resource Management for PAM Unit, 9-Biomedical Engineers and 1-Public Health Officer	Person	10	10	100
6	Financial administration and Irrugulation including conduction of staff capacity building programs	Times	2	2	100
7	Monitoring and supervision of repair and maintenance of tools and instruments/equipment by biomedical engineer and PAM unit	Times	3	3	100
8	Inquiry and admission into the hospitals for treatment of injured in people's movement	Times	3	3	100
9	Follow-up and monitoring of minimum service standards of district level hospital and mutual fund matching	Times	3	3	100
10	Development and modification including publication of new policies, rules, directives and other documents	Times	3	3	100
11	Monitoring, inspection and interaction with private, government as well as non-government hospitals	Times	3	3	100
12	Central level assistance and coordination visit to state and local level review meetings	Times	3	3	100
13	Package development and follow-up for oral health care services under PHC settings	Times	3	3	100
14	Basic / Refresher Training of Medical Recording related to ICD-10	Times	1	1	100
15	Printing of annual report of the DoHS, HMIS records, reports, monitoring forms and monitoring booklets as well as reimbursement of past dues.	Times	3	3	100
16	Expenses for conduction of coordination meetings with committees, divisions and sections as specified by different directives	Times	15	15	100

Annex 1 Major Activities Carried out in FY 2075/2076

17	Conduction of activties related to federal, provincial and local level throgh PPP model	Times	3	3	100
18	Training including material development related to Server Management, DHIS 2, HMIS, PHAT	Times	3	3	100
19	Monthly, bi-monthly and quarterly review and planning activities of the Department of Health Services	Times	3	3	100
20	Integrated supervision of health care programs	Times	200	200	100
21	Fund availability and reimbursement of remaining dues of last FY to listed hospitals to provide services for poor citizen	Times	3	3	100

Annex 2: Program Targets for FY 2076/77**Family Welfare Division: (1) Child Health and Immunization section program activities:**

SN	Activities	Unit	Target
1	MR Guidelines and IEC materials preparation and printing	times	1
2	Procurement of vaccine and vaccine related materials, Vaccine carrier, icepack, refrigerator, cold box,	times	1
3	Advocacy meeting about sustainable financial management of Immunization Programme with the members of the parliament, Policy makers, bankers, industrialist, businessman, private sectors and civil society	times	1
4	Provincial level ToT about National immunization program and micro planning for EPI focal person and health worker.	Batch	7
5	1 days orientation to media person about NIP and AEFI central and province	times	2
6	MR campaign Launching	times	1
7	High level personal and media orientation about MR campaign on central level	times	1
8	Development of immunization fund for sustainable immunization program	times	1
9	DQSA training for Low coverage and high dropout districts	times	1
10	Briefing High level officers, MoHP and national Immun. Committee, Stake holders and partners about Rota vaccine and hygiene promotion program introduction	batch	1
11	Rota vaccine and hygiene promotion program launching	times	1
12	2 days orientation to Medical officer, Medias and paediatrician about A.E.F.I in all province	batch	13
13	Media, Doctors, trade union and health workers Orientation about MR Campaign 2076 to all 7 province	batch	7
14	4 days Health workers training for private institutions/palika (200 no.) about NIP, immunization session management ,EVM and vaccine and cold management.	batch	8
15	Orientation training on utilization and retention of Child health card/ Full immunization card for some districts of province 3 and 2.	batch	2
16	Introduction of HPV vaccine	times	1
17	KMC strategy and guidelines Preparation	times	1
18	KMC corner establishment	Place	5
19	IMNCI RDQA Training		
20	FBIMNCI Training	batch	3
21	SNCU training for Medical Officer	batch	9
22	SNCU reporting recording training	batch	7
23	TOT on POCQI	times	1
24	Early Childhood Development workshop	times	1
25	Research on New born and Child health	times	1

Family Welfare Division: (2) Nutrition section program activities:

SN	Activities	Unit	Targets
1	National Nutrition Program Review (Two Days) – with participation of Nutrition Representative of all provinces	No. of times	3
2	Two-day capacity enhancement program of staff employed in the nutrition rehabilitation house	No. of times	1
3	Review and plan formulation of Multi-Sector Nutrition and Food security Directive Committee and stake holders All provinces	No. of times	1
4	MToT on Comprehensive Nutrition Specific Intervention package for Health Coordinator and Focal person of Social Development Ministry Basic Health Nutrition Package (18 District- Taplejung, Bhojpur, Sangja, Magdie, Palpa, Rupandehi, Gulmi, Arghakhanchi, Banke, Puthanjan, Dang, Salan, Kailali, etc.)	No. of times	9
5	MToT on Comprehensive Nutrition Specific Intervention package for Health	No. of	15

Annex 2: Program Targets for FY 2076/2077

	Cordinator of 30 MSNP districts	times	
6	capacity building with concerned stakeholders on the sale and distribution of breast milk products.	times	6
7	Celebrate National Day / Month on nutrition related Programs (Breastfeeding Week, School Health and Nutrition Week, Iodine Month etc.)	No. of times	4
8	Preparation, refinement and printing of training directory for nutrition programs, preparation, modification and updating of micronutrient guidelines based on nutrition strategies.	No. of times	1
9	Monitoring and Supervision of Nutrition Programs	times	2
10	Orientation, capacity building and Planning of Disaster Risk Reduction	batch	1
11	Operation of Nutrition Rehabilitation Home for malnutrition management (through hospital: Bheri, Koshi, Narayani, Bharatpur, Sagarmatha, Pokhara Health Sciences Foundation, Rapti Health Sciences Academy, Dadeldhura Hospital and Kanti Children Hospital).	No. of times	1
12	Purchase of Laptop and LCD for Nutriton Section	times	1
13	Purchase and distribution of nutritional materials (Vit A, RUTF / RUSF, f75, F100, Resomal, Albendazole, MNP, Rapid Test Kit, Height / weight Machine, Shakir's Tape (MUAC), dummy baby and mother for breast feeding)	No. of times	1
14	Orientation to social development Ministers team about nutrition program and intervention to all provinces	No. of times	1
15	Mother Baby Friendly Hospital (MBFHI)- 5 hospital	times	1
16	Program for the Health and Education Parliamentary Committee for breastfeeding / nutrition promotion	No. of times	1
17	Production and promotion of audio-visual material to enhance nutritional capacity of health workers	No. of times	1

Family Welfare Division :(3) Newborn and IMNCI program activities:

SN	Activities	Unit	Target
1	Procurement of equipment for CBIMNCI program	times	1
2	Procurement of SNCU/ NICU equipment	times	1
3	Procurement of equipment for KMC units and KMC corners	times	1
4	Development of Prematurity (KMC) Guideline	times	1
5	Development of FBIMNCI/ Newborn Coaching/ Mentoring Guideline	times	1
6	Facility Based IMNCI (FB-IMNCI) ToT	batch	3
7	Revision of national newborn health strategy and plans	batch	2
8	FBIMNCI/Newborn Care Coaching/ Mentoring Training	times	2
9	Development of Early Childhood Development Guideline	times	1
10	Mentoring for SNCU/ NICU staffs	times	-
11	IMNCI Training for health workers in province and health offices	times	7
12	Comprehensive Newborn Care (Level II) Training for MOs	times	9
13	Free Newborn Care Program	No. of Hosp	107
14	Research on Newborn and IMNCI related program	times	2
15	ToT on Point of Care Quality Improvement (POCQI)	batch	1
16	IMNCI Routine Data Quality Assessment (RDQA) ToT	batch	1

Epidemiology and Disease Control program activities:

S N	Activity	Unit	Annual Target
1	Establishment of health desk at international airport and strengthen existing health desk	No. of times	1
2	Procurement of microscopy for diagnosis of malaria	Quantity	11
3	Deployment of health worker team at Tribhuvan International Airport	No. of times	3

Annex 2: Program Targets for FY 2076/2077

S N	Activity	Unit	Annual Target
4	Hiring of staff for official work on agreement	No. of times	3
5	Conduct national annual review on Malaria, dengue and kalaazar	No. of times	3
6	Conduct national workshop on free hydrocele surgery and planning meeting	No. of times	1
7	conduction of orientation, review and planning meeting with provincial authorities and medical colleges on NCD and mental health	No. of times	1
8	conduction of various activities based on IHR-2002	No of times	1
9	Review and revision of RRT, outbreak response and control of communicable disease guideline based on federal context	No of times	1
10	Review and planning on zoonotic diseases focus on snakebite and rabies treatment center.	No of times	1
11	Multisectoral workshop on Onehealth	No of times	1
12	Mapping and prioritization of zoonotic diseases	No of times	1
13	Formation of TWG on Zoonotic diseases and conduction of meetings	No of times	1
14	orientation to different health institutions including medical colleges (doctors and paramedics) for influenza management	No of times	1
15	preparation and demonstration to hospitals on epidemic disaster and response	No of times	3
16	Review meeting on Early Warning and Reporting System (EWARS)	No of times	2
17	Formation of TWG on EWARS and conduction of meetings	No of times	1
18	Study and improvement on EWARS	No of times	1
19	Integrated vector surveillance on malaria, kalaazar, dengue, JE etc	No of times	3
20	Conduction of Mass Drug Administration (MDA) for Lymphatic Filariasis	No of times	1
21	Interaction program with related stakeholders on effect and management of radio nuclear and biochemical disaster	No. of times	1
22	Purchase of RRT deployment kits	No. of times	1
23	Purchase of diphtheria antitoxin, ARV and other vaccine	No. of times	1
24	Activities to manage sickle cell anemia in affected districts	No. of times	1
25	Procurement of Insecticide for Indoor residual spraying for malaria control in endemic districts	No. of times	1
26	Procurement of LLIN for malaria endemic districts	No. of piece	1
27	Procurement of medicines and medical goods for malaria diagnosis and control	No. of times	1
28	Technical support from central level to lower levels in LF elimination programme	No. of times	1
29	Procurement of DEC Tablet for LF MDA	No of Piece	1
30	Procurement and supply of ASVS for around 2000 persons to districts	No of item	1
31	Procurement of ARV (Cell culture vaccine) for approx 50,000 persons.	No of item	1

Leprosy Control and Disability Management activities:

S N	Activity	Unit	Annual Target
1	Trimester review on leprosy	Times	3

Annex 2: Program Targets for FY 2076/2077

S N	Activity	Unit	Annual Target
2	Transportation for the distribution/management of MDT	Times	3
3	Celebration of World Leprosy Day	Times	1
4	Printing of annual report, program implementation guideline and bulletins	Times	4
5	Development of information system for disability, skin disease, injury and leprosy	Times	1
6	Technical monitoring and case validation	Times	
7	Surveillance for leprosy and disability prevention	Times	2
8	Orientation, planning, monitoring on post exposure prophylaxis in province	Times	3
9	Leprosy orientation for health workers of mini leprosy elimination campaign and skin camp	Times	24
10	Conduct reconstructive surgery camp in coordination with supporting partners.	Times	5
11	Grant for leprosy affected of Khokana, Pokhara, Kapan and BudhanilkanthaArogya Ashram	Times	3

Nursing and Social Security Division program activities:

S.N.	Activities	Unit	Targets
1.	Develop nirdesika for deployment of one nurse in every school for the management of school health program	Times	1
2.	Develop guideline and standard regarding home based health care services	Times	1
3.	Develop e-based training package on geriatric care for health workers	Times	1
4.	Develop clinical protocols on chemotherapy preparation and administration, fistula puncture and hemodialysis, ventilator care	Times	3
5.	Deploy nine midwives in hospitals and provide safe motherhood and midwifery services	Times	9
6.	Provision of scholarship to PCL and bachelor midwives to prepare midwife as required by Nepal	Times	30
7.	Develop ten continue professional development module and piloting of it in two federal hospitals	Times	12
8.	Development of action plan and implementation of clinical audit program	Times	1
9.	Revise and update the job description of all level health workers	Times	1
10.	Health and nursing care service support program in government secondary schools for school children and adolescents including menstrual hygiene management	Times	30
11.	Capacity assessment of nurses working in safe motherhood area and develop standard bridge course to develop professional midwives	Times	2
12.	Conduct policy dialogue in Federal and Province level for nursing and midwifery services	Times	4
13.	Capacity development of nurses working in hospitals running geriatric ward and geriatric homes on geriatric care	Times	1
14.	Develop infection prevention and control web based training package and develop capacity of nurses on IPC	Times	2
15.	Celebrate, advocate and interact on Nursing and FCHV day	Times	2
16.	Revision of Gender based violence clinical protocol	Times	1
17.	Facilitation, review, orientation and onsite mentorship for hospital and it's staff especially providing geriatric and GBV service	Times	8
18.	Regular supervision and monitoring of hospitals for quality nursing service	Times	40
19.	Integrated supervision of health institutions that providing SSU, OCMC, Geriatric care and reaching the unreached program	Times	30
20.	Reimbursement and payment of fund quarterly to the hospitals that is listed under impoverished citizen treatment scheme (including previous Fiscal Year due)	Times	3

Source : NSSD, DoHS

Curative Service Division: (1) Hospital Services monitoring and strengthening program activities:

SN	Activities	Unit	Targets
1	Continuous supervision and monitoring of the hospitals for optimum quality service	number	95
2	Minimum Service Standards (MSS) implementation and follow-up in hospitals	number	94
3	Formulate standard treatment protocol (STP) of diseases	number	2
4	Telemedicine service extension	number	1
5	registration, renewal and regulation of the specialized and tertiary level hospitals	number	90
6	Pharmacy Service strengthening in federal hospitals	number	10
7	Digitalization of MSS recording and reporting system	Times	1

Curative Service Division: (2) Basic & Emergency Management Section program activities:

SN	Activities	Unit	Targets
1	Modification and extension of basic health care services based on the emergence of diseases, availability of financial resources and local needs	Time	1
2	Supervision, monitoring and evaluation of the quality of basic health services	Time	1
3	Formulation of Protocol for strengthening the Emergency services.	Time	1
4	Develop and implementation of Basic Health Service Package	Time	1
5	Develop and implementation Emergency Service Package	Time	1

Curative Services Division: (3) IENT and Oral Health Section program activities:

SN	Activities	Unit	Targets
1	Establishment of Eye OPD in federal hospitals	number	10
2	MTOT to Dental surgeons about oral health	times	5
3	Training on Oral health and facial injuries to dentist working in federal hospitals	times	5

National Tuberculosis Control Center program activities:

SN	Activities	Unit	Target
1	Procurement of equipments for Cultrue DST lab expansion	Pieces	3
2	Procurement of GeneXpert machine	Pieces	18
3	Construction of Chest Hospital	person	60
4	Procurement of LPA machine	Pieces	2
5	PME workshop of NTP at national level	Times	3
7	Basic ZN Microscopy Training	Times	4
8	Procurement of N95 Mask and personal protection utilise	Pieces	11044
9	Nutritional support to MDR patients	person	60
10	Cultrue DST lab Training	Times	1
11	Supply of TB Drug to Medical Store and District	Times	3
12	Broadcasting of TB Related message by National level Television	Times	200
13	Revision of Guideline and Recording and Reporting form	Times	2
14	Active Case Finding Program	Times	3
15	Conditional grant to Kalimati Chest hospital	Times	3
16	Procurement of Consumable and Chemical and Regent for sputum Microscopy	Times	1
17	Procurement of Second Line Drug	Times	1
18	Procurement of Falcon Tube	Times	1
19	Extension of Warranty of GeneXpert Machine	Times	10
20	GeneXpert Management Training	Times	9
21	Income Generation Training to DRTB Patient	Times	1
22	Procurement of Digital Xray Film	Pieces	1200
23	Internet Installation to DR/GeneXpert Center	Institut	60
24	Procurement of First Line Drug TB	Times	1
25	Establishment of Quality Control Center in Province 2 and Province 5	Place	2
26	LQS Training to Lab Personnel	Times	4
27	Clinical Management Training to Medical Officer	Times	5

Annex 2: Program Targets for FY 2076/2077

SN	Activities	Unit	Target
28	Procurement of Cartidge for GeneXpert Machine	Pieces	47000
29	Transportation of TB Drug to Medical store and District Store	Times	20
30	Courier service for Culture /DST test	Times	5000
31	Supervision to TB Teatmet Center	Times	90
32	National PME workshop on TB Program	Times	2
33	Intrraction with Stakeholder on TB Program	Times	10
34	DR TB Basic Training	Times	4

National AIDS and STI Control Center program activities:

SN	Activities	Unit	Target
1	Procurement of Xene Export machine , Refrigerator van , reagents and accessories	event	1
2	IBBS survey among male labor migrants throughout the country	event	1
3	DHIS -2 tracker training for counselors and others	times	7
4	Procurement of HIV test kits	event	1
5	Procurement of the ARV drugs	event	1
6	Procurement of STI/OIs drugs	event	1
7	Procurement of the CD4 reagents	event	1
8	ToT on STI	event	2
9	STI syndromic case management training	lot	4
10	Training to medical officer on Hepatitis B and c	lot	2
11	CMT training manual print	event	1
12	AIDS day celebration	event	1
13	CMT ToT for provincial facilitators	lot	3
14	Logistic data review	lot	1
15	PMTCT TOT	lot	3
16	Monitoring and supervision for HIV program	event	12
17	Development of Hepatitis Strategy	event	1
18	National Program review on HIV,STD including HEP c for health workers	lot	1
19`	Development of guideline of HIV an STD	event	1
20	Data Quality assessment	event	1
21	Study on Identification of discrimination of PLHIV	event	1
22	Review of National HIV strategy	event	1
23	Establishment of IT platform using social media for PLHIV	event	1

National Health Training Center program activities:

SN	Activities	Unit	Target
	Training Material Development Section		
1	Learning Resource Packages (LRP) Development and revision	Times	7
	Skill Development Section		
1	Advanced Skilled Birth Attendants Training for doctors (ASBA Training)	Person	16
2	Rural Ultrasound Training (Staff Nurse)	Person	20
3	Pediatric Nursing Care Training (Staff Nurse)	Person	70
4	Diploma in Biomedical Equipment Engineering (DBEE) training for 24 persons and continuation of 24 persons from FY 2074/75	Person	24
5	Induction training for newly appointed health officers	Person	55
6	Medico-legal training for Doctors	Person	120
7	Operation Theater Management Training (OTTM) for Nurses	Person	40
8	New Born Intensive Care Unit (NICU) Management Training (Staff Nurse/Nursing Officers) Level 2	Person	100
9	Intensive Care Unit (ICU) Training for Nurses	Person	30
10	ToT on screening for pre- cancer lesion of Cervix/ VIA/CRAYO for Medical and Nursing staffs	Person	60
11	Trainer's pool preparation by enhancing competency of different clinical trainers	Batch	5

Annex 2: Program Targets for FY 2076/2077

SN	Activities	Unit	Target
12	MTOT on Road Traffic Accident (RTA) and Safety	Times	3
13	MTOT on Occupational Health and Safety	Times	2
14	MTOT on Climate Change and Health Impact	Times	3
15	TOT for health workers to orient members of Health Facility Operation and Management Committee (HFOMC)/Province level	Times	7
16	TOT on Anti-Microbial Resistance (AMR) prevention	Times	7
17	Clinical Training Skills (CTS) training	Person	64
18	Anesthesia Assistant (AA) Training for HA/SN	Person	10
19	Palliative care training for doctors and nurses	Person	64
20	Training on accounting/ online recording reporting/ TABUCS for account staffs	Person	50
21	TOT on Mental Health for Medical Officers/Health Workers	Times	3
22	TOT on Package of Essential Non-communicable diseases (PEN)	Times	6
23	TOT on role of health workers to response Gender Based Violence (GBV)	Batch	2
24	Training for health workers on Burn Care Management	Batch	7
25	Advocacy/Orientation meetings on climate change and health impacts with policy makers of all 7 province	Times	7
Training Accreditation and Regulation Section			
1	Review and Refresher workshop/meetings with trainers of different trainings	Times	7
2	Preparation of training accreditation and regulation guideline/protocol	Times	5
3	Information collection for trainer's pool update	Times	5
4	Quality Improvement (QI) tools preparation/revision	Times	3
5	Follow up and Enhancement Program (FEP) for SBA, FP, MLP and others	Times	7
6	Accreditation, renew and regulation meetings with different training sites	Times	7
7	Planning and review meetings for regulation of quality of training materials and trainings	Times	7
8	Accreditation/regulation meetings with different institutions that prepare training material and conduct trainings	Times	6

National Health Education Information and Communication Center program activities:

SN	Activities	Unit	Targets
1	Broadcasting and Airing of the messages regarding Smoking and Tobacco product control through private television and FM .	Times	1
2	Airing of health messages and public health radio program through Radio Nepal.	Times	2100
3	Publication of health messages, information and press release in national newspapers.	Times	40
4	Dissemination of health news,information,or messages through website,Facebook, you tube,twitter,aps etc.	Times	3
5	Communicable and epidemic disease control related communication program and daily newspaper monitoring program.	Times	6
6	Health awareness and communication program for disable people	Times	3
7	Ear/Nose/Throat related health awareness and communication program.	Times	4
8	Dissemination of information and messages through online media	Times	3
9	Development and distribution of federal health communication policy, strategy	Times	1
10	Broadcasting of health related message, information through national private television	Times	2788
11	Health literacy campaign program mobilization	Times	1
12	Communication program on smoking and tobacco control and regulation.	Times	24
13	Communication program on non-communicable disease prevention and control.	Times	17
14	Health promoting school campaign framework or strategy development and campaign conduction	Times	8
15	Social media, sms, aps and IVR service from information technology center	Times	3
16	Advocacy and strategic communication on occupational, environmental health and Air pollution, climate change	Times	12
17	Samriddha Nepal shukhi Nepali Promotion Program	Times	5

Annex 2: Program Targets for FY 2076/2077

SN	Activities	Unit	Targets
18	Broadcasting of health messages, public health dialogue (Janaswasthya bahas) and jivan chakra through Nepal television	Times	2827
19	AMR awareness and orientation health promotion program	Times	7
20	Communication program on brain death, kidney and organ donation	Times	3
21	Communication program on fuel emission and air pollution	Times	3
22	Development of print and visual materials on obstetric fistula	Times	2
23	Adolescent reproductive health (8 set booklet) printing.	Piece	5000
24	Health message exhibition on assembly, event, sports, health camp musical and cultural program	Times	3
25	Organization of assembly, event, sports, health camp musical and cultural program	Times	1
26	Publication and dissemination of public health related press release, information and messages	Times	12
27	Coordination program among federal, provincial and local level for the development and expansion of health promotion activities.	Times	3
	Awareness and communication program on mental health	Times	24
28	Awareness and communication program on IMNCI, Immunization, Diarrheal diseases pneumonia etc.	Times	12
29	Awareness and communication program on birth defect.	Times	3
30	Awareness and communication program on family planning, safe motherhood and neonatal health.	Times	3
31	Awareness and communication program on family planning, safe motherhood, neonatal and adolescent health.	Times	12
32	Family planning, PPIUCD promotion and social behavioral change through inter personal communication for hard to reach group.	Times	3
33	Airing and broadcasting of messages relating to risk factors of NCDs through Radio Nepal and Nepal Television.	Times	1
34	Monitoring and facilitation at provincial and local level.	Times	100

National Public Health Laboratory program activities:

SN	Activities	Unit	Target
1.	Distribution and publicity of management, requirement and transportation of cold chain	Time	3
2.	Management of quality control in government and private hospitals	time	3
3.	Participation in international quality control program	Time	3
4.	Development of NEQAS Software	Time	1
5.	Research activities of NPHL	Time	3
6.	Sickle cell surveillance management	Time	3
7.	Laboratory service security management	Time	3
8.	Management of BSL 3 Laboratory operation	Time	3
9.	Operational expenses for NBBTS to improve blood transfusion services	time	3
10.	Management of NIC, HIV, Microbiology, JE, Measles, Rubella, Hep B & C, Polio operation programs	time	3
11.	Laboratory Accreditation	time	1
12.	Barcode management for laboratory service reliability and security	number	3
13.	Providing diagnostic services during epidemic outbreak	time	3
14.	Management of constructing infrastructures and human resources to operating Provincial Public Health Laboratory	time	1
15.	Monitoring and evaluation of government hospitals, private hospitals and blood transfusion service centre	Time	50
16.	Procurement of fully automated barcode labeling machine	Piece	1
17.	Procurement of real time PCR, HLA Machine and Extraction machine and initiation of service for communicable disease	Set	1
18.	Procurement of ECLIA and ELISA machine for virology and immunology unit	Set	1

SN	Activities	Unit	Target
19.	Construction of 2 to 8 degree cold store room	Piece	1
20.	Construction of molecular lab for no communicable diseases	Time	1
21.	Preparation and planning on upgradation of NPHL to National Diagnostic Centre with latest technology	time	4

Management Division: (1) Integrated Health Information Management Section program activities:

S N	Activity	Unit	Target
1	Conduction of coordination meetings of committees, divisions and sections as specified by various directives	Times	10
2	Monthly, bi-monthly, quarterly review, planning and infrastructure related development programs	Times	6
3	Printing and distribution of HIMS records, reports, monthly monitoring booklets	Times	1
4	Training for Data Managers on Health Information Management and Analysis (GIS / STATA) (SO/ SA and Medical Recorder Assistant)	Times	2
5	Training on data management, analysis and use (PHAT)	Times	3
6	Assistance for and monitoring of state and local level reviews	Times	3
7	Preparation and printing of annual report	Times	2
8	Development of Demography Dynamic model for projection of target population and health education material according to local level	Times	2
9	Payment of internet service connected to HMIS branch, server management, network optimization, procurement of firewall	Times	1
10	Procurement of Statistical Packages for Health Information Management, Word Processing Software and Antivirus	Times	1
11	Transfer and upgrade of old database to DHIS 2as per the report from Health Facility	Times	2
12	Development (customization) and use of digital recording information systems at health facilities	Times	3
13	HMIS and DHIS training to staff of Central Hospital, Teaching Hospital and other hospitals (including private ones)	Times	3
14	Onsite coaching and mentoring to improve health data quality in hospitals	Times	3
15	Update HMIS records and report forms, guidelines and health indicators	Times	2
16	Training for doctors including medical recorders from Central Hospital, Teaching Hospital and other hospitals (private) Mortality Statistics	Times	3

Management Division: (2) Infrastructure Development Section program activities:

S N	Activity	Unit	Target
1	Maintenance and improvement of physical structures within the Department of health premises	Times	2
2	Construction of damaged boundary wall behind the National Health Training Center	Times	1
3	Procurement of Laptop-5 and Projector-1 for HIMS section	Set	6
4	Furniture and fixtures	Times	3
5	Biomedical tools and equipment maintenance including payments of previous remaining expenses	Times	1
6	From Human Resource Management Contract Services: Store Assistant 1, Civil and Mechanical Engineer 2, Data Analyst 1, Office Assistant 3, Computer Assistant 1, Driver 5, Sweeper Part-time-3	Person	16
7	Human Resource Management under Staff Administration section and Financial Administration section of DoHS	Person	6
8	Human Resource Management for PAM Unit, 10-Biomedical Engineers and 1-Public Health Officer	Person	11
9	Activities related to financial administration and disallowances	Times	1

Annex 2: Program Targets for FY 2076/2077

10	Waste management and sanitation within the premises of DoHS (from third party included)	Times	1
11	Repair and maintenance of spare parts not included in the multi-year agreement after inquiry with concerned hospitals and payment	Times	1
12	Monitoring of biomedical equipment maintenance work	Times	3
13	Development of new policies, rules, directives and other documents including Revision and printing	Times	2
14	Follow-up and monitoring of minimum standards of physical infrastructures including buildings	Times	3
15	Integrated supervision of health care programs	Times	100
Management Division: (3) Environment Health and Health Care Waste Management Section program activities:			
S N	Activity	Unit	Target
1	MTOT on Strengthening of Health Facility generated Waste Management	Times	2
2	Onsite coaching and follow-up of solid waste management for health organization	Times	24
3	Review and printing of Guidelines on Health Care Waste Management	Times	1
4	Strengthening of programs including drinking water and sanitation WASHFIT tools	Times	2
Management Division: (4) Logistic Management Section program activities:			
S N	Activity	Unit	Target
1	Continuous construction of modern central vaccine stores	Building	1
2	Continuous construction of Central Store Teku	Building	1
3	Reconstruction of Pathlaiya Store Building continues	Pcs	1
4	Procurement of office equipment	Set	12
5	Purchase of Hospital Equipment (including payment of old contract)	Times	3
6	Purchase of servers for expansion and operation of LMIS program	Times	1
7	Purchase of spare parts for vaccination and cold chain management	Times	1
8	Fuel and other fuels for vaccine safety and transportation	Times	20
9	Pharmacist, LMIS technical service contract in store	Person	25
10	To be taken in staff service consultation	Person	20
11	Review and discussion with all the states about LMIS, HMIS.	Times	2
12	Seminar on quantification of health products in the Union	Times	1
13	Meetings of various committees and sub-committees related to supply management in the association	Times	3
14	LMIS program expansion and operating costs	Times	3
15	Management Division Website Updates	Times	1
16	LMIS Forms, Stock Book Printing	Times	1
17	Tools, means of transportation, maintenance of vehicles	Times	3
18	Drug and equipment quality testing	Times	3
19	Preparation of tender documents, publication of bill notice, third party insurance, vehicle tax and supply services.	Times	3
20	Repacking, transportation, and redistribution of drugs, vaccines, and vaccines	Times	3
21	Washing and disposing of old, expired, broken medicines and other unusable health related items	Times	7
22	Capacity building for effective vaccine management	Times	4
23	Vaccination and Coldchain Management Plan Onsite Coaching with Preventive Maintenance	Times	50
24	Pre-evaluation activities for effective vaccine management	Times	1
25	Connection and management of Coldchain Equipment Sub Centers received through UNICEF	Times	2
26	Seminar on Vaccination and Cold Chain Management with Stakeholders	Times	2
27	Technical evaluation of effective vaccine management work	Times	3
28	Health in All Policy 13.1 Workshop	Times	2
29	Technical Specification Bank Enhancement Program	Times	2
30	TOT on Procurement and Basic Supply Management	Times	2
31	Supervision, coordination and technical Support	Times	70

