PROVINCIAL ANNUAL HEALTH REPORT

2079/2080

Government of Karnali Province
Ministry of Social Development
HEALTH SERVICE DIRECTORATE
Birendranagar, Surkhet, Nepal

Karnali Province Government

Ministry of Social Development

Health Service Directorate

Birendranagar, Surkhet, Nepal

PROVINCIAL HEALTH ANNUAL REPORT

F/Y 2079-80

FOR FURTHER INFORMATION

Health Service Directorate

Karnali Province Government

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Karnali Province Government
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MESSAGE

The Constitution of Nepal has enshrined basic health services as a fundamental right of every citizen. In Karnali Province, we've embraced a Provincial Health Policy that highlights our firm commitment to improve access and utilization of healthcare services. Our vision is anchored in a robust health system, aiming towards *Healthy and Prosperous Karnali Citizens*. Our dedication extends to establish strong institutional arrangement within the health system, aiming to provide integrated services and guarantee quality healthcare across various service points. The Ministry of Social Development, under the Karnali Province Government, is committed towards pursuit of universal health coverage, striving to provide quality healthcare services to everyone, regardless of their social or economic status.

We are delighted to present the Annual Health Report for the fiscal year 2079/80. This comprehensive report outlines performance metrics against predefined targets, specifying challenges, issues, and actions taken in various health programs. We express profound gratitude towards all health professionals who tirelessly worked to pursue health-related goals, particularly during pandemics, epidemics, and endemics.

This annual report aims to serve as a valuable resource for policymakers, managers, decision-makers, evaluators, researchers, and students. Furthermore, insights derived from this report are intended to promote deeper understanding and analysis, with the ultimate aim of fostering continuous improvements in health services within Karnali Province.

I extend heartfelt gratitude to Director Dr. Rabin Khadka and the entire team for their invaluable contributions in preparing this report. Additionally, sincere thanks go to the Government of Nepal, our esteemed development partners, and all stakeholders for their unwavering support.

Let us persist in our collective efforts to ensure a healthier and brighter future for Karnali Province.

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Khadga Bahadur Pokharel
Hon'ble Minister
Ministry of Social Development,
Karnali Province

Karnali Province Government

Ministry of Social Development
Karnali Province
Birendranagar, Surkhet

PREFACE

We are pleased to present the Annual Health Report for the fiscal year 2079/2080 of Karnali Province, offering a comprehensive overview of our collective efforts and accomplishments. This report outlines the yearly progress, issues and challenges of various health programs.

I wish to express deep gratitude to the unwavering commitment of our health workers, tirelessly delivering essential and emergency services to the people of Karnali Province.

The Ministry of Social Development remains dedicated to provide quality health services to all citizens. Our approach, inclusive of preventive, promotive, curative, rehabilitative, and palliative care, aims to optimize the use of available resources. Our alignment with health policies, strategies, and programs reflects our pursuit of a prosperous and healthy Karnali community. Yet, acknowledging existing gaps, we recognize the need for further efforts to reach the SDG 2030 goal. The Ministry of Social Development is determined to address these gaps by intensifying specific interventions.

This report is envisioned as a pivotal tool for evaluating targets, achievements, assessing access, quality, and identifying gaps in health services over the preceding year. It is intended as a valuable resource for policymakers, program managers, implementers, researchers, and concerned stakeholders. Providing insights into current issues, constraints, and recommendations, it's crucial for designing, implementing, monitoring, evaluating programs, and evidence-based planning.

I extend sincere appreciation to the health service units, Hospitals, Public Health Offices, Medical Superintendents, Officials of Hospital Management Committees, and all involved Officers for their persistent commitment to delivering healthcare services.

I commend the Health Service Directorate for publishing this Annual Report and express gratitude to the Director of Provincial Health Service Directorate, focal persons, and development partners for their enduring contributions in producing this invaluable document.

Dr. Bhojraj Sharma Kafle
Secretary
Ministry of Social Development,
Karnali Province

प्रदेश सचिव

Karnali Province Government
Ministry of Social Development
Health Service Directorate
Karnali Province
Birendranagar, Surkhet

FOREWORD

The Provincial Health Service Directorate publishes Annual Health Report summarizing the preceding year's efforts within the province. This report provides status of various health programs using from routine health information systems, performance reviews, and field visits. Through verification, analysis, and interpretation, this report encapsulates the annual progress of all Public/Health Service Offices, Public Hospitals, and other public health facilities across Karnali province.

This report contains provincial and district-level breakdowns of various service delivery statistics, highlights performance against predetermined targets and presents key issues within specific health programs operated by all Public/Health Service Offices in Karnali. It is my belief that this report will help to plan effective and efficient programs in the upcoming fiscal year.

This report serves as a vital tool for the Health Service Directorate, Public/Health Service Offices, and other public and private stakeholders, facilitating the monitoring and evaluation of health programs at both district and provincial levels. It underscores the importance of evidence-based planning and prioritization, derived from the comprehensive analysis of prevailing information in Karnali.

I extend my gratitude to the Ministry of Health & Population and the Department of Health Services for their unwavering technical and administrative support in implementing, monitoring, and evaluating health programs over the years. I extend sincere thanks to the Honorable Minister Khadga Bahadur Pokharel, Secretary Dr. Bhojraj Sharma Kafle, and Health Service Division of the Ministry of Social Development, Karnali Province, for their guidance to the Health Service Directorate. Additionally, I appreciate the dedication of local-level elected representatives, Health Section chiefs, and health facility staffs for ensuring the provision of basic health services.

Furthermore, I would like to acknowledge to the managers of Public/Health Service Offices, Hospital Directors, Medical Superintendents, Provincial and district hospital staff for their persistent efforts in delivering healthcare across Karnali province. The ongoing and commendable contributions of Female Community Health Volunteers (FCHVs) and healthcare staff at various levels are pivotal in providing primary and emergency healthcare services at both facility and community levels. I also like to extend my heartfelt thanks to UN agencies, bilateral and international organizations, non-governmental organizations, and all public and private stakeholders collaborating to enhance the health and support health programs within the province.

I extend my heartfelt gratitude to the committed team members of the Health Service Directorate, Strengthening Systems for Better Health, UNICEF, WHO, and the diligent members of the Health and Nutrition Cluster, as well as the PHCT members from our esteemed development partners. Their involvement and invaluable insights have significantly contributed to shaping this report.

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(Dr. Rabin Khadka)
Director
निर्देशक

ABBREVIATIONS AND ACRONYMS

ABER	Annual Blood Examination Rate
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ANM	Auxiliary Nurse Midwife
API	Annual Parasite Incidence
ARI	Acute Respiratory Infection
ART	Anti-Retroviral Therapy
ASRH	Adolescent Sexual and Reproductive Health
BCG	Bacillus Calmette and Guerin
BEONC	Basic Emergency Obstetric & Newborn Care
CABA	Children Affected By AIDS
CAC	Comprehensive Abortion Care
CBIMNCI	Community Based Integrated Management of Neonatal & Childhood Illness
CCC	Community Care Center
CEONC	Comprehensive Emergency Obstetric Newborn Care
CFR	Case Fatality Rate
CHBC	Community Home Based Care
CoFP	Comprehensive Family Planning
CPR	Contraceptive Prevalence Rate
C/S	Cesarean Section
DoHS	Department of Health Services
DOTS	Directly Observed Treatment Short Course
DPT	Diphtheria, Pertussis and Tetanus
DQSA	Data Quality Self-Assessment
DTLA	District Tuberculosis and Leprosy Assistant
EDCD	Epidemiology and Disease Control Division
EDP	External Development Partners
EDPT	Early Diagnosis and Prompt Treatment
EOC	Emergency Obstetric Care
EPI	Expanded Program on Immunization
FCHV	Female Community Health Volunteer
FP	Family Planning
FPAN	Family Planning Association of Nepal
FY	Fiscal year
GM	Growth Monitoring
GoN	Government of Nepal
HSD	Health Service Directorate
HFs	Health Facilities
HI	Health Institution
HIV	Human Immunodeficiency Virus
HP	Health Post
IDD	Iodine Deficiency Disorder
IEC	Information Education and Communication
IMR	Infant Mortality rate
IP	Infection Prevention
IPD	Immunization Preventable Diseases
IUCD	Intra Uterine Contraceptive Device
Lab. Asst.	Laboratory Assistant
LEC	Leprosy Elimination Campaign
LMIS	Logistic Management Information System

M&E	Monitoring and Evaluation
MB	Multi-Bacilli
MCs	Microscopy Centers
MDT	Multi Drug Therapy
MDR	Multi Drug Resistant
MIYCN	Maternal and infant young child nutrition
MMR	Maternal Mortality Ratio
MoHP	Ministry of Health & Population
MoSD	Ministry of Social Development
MWRA	Married Women of Reproductive Age
NCASC	National Center of AIDs and STD Control
NGO	Non-Governmental Organization
NHEICC	National Health Education Information and Communication Center
NHTC	National Health Training Center
NIP	National Immunization Program
NMR	Neonatal Mortality Ratio
NPHL	National Public Health Laboratory
NRCS	National Red Cross Society
NTC	National Tuberculosis Center
OPD	Out Patient Department
OPV	Oral Polio Vaccine
ORC	Outreach Clinic
ORS	Oral Rehydration Solution, Oral Rehydration Salts
ORT	Oral Rehydration Treatment
PAC	Post Abortion Care
PB	Pauci-Bacilli
PEM	Protein-Energy Malnutrition
PF	Plasmodium falciparum
PHC	Primary Health Care
PHCT	Provincial Health Coordination Team
PHO/PHA	Public Health Officer/Public Health Administrator
PLHIV	People Living with HIV
PME	Planning, Monitoring and Evaluation
PMTCT	Prevention of Mother To Child Transmission
PNC	Post Natal Care
PR	Prevalence Rate
PSI	Population Service International
PWID	People Who Inject Drugs
RDT	Rapid Diagnostic Test
SAM	Severe Acute Malnutrition
SBA	Skilled Birth Attendant
STI	Sexually Transmitted Infections
TNA	Training Need Assessment
TOT	Training of Trainers
Td	Tetanus diphtheria
TSU	Technical Support Unit
UN	United Nations
UNICEF	United Nations Children's Fund
VBD	Vector Borne Diseases
VPD	Vaccine Preventable Diseases
VSC	Voluntary Surgical Contraceptive
WFP	World Food Program
WHO	World Health Organization

FACT SHEET
KARNALI PROVINCE
(Fiscal Year 2077/78 to 2079/80)

Program Indicator	Province			FY 2079/80 by district									
	2077/78	2078/79	2079/80	DOLPA	MUGU	HUMLA	JUMLA	KALIKOT	DAILEKH	JAJARKOT	RUKUM WEST	SALYAN	SURKHET
PUBLIC HOSPITAL	22	25	32	1	3	2	1	4	3	1	5	2	3
PRIMARY HEALTH CENTRE	14	14	13	0	1	0	1	1	2	3	1	2	3
HEALTH POST	333	333	331	331	23	24	26	29	27	55	30	25	45
BASIC HEALTH SERVICE CENTER	239	268	300	12	22	8	21	47	24	44	44	32	46
COMMUNITY HEALTH UNIT	101	108	115	6	14	17	4	10	16	5	2	10	31
URBAN HEALTH CENTRE	17	26	30	0	0	0	1	0	5	0	10	5	9
REPORTING STATUS													
PUBLIC HOSPITAL	100	100	100	100	100	100	100	100	100	100	100	100	100
PRIMARY HEALTH CENTRE	100	100	100		100		100	100	100	100	100	100	100
HEALTH POST	100	100	100	100	100	100	100	100	100	100	100	100	100
BASIC HEALTH SERVICE CENTER	100	100	100	100	100	100	100	100	100	100	100	100	100
URBAN HEALTH CENTRE	100	100	100				100		100		100	100	100
COMMUNITY HEALTH UNIT	100	100	100	100	100	100	100	100	100	100	100	100	100
Percentage of Reporting Status (PHCORC)	77.1	78.4	81.4	61.4	34	48.1	74.6	68.8	90.5	88.8	85.1	91.4	95.8
Percentage of Reporting Status (EPIC)	93.4	94.1	92.1	81.5	85.4	83.6	93.2	95.6	91.7	95.6	91.4	93.3	97.6
Percentage of Reporting Status (FCHV)	87.9	89.7	92.5	68.3	62.9	83.2	92.4	93.3	97.5	97.1	90.4	99	98.6
IMMUNIZATION STATUS %													
BCG Coverage	106.9	91.8	90.7	74.2	74.9	75.8	82.7	66	75.5	87.3	107.5	94.8	122
DPT-HepB-Hib3 Coverage	101.1	94.1	88.6	76.4	71.9	79.3	78.2	69.5	81.3	83.6	106.1	96.1	108.1
measles/rubella 1 Coverage	94.9	95	86	78.6	66.6	83.3	80.3	67.9	80	81.6	103.8	94.4	99.7
measles/rubella 2 Coverage	91.9	89.1	87.7	83.8	58.2	85.2	83	67.2	85.2	83.7	102.7	92.5	105
JE Coverage	95.5	95.5	86.7	76.5	61.7	82.2	81.8	65.5	82	77.2	101.7	92.4	109.7
% of rota 2nd	78.5	87.2	88	78.2	59.2	70.5	83.6	69.7	77.3	84.4	108.4	97.8	108.3
TD2 & TD2+ Coverage	72.8	66.3	65.2	63.6	39.4	44.2	67.7	52.8	57.9	62	77.7	70.5	80.5
NUTRITION STATUS %													
Percentage of children aged 0-11 months registered for growth monitoring	118.1	119.4	113.1	99.8	144.2	98.1	77.1	99.7	94.6	104.9	122.6	130	136.9
% of children aged 0-23 months registered for Growth Monitoring (New) who were Underweight	3.6	4.1	3	1.2	6.5	3	3.8	3.9	3.2	3.6	1.6	2	1.9
Percentage of women who received a 180 day supply of Iron Folic Acid during pregnancy	73.7	72.4	77	45.9	57.6	68.1	72.4	77.6	65.9	56.7	94	99.5	89.3
Percentage of postpartum women who received Vitamin A supplementation	92.6	90	97	95.7	88.6	96.1	66.3	99.7	99.7	103.9	98.4	99.4	99.8
Integrated Management of Neonatal and Childhood Illness (IMNCI) STATUS													
% of infants aged 0-2 months with Possible Severe Bacterial Infection (PSBI)	18.3	20.6	16.9	0	0.95	3.5	11.9	18.7	14.4	16.7	10.2	12.4	21.5
% of PSBI cases received complete dose of Gentamicin	65.2	75.4	88.6	0	200	100	46.1	76	68.4	76.1	68.8	64.8	98.3
Incidence of ARI among children under five years (per 1000)	405	425	406	357	314	470	410	382	322	321	627	419	452
Incidence of pneumonia among children under five years (per 1000)	65.9	85.7	73.6	61.5	66.7	89.2	80.9	91.1	48.7	58.1	113.9	61.9	80.9
Diarrhoea incidence rate among children under five years	249	216	216	272	216	387	191	209	194	187	308	192	198

Program Indicator	Province			FY 2079/80 by district									
	2077/78	2078/79	2079/80	DOLPA	MUGU	HUMLA	JUMLA	KALIKOT	DAILEKH	JAJARKOT	RUKUM WEST	SALYAN	SURKHET
% of children under five years with diarrhea treated with zinc and ORS	96.3	94.8	97.3	90.7	94.9	91.9	94.2	99.7	94.1	99.7	99.8	99.1	99.5
SAFE MOTHERHOOD (%)													
% of pregnant women who had at least one ANC checkup	124.7	121.2	118.3	82.1	130.5	113.4	141.6	121.4	93.7	96.2	107.8	145.9	133
Percentage of pregnant women who had four ANC checkups as per protocol	76	72.3	85	48	92.1	68.3	92.6	85.4	73.4	58.8	87.9	104.7	101.5
% of institutional deliveries	69.5	69.8	83.4	49.1	67.4	63.5	77.7	67.8	74.7	58.1	102	79.4	124.6
% of deliveries below 20 years of age among total institutional deliveries	NA	NA	21.6	23.4	23.7	11.8	18	14.8	20.4	29.6	25.9	24.7	20.4
% of neonates who received four checkups as per PNC protocol	NA	NA	41.3	24.6	35.9	42.2	39.4	30.5	46.9	46.5	37.2	56	35.8
% of deliveries by caesarean section among reported deliveries	5.9	6.6	7.9	4.8	1.8	1.1	11	2	3.1	1.7	6.2	2.6	17.6
Contraceptive prevalence rate (unadjusted) among women of reproductive age (WRA)	26.3	28.5	28.6	29.8	35.2	20.8	17	24.2	28.7	20.9	21.1	34.3	35.3
% of modern contraceptives new acceptors among WRA	12.2	12.5	10.7	14.8	10.6	17	12.2	11.3	7.9	13.7	12.7	6.3	11.1
FEMALE COMMUNITY HEALTH VOLUNTEERS													
Number of FCHV	4272	207	213	255	548	298	825	272	246	424	984	4272	207
% of Mother groups meeting held	93.9	96.7	95.4	76.6	85.3	65.7	96.5	95.4	92.7	93.2	89.6	96.7	109
MALARIA AND KALA-AZAR													
Annual Blood Examination Rate per 100	0.40	1.4	2.14	1.05	3.71	9.04	0.50	0.91	0.67	0.41	1.15	0.43	5.03
Annual Parasite incidence (API) per/1000 popn	0.02	0.04	0.02	0.00	0.01	0.12	0.00	0.01	0.01	0.00	0.01	0.00	0.05
Incidence of Kala-azar in high risk districts/10000 popn	0.39	0.66	0.39	0.00	0.00	0.00	0.33	1.35	0.00	0.05	0.06	0.00	0.99
TUBERCULOSIS													
Case notification rate (All form of TB case)	65.3	97.3	91.3	85.5	68.2	34.8	87.3	74.9	62.3	65.8	100.5	101.9	130
TB Treatment Success Rate(Percentage)	93.4	90.9	93.2	100	100	96	96	97.8	94.1	92.2	92.6	91.2	92
LEPROSY													
New case detection rate	3.7	4	4.2	2.3	4.4	3.5	3.3	4	3.5	5.2	6.5	3.7	4.2
Prevalence rate (PR) per 10000	0.47	0.49	0.53	0.45	0.58	0.35	0.49	0.40	0.50	0.62	0.95	0.58	0.40
HIV/AIDS													
HIV Tested	1497	12090	17249	0	0	725	0	224	773	0	2527	44	12956
Number of new positive cases among HIV tested	30	70	56	0	0	0	0	2	6	0	3	1	44
Number of HIV positive cases on ART	651	690	713	0	0	0	0	40	215	0	65	31	362
CURATIVE SERVICE													
% of OPD New Visits among total population	103	105	87.7	79.6	77.0	118.7	96.4	80.2	69.1	62.2	114.3	69.3	109.1
Average Length of stay in hospital	3	3	3.1	2.6	2.9	2.8	4.2	2.9	3.2	1.2	2.9	1.7	3.1

EXECUTIVE SUMMARY

This Provincial Annual Health Report of Health Service Directorate of fiscal year 2079/80 (2022/23) reflects the performance of various programs of preceding three fiscal years and presents problems/constraints; actions taken and suggested actions for further improvement. Moreover, this report presents and analyzes progress and achievements of various health programs in provincial level, district, and local level comparing them with national service coverage. This report is mainly based on the information collected by the Health Management Information System (HMIS) from the various health institutions of Karnali province and progress report of different service centers.

In Karnali Province, the healthcare infrastructure comprises a diverse range of facilities, including 1 Academic Hospital (KASH), 1 Provincial Hospital in Surkhet, and 10 hospitals under the Health Service Directorate (comprising 2 Secondary Hospitals: Jajarkot Hospital and Mehelkuna Hospital, and 8 District-level Hospitals). Additionally, there are 23 Primary Hospitals at the local level, 3 Community Hospitals (Chaurjahari Hospital, Eye Hospital, and Shining Hospital), and 10 Private Hospitals. The province also boasts 13 Primary Health Care Centers (PHCCs), 330 Health Posts (HPs), 300 Basic Health Service Centers, 30 Urban Health Centers, and 149 Community Health Units, all contributing data to the Health Management Information System (HMIS).

The reported services encompass 816 Primary Health Care/Outreach Clinics (PHC/ORC), 1267 EPI Clinics, 4267 Female Community Health Volunteers (FCHVs), and 16 poly-clinics. Moreover, the province hosts 1 Ayurveda Hospital and Research Center, complemented by 9 Ayurveda Health Centers, 18 Ayurveda Dispensaries, and 39 Nagarik Arogya Kendra, collectively enhancing the healthcare services available to the population.

In this fiscal year, reporting status of all Health facilities (Hospitals, PHCC, HP, BHSC, CHU and UHC) is 100% whereas the reporting status of PHC-ORC, EPI clinics and FCHV is 81.4%, 92.2% and 92.5% respectively.

FAMILY WELFARE DIVISION

Immunization

The immunization coverage for key antigens within the regular National Immunization Program (NIP) during the fiscal year 2079/80 has shown a decrease compared to the previous fiscal year. Specifically, BCG coverage stands at 90.7%, DPT-Hep B-Hib-III at 88.6%, OPV-III at 88.1%, Measles-Rubella-I at 86%, Measles-Rubella-2 at 87.7%, Td2 & Td2+ for pregnant women at 65.2%, and JE at 86.7%.

However, there is a positive trend in the fiscal year 2079/80 regarding the dropout rate between DPT-HepB-Hib 1 and measles 2, which has decreased significantly by 5.1% compared to the previous fiscal year (6.6%).

Nutrition

Evaluate the nutritional status of children under 2 years old to enhance their overall well-being. Conduct monthly growth monitoring to track their development and address any nutritional concerns promptly. All the children of under 1 years children were registered for growth monitoring, among which 3 % are reported underweight which slightly decreased compared to the last fiscal year 3.4 percent. Two rounds of Mass Distribution Campaign of Vitamin A and Albendazole distribution was successfully conducted. The coverage of vitamin A distribution (6-59 months) was 88.68% in first round and 89.41% in second round. Similarly, albendazole coverage (12-59 months) was 87.55% in first round and 87.41% in second round. 77 % women received a 180 days iron folic acid during pregnancy which is a significant increase from last fiscal year (72.3%). Furthermore, a total of 97% postpartum mother received vitamin A supplementation.

Community Based Integrated Management of Neonatal and Childhood Illness (CB-IMNCI)

The CB-IMNCI program has been rolled out in all districts of Karnali Province aiming to reduce neonatal, infant and child mortality. The CB-IMNCI program has been implemented up to community level and it has achieved positive results in management of neonatal & childhood illnesses. ARI incidence per 1,000 under-five population have decreased from 425.2 in fiscal year 2078/79 to 405.9 in this fiscal year. Incidence of Pneumonia is slightly increased from 85.7/1000 in fiscal year 2078/79 to 73.6/1000 in fiscal year 2079/80. Incidence of diarrhea in current fiscal year is 216/1000 under-five years which is same as that of previous fiscal year. Among total diarrheal cases 97.3% were treated with Zinc and ORS. Proportion of 'Severe Dehydration' among diarrhea cases were declined to 0.41% in fiscal year 2079/80 from 0.47% in fiscal year 2078/79.

Family Planning

The provincial modern contraceptive prevalence rate (unadjusted mCPR) for family planning among women of reproductive age (WRA) in fiscal year 2079/80 experienced a slight increase to 28.8%, as compared to the rate of 28.2% in the preceding fiscal year 2078/79.

At the district level, Surkhet exhibited the highest mCPR at 35%, indicating a relatively higher acceptance and use of modern contraceptives. On the other hand, Jumla District reported the lowest mCPR at 17.1%, highlighting potential disparities in family planning practices that may require targeted interventions.

The local-level analysis revealing that 40 localities have modern contraceptive prevalence rates (mCPR) below the provincial average highlights a critical area for attention. This finding emphasizes the need for targeted and tailored interventions in these specific localities to address potential barriers or challenges hindering the uptake of modern contraceptives. Understanding the unique context of each locality is crucial for designing effective strategies that resonate with the local population and address specific challenges.

Safe Motherhood and Newborn health

In Karnali Province, there has been a noteworthy enhancement in the access and availability of safe motherhood and newborn services, characterized by an increase in the number of birthing centers and improved accessibility during delivery. The service statistics for the

fiscal year 2079/80 reveal positive trends, with 85% of pregnant women having the recommended four ANC visits, compared to 72.3% in the previous fiscal year. Institutional deliveries increased from 69.8% in 2078/79 to 83.4% in the fiscal year 2079/80, reflecting a relatively high percentage in the province. However, maternal mortality rates have not seen significant reductions, highlighting the need for focused attention. Conversely, there have been positive declines in neonatal mortality and stillbirths.

Primary Health Care Outreach Clinic (PHC-ORC)

The Primary Health Care Outreach Clinics (PHC/ORC) are pivotal in extending fundamental health care services to the community level. In the fiscal year 2079/80, these outreach clinics played a crucial role by serving a total of 252,036 people, and on average, each PHC outreach clinic attended to 19 individuals. This underscores the vital healthcare support provided to the community, addressing basic health needs at the grassroots level.

Out of the planned clinics, a commendable 81.4% were successfully conducted, indicating a high level of operational efficiency. The data shows a positive trend with a slight increase in the conduction of PHC/ORC clinics and the number of clients served compared to the previous fiscal year 2078/79, which stood at 78.4%.

Adolescent Sexual and Reproductive Health (ASRH)

Nepal has been proactive in addressing the unique healthcare needs of adolescents by developing the Adolescent Sexual and Reproductive Health (ASRH) strategy. The country endorsed its first National Adolescent Health and Development (NAHD) strategy in 2000, with ASRH being identified as a priority program under the Family Welfare Division. The NAHD strategy was revised in 2018 to adapt to emerging issues faced by adolescents in the evolving social context.

The primary objective of ASRH is to ensure that all adolescents are healthy, happy, competent, and responsible individuals. The strategy aims to create a safe, supportive, and protective environment while enhancing the accessibility of adolescents to age-specific information, thereby improving their overall health status.

In the specific context of Karnali, a significant step has been taken with 123 health facilities providing adolescent-friendly health services. Furthermore, some local levels in Karnali have taken proactive initiatives to expand adolescent-friendly health services at the facility level. This local-level engagement underscores the importance of community involvement in addressing adolescent health issues and promoting a comprehensive approach to their well-being.

NURSING AND SOCIAL SECURITY

Female Community Health Volunteers (FCHV)

A total of 4272 Female Community Health Volunteers (FCHVs) have been working in Karnali province. They are involved in the promotion of safe motherhood, child health, family

planning, and community-based health services. In this fiscal year almost 95.4% mothers group meetings have been held in Karnali Province. FCHVs played a crucial role in distribution of family planning devices such as condoms and pills as well as distribution of ORS and vitamin A to postpartum mothers. Looking at the data, FCHVs had distributed a total of 376841 pieces of condoms in this fiscal year 2079/80. Similarly, a total of 32351 cycle of Pills were distributed in fiscal year 2079/80. Likewise 78593 packets of ORS were distributed in this fiscal year 2078/79 Beside this, they were also actively involved in national events such as Vitamin A distribution as well as counseling and referring mothers to health facilities for service utilization. A total of 3230 postpartum mothers received vitamin A from Female community health volunteers.

EPIDEMIOLOGY AND DISEASE CONTROL

Malaria

A total of 34 new malaria cases were identified in fiscal year 2079/80 which decreased from 48 cases in last fiscal year 2078/79. Among the total cases, Plasmodium vivax cases were 29 (10 indigenous and 19 imported), Plasmodium vivax relapse case was 1 (indigenous), and 4 Plasmodium falciparum cases (imported). The Annual Blood Slide Examination Rate (ABER) increased from 0.39 in fiscal year 2077/78 to 1.15 in this fiscal year 2078/79 to 2.14 in fiscal year 2079/80. During the same period, the annual parasite incidence rate (API) has increased from 0.02 per 1000 in fiscal 2077/78 to 0.03 in this fiscal year 2078/79 and 0.02 in fiscal year 2079/80.

Kala-azar

Kala-azar stands out as a high-priority public health concern in Karnali Province, with half of its districts reporting new cases in the recent fiscal year. Over the past three fiscal years, there has been observed fluctuation in the incidence of the disease, with a notable reduction in the current fiscal year compared to the previous one. In FY 2079/80, Kalikot district surpassed the elimination threshold with an incidence rate of 1.33 per 10,000, and Surkhet district is on the borderline of the elimination threshold with an incidence rate of 0.99 per 10,000 population. The overall incidence of kala-azar cases in Karnali Province is reported to be 0.39 per 10,000 population. These figures emphasize the ongoing challenges and efforts in addressing Kala-azar as a significant public health issue in the province.

Lymphatic Filariasis

Mass Drug Administration (MDA) against Lymphatic Filariasis has been stopped in Karnali Province after effective implementation of MDA campaign. Morbidity management and disability prevention program being continued in Karnali Province Hospital, Surkhet, Karnali Academy for Health Science (KAHS), Jumla and other province level hospital.

Health Emergency Epidemic & Outbreak

Provincial Health Emergency Operation Center (PHEOC) is a focal point for emergency health management at provincial level. The unit is responsible for outbreak management, disaster response, epidemic, endemic and pandemic, and technical support to province government for situation assessment, monitoring and surveillance. Contact tracing and case

investigation (CICT) is one of the prime responsibilities of PHEOC and has been carried out. PHEOC is actively involved in information collation and management related to natural disasters, casualties and outbreak responses in Karnali from different stakeholders involved.

Tuberculosis

In Karnali, Directly Observed Treatment Short course (DOTS) for Tuberculosis (TB) is being provided through 400 treatment centers. In fiscal year 2079/80 total 1577 (PBC: 856, PCD: 251 and EP: 470) TB cases has been notified. The Case Notification Rate (CNR) per 100,000 has slightly decreased to 91.4 in fiscal year 2079/80 which was 97.2 per 100000 in fiscal year 2078/79. However, Treatment Success Rate has been increased to 93.2% in fiscal year 2079/80 from 90.9% in fiscal year 2078/79. Multi Drug Resistant (MDR) TB management service has been implemented in Karnali province since 2005. Total 10 MDR-TB cases have been registered in 2079/80 in Karnali.

Leprosy

In the fiscal year 2079/80, a total of 89 leprosy patients were registered, including 73 new patients, 3 relapsed cases, 7 with treatment restarted, and 6 transferred cases. The new case detection rate has slightly increased to 4.2 per 100,000 population compared to 4 per 100,000 population in the previous fiscal year 2078/79. Additionally, 69 patients completed treatment during the fiscal year 2079/80, leaving a total of 92 cases under treatment by the end of that period. Moreover, the prevalence of leprosy in Karnali remained stable at 0.53 per 10,000 population, which is below the leprosy elimination threshold of less than 1 per 10,000 population.

Disability management

A major objective of disability management program for a disability inclusive health system and population access to rehabilitation services and assistive technology. Physiotherapy units are operating in KASH, Province Hospital and District hospitals for disability management in Karnali province. Likewise, various activities related to disability management are conducted through partner organizations. Preliminary draft of the rehabilitation strategic plan has been prepared in this province to address the issues of disability. Altogether 9590 new cli- ents were reported in DHIS-2 have received rehabilitation service from 9 different hospitals in fiscal year 2079/80.

HIV/AIDS and STIs

Total 17249 persons were counseled & tested for HIV & 56 new HIV positive cases were reported in fiscal year 2079/80. Total 57 (20 female and 36 male and 1 sexual minority started new ART treatment. Meanwhile 10 children have started ART services. Total 713 clients were receiving service from ART. A total of 35966 tests were done during antenatal, labor and delivery, and postnatal period. Among the total test performed, 3 woman were diagnosed positive.

NCD and Mental Health

Non-communicable Diseases (NCDs) are emerging as the leading cause of deaths in Nepal due to changes in social determinants like unhealthy lifestyles, urbanization, demographic and economic transitions. Nepal has adapted the PEN intervention for primary care in a low

resource setting developed by WHO. Provincial ToT and District level training of health service providers were carried out for Package for Essential Non-Communicable Diseases (PEN) program in scaled up to all districts in Karnali Province. PEN Program was implemented in Hospitals, PHCCS and Health Post of respective districts.

In Karnali Province, a Training of Trainers (TOT) on Child and Adolescent Mental Health (CAMH) was organized. Additionally, ten CAMH training batches were delivered to health workers, with an extra batch specifically tailored for Health Coordinators at the local level in Dailekh and Surkhet Districts.

CURATIVE SERVICE

Curative Services

Curative services have been provided through government health facilities academic hospitals, private health institutions and non-governmental hospitals within the province. Majority of curative services ware provide by provincial hospital. Percentage of new OPD visits among the total population was found 87.71% in fiscal year 2079/80. The bed occupancy rate of hospitals in the province increased to 42.2 % in this fiscal year 2079/70 from 40.% in fiscal year 2078/79. All the essential listed drugs by government of Nepal have been procured by health service directorate, logistic management and procurement section and supplied to health facilities.

Minimum Service Standard (MSS)

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. MSS has been implemented in provincial, local level hospitals and health posts in Karnali province emphasizing on Governance and Management, Clinical Service Management and Hospital Support Services respectively.

SUPPORTING PROGRAMS

Personnel Administration

Health Service Directorate takes the responsibility of organizing day-to-day internal administrative and personnel management. Out of 909 sanctioned positions, only 327 are filled and 582 posts are still vacant. Total 808 posts are fulfilled in contract basis and still majority posts as medical officers and specialists are vacant in the hospitals. Despite of the challenges, Ministry of Social Development (MoSD) and Health Service Directorate, Karnali province has been filling the vacant post in contract basis.

Financial Administration

A total of Rs. 349500000 budget was allocated for Health Service Directorate, out of which Rs. 2312000000 was spent. Of the total allocated budget only 66.16% of the budget is absorbed.

Planning, Monitoring and Information Management

The Management Information System (MIS) Section of the Health Service Directorate (HSD) plays a pivotal role in bolstering the healthcare system. It fosters seamless coordination with Public/Health Service Offices and hospitals, ensuring timely reporting and constructive feedback mechanisms. The MIS Section is instrumental in providing technical support to districts and local levels in the effective utilization of the Health Management Information System (HMIS). This includes the formulation and execution of integrated supervision and monitoring plans to enhance the overall efficiency of healthcare operations.

A key facet of the MIS Section's contributions is its active involvement in the Annual Performance Review workshops at both district and local levels. Furthermore, it conducts half-yearly and annual provincial performance review workshops, promoting a comprehensive and well-informed approach to healthcare evaluation.

To optimize the functionality of HMIS tools, the MIS Section initiated an orientation program for local-level health facilities, ensuring the seamless adoption of revised tools. Training sessions encompassing DHIS-2, LMIS, AHMIS and EHIRRS were conducted at both provincial and district levels, involving staff from PHCC, Health Service Offices, hospitals, and local health facilities.

Throughout the fiscal year 2079/80, the MIS Section sustained its comprehensive approach to planning, monitoring, supervision, and information management. This included on-site coaching, routine data quality assessments, and active engagement in the orientation and supervision/monitoring of private and non-government institutions across various districts.

Logistic Management

Provincial Health Logistic Management Center (PHLMC) office has been established in Karnali province since beginning of current fiscal year 2080/90. Aiming to allocate logistics (from central and provincial level), manage and distribute the health commodities to esteemed health institution. Moreover, HSD provides logistic services for repair and maintenance of biomedical equipment's & instruments.

Health Training

Human Resource Development Center (HRDC) has conducted several in-service, refresher, training along with clinical, non-clinical and other management trainings in the fiscal year 2079/80. HRDC is responsible for gap analysis, research on training needs, prioritization and recommendation of HRH in Karnali province.

Health Education, Information and Communication

The Provincial Health Service Directorate, in collaboration with Public/Health Service Offices, actively implements Information, Education, and Communication/Behavior Change Communication (IEC/BCC) activities, employing diverse media and methods tailored to the local needs of the population. A concerted effort is made to mobilize local media at the district and community levels to effectively disseminate health messages.

Key activities include comprehensive health education programs conducted in schools and communities, aiming to raise awareness and promote health literacy. The production and distribution of print materials further contribute to information dissemination. Regular, weekly, and periodic health programs are developed for radio, television, and FM radio, engaging local audiences. Additionally, health messages are published and disseminated through newspapers, emphasizing social mobilization, advocacy, workshops, seminars, observations on special days, and exhibitions.

The Health Education and Health Promotion unit of the Provincial Health Service Directorate shoulders the responsibility for orchestrating these multifaceted IEC/BCC initiatives. By addressing the specific health needs and preferences of the local population, this coordinated approach ensures that health information reaches individuals through channels that resonate with them. This proactive engagement in IEC/BCC activities reflects a commitment to promoting public health, enhancing health awareness, and fostering positive health behaviors within the community.

Supportive Supervision, Monitoring and Evaluation

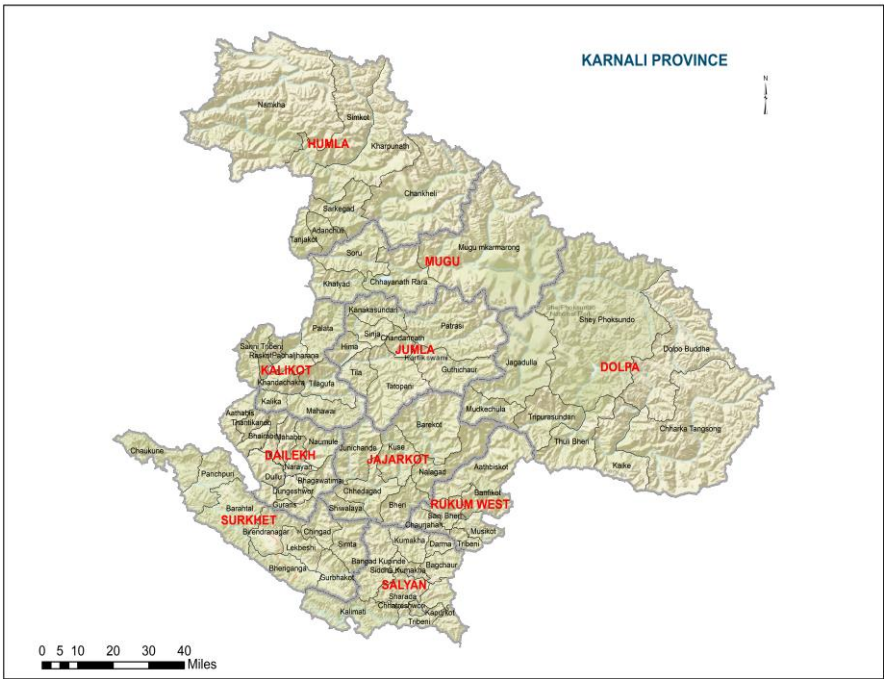
Health Service Directorate of Karnali province has carried out integrated as well as program specific supervision and monitoring in different districts, local levels and different service delivery sites within the province. Different methodologies, tools, techniques & priorities were developed and deployed for supervision and monitoring.

1. INTRODUCTION

1.1 General Introduction

Karnali Province spans between 80°58'58" and 83°40'57" East longitude and 28°10'7" and 30°26'50" North latitude, covering an area of 30,211 square kilometers, which accounts for 21.6% of the total area of the country. This province features diverse topography, including mountains and hilly terrain, and shares borders with China to the north, Gandaki Province to the east, Sudurpaschim Province to the west, and Lumbini Province to the south.

Figure 1 Map of Karnali Province



According to the National Census 2021, Karnali Province has a total population of 1,688,412, with 864,651 females and 823,761 males. Approximately 5.8% of the national population resides within its 10 districts. This province consists of 79 local level (54 rural and 25 urban) and 718 wards.

Health Service Directorate

The constitution of Nepal guarantees access to basic health services as a fundamental right for every citizen. In alignment with this constitutional provision, the Health Policy of 2076 in Karnali Province envisions ensuring access to quality healthcare services for all Karnali residents, thereby safeguarding their fundamental right to a healthy life. The Health Service Directorate (HSD) serves as the implementing body for health activities, operating under the Ministry of Social Development (MoSD) of Karnali Province. Comprising 8 sections, the Health Service Directorate is responsible for providing technical support and program supervision to public health service offices and hospitals.

1.2 Role and responsibility of Health Service Directorate

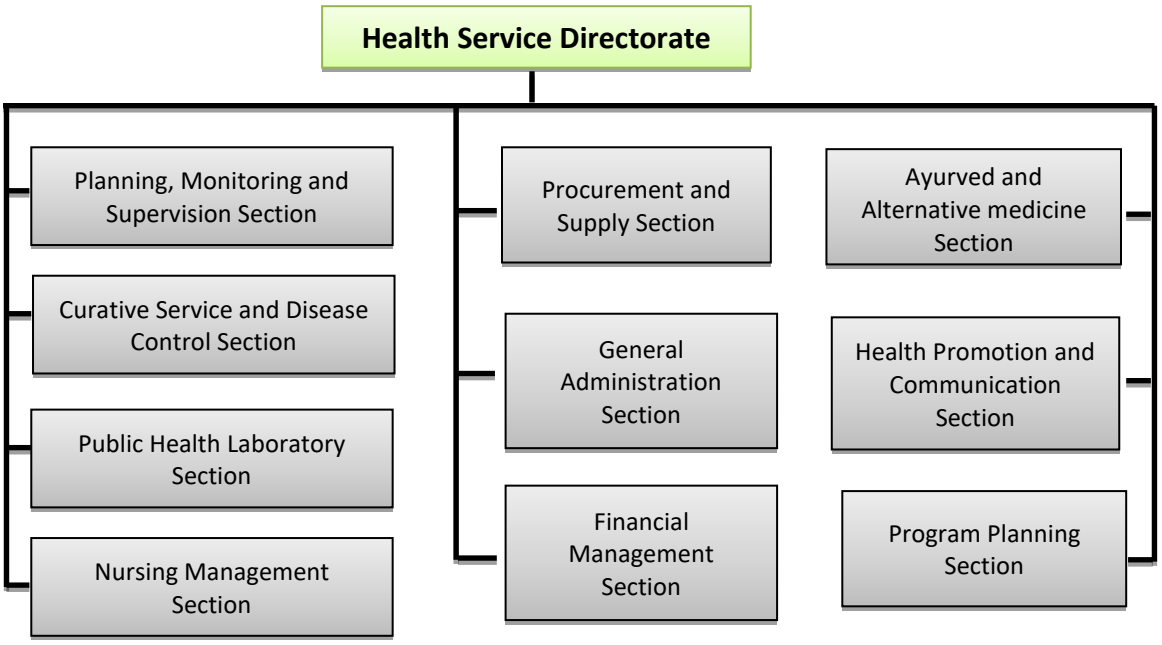
The Health Service Directorate (HSD) functions as the implementing body for health services within the Ministry of Social Development (MoSD) of Karnali Province. Its primary objective is to facilitate the provision of primary healthcare services to ensure accessibility for all individuals. The Health Service Directorate plays a crucial role in overseeing the enhancement of the health system, offering technical assistance, monitoring programs, providing supervision, collecting feedback, and evaluating the health services administered by Public/Health Service Offices and Hospitals.

Objectives:

- To reach the preventive, curative and promotional health services up to the doorsteps of people.
- Monitoring and supervision of health services

1.3 Major activities of Health Service Directorate

- Develop an annual work plan aligning with the policies and directives of the Ministry of Health and Population (MOHP) and the Ministry of Social Development.
- Develop the provincial and district level program and report to federal government through Ministry of Social Development.
- Support to implement the National and provincial health policy, analyzing the available health services in the province.
- Coordinate with relevant stakeholders in the province, fostering collaboration to collectively address challenges and enhance effectiveness in the health sector.
- Develop budget estimates in coordination with the health offices, Ayurveda centres regarding the construction and repair of physical facilities.
- Monitor and regulate the financial transaction in the district level as per need.
- Administer the implementation of audit report and take action to those who do not clear their advances and financial irregularities as per the existing financial rules or recommend to the centre for necessary action Print and distribute the forms and formats provided by Policies to district Health Offices, Hospitals and Ayurveda Centers.



Number of Service outlet

To deliver the primary and emergency health service in Karnali there are 11 Primary level Hospital 14, Primary Health Care Centers (PHCCs), 333 Health Posts (HPs), 55 Community Health Units, 1035 PHC-ORCs and 4273 FCHVs. Public/ Health service Offices under the Directorate are established in Surkhet, Jumla, Salyan, Humla, Mugu, Kalikot, West Rukum, Dailekh, Jajarkot and Dolpa for managerial purpose as an implementation unit of Province Government of Karnali. Likewise, to cater clinical services, along with Karnali Academy of Health Sciences and Province Hospital. Other private health facilities and development partners including INGOs, bilateral and multilateral organizations have been working in the province.

Figure 1.2 Health facility of Karnali Province

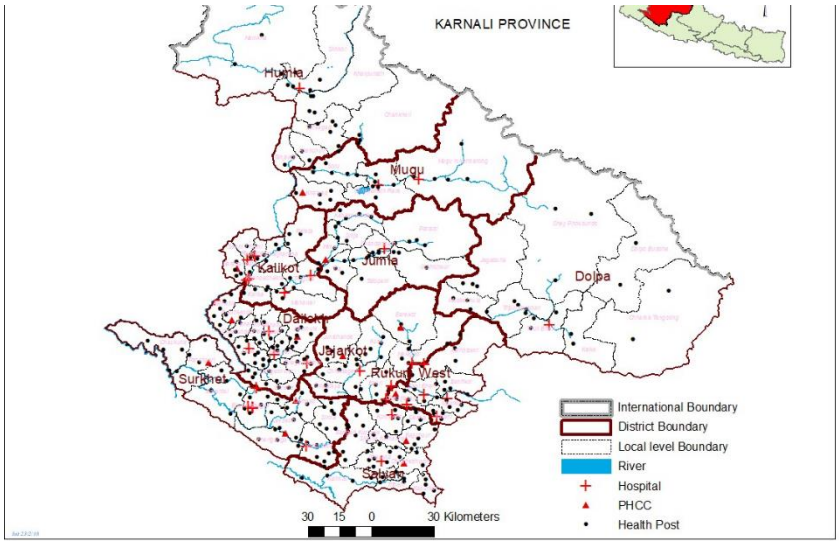


Table 1.1.Service Delivery Points, Service Providers in Karnali

Service Providers	No	Service Providers	No
Karnali Academy of Health Sciences (KAHS)	1	Birthing Center (Excluding BEONC/CEONC)	359
Secondary Hospital A (Mehalkuna)	1	CEONC	11
Secondary Hospital B (Province Hospital)	1	PHC/ORC	1014
Public Health Service Office	2	Immunization Clinics	1370
Health Service Office	8	FCHV	4272
District Hospital (Province)	8	Safe Abortion Site	54
Primary Hospital (Local Level)	23	Microscopic Center	32
Community Hospital	3	DOTS Center	419
Private Hospital	7	DR Treatment Center	2
PHCC	13	DR Treatment Sub center	16
Health Post	331	GeneXpert Lab	8
Community Health Unit	101	ART Center	6
Urban Health Clinic	25	Ayurveda Health Center	9
BHCC	309	Nagarik Arogya Kendra	40
BEONC	13	Private Health Facilities	29

Source: District Presentation at Provincial Review Meeting Birendranagar, Surkhet 2079

Health System Building Blocks in context to Karnali Province

The World Health Organization has delineated a comprehensive health system framework consisting of six essential building blocks vital for the efficacy of healthcare systems. These building blocks are foundational for ensuring the provision of high-quality health services, spotlighting elements such as service delivery, workforce management, information management, procurement and supply, health financing, and effective leadership and governance. This framework offers a systematic approach for nations and institutions to evaluate, fortify, and enhance their health systems, thereby advancing the welfare of individuals and communities. Table 2.1 highlights data on indicators related to key pillars within Karnali Province's health system.

Table 1.1.2 Status of Health System

Building Blocks and Indicators	Status of Karnali Province
Health Services Delivery	
Population per government hospital	77,326
Population per hospital (both sector)	53,100
Population per health facility (included hospital, PHCC and HP)	2,302
Population per FCHV	391
Health Workforce (Province level)	
Availability of Medical Doctors	117 (Vacant percentage 81%)
Availability of Nursing Staff	263 (Vacant percentage 50.52%)
Availability of Paramedics	117 (Vacant percentage 34.57%)
Availability of Lab technicians/assistance	50 (Vacant percentage 75%)
FCHVs	4,341
Doctor per 1000 population	0.05
Nurse per 1000 population	0.44
Health Information	
Reporting Status of Government Hospital (N=18)	100 %
Reporting Status of PHCC (N=13)	100 %
Reporting Status of Health Posts (N=331)	100 %
Reporting Status of PHC-ORC (N=816)	81.4 %
Reporting Status of EPI clinics (N=1446)	92.2 %
Reporting Status of FCHVs (N=4273)	92.5 %
Health Financing	
Provincial Total Budget for FY 2079/80	32616163000
Total Budget MoSD	59719000
% of health budget among total MoSD budget	18.3%
Expenditure(Health sector MOSD) (%)	68.44%
Insurance covered districts	10
Total population insured	428668(29.28 % among total population)
Leadership and Governance	
Provincial Health Policy	Implementation stage
Provincial Health Act	Endorsed

Source: Annual Review of PHSD, MoSD, Karnali Province.

Service Readiness

Service readiness refers to overall capacity of health facilities to provide general health services. In this section, availability of basic amenities, infrastructure and enabling environment required to provide general service are listed. Numbers under each district indicates availability of given service readiness criteria in health facilities of given district. Health Facilities includes Primary Health Care Centers, Health posts, BHSCs, UHCs and CHUs.

Table 1.1.3 District wise details of Infrastructure for Service Delivery at local level

S.N.	Details	Karnali	Dolpa	Mugu	Humla	Jumla	Kalikot	Dailekh	Jajarkot	Rukum West	Salyan	Surkhet
1	# of health facilities with computer	585	22	25	23	51	55	91	61	50	83	124
2	# of health facilities with internet facility	408	17	10	19	33	40	66	39	32	64	88
3	# of health facilities with 24 hours electricity supply	375	14	15	30	26	35	63	27	61	51	53
4	# of health facilities having their own building	729	34	44	50	50	78	114	86	78	80	115
5	# of health facilities having their own land (at least 3 Ropani)	329	13	16	24	37	36	61	37	19	37	49
7	# of building of birthing center as per standard	411	15	26	37	28	60	40	40	57	36	72
8	# of health facilities with staff quarter	179	13	14	19	19	23	19	7	11	16	38
9	# of health facilities with access to motor road	655	21	30	31	46	43	113	72	83	94	122
10	# of available of stretchers in Ward	690	44	45	40	62	84	100	66	62	86	101
11	# of ambulance	90	3	6	3	6	5	12	6	12	11	26

Source: District Presentation at Provincial Review Meeting Birendranagar, Surkhet 2079

1.2 Nepal Health Sector Strategy 2023-2030

1.2.1 Introduction

The origin of the five-year strategic health planning process in Nepal can be traced back to 2003 when the Council of Ministers endorsed the Health Sector Strategy: An Agenda for Reform. The strategy put in place the first Nepal Health Sector Program (NHSP-I) as its implementation plan for the period 2005-2010. The second sector Program for the period 2010-2015 (NHSP-II) was largely seen as an extension of the previous one, albeit with greater emphasis on partnerships, local governance, decentralized service delivery and equitable access to essential health care services. Nepal Health Sector Strategy 2015-2020 (NHSS) was recognized as the strategy that would guide the sector, considering multi-sector collaboration to address wider determinants of health, over the next five-year period. It responded to the existing socio-political environment and the changes that took place both in the local and global health agenda. Nepal Health Sector Strategic Plan 2022-2030 (NHSP) has been implemented. This strategic plan calls for “healthy, productive, responsible and happy citizens”.The strategic plan has established 14 outcomes and 29 sub-outcomes across five strategic objectives to be achieved by the year 2087. The five strategic objectives of the planning process are as follows:

The NHSP stands on six guiding principles based on the National Health Policy, 2076

Guiding Principles

(a) Universal access to health and social protection

(b) Federal, provincial and local health system coordination and coordination;
(c) Health in all policies Multisectoral approach
(d) Delivery of services to the out-of-reach population
(e) Increasing investment on health by country and in health Governance
(f) Professionalism and ethical conduct

1.3 Sustainable Development Goals

On 25 September 2015 at United Nations Sustainable Development Summit, world leaders adopted the 2030 Agenda for Sustainable Development, which includes a set of 17 Sustainable Development Goals (SDGs) to end poverty, fight inequality and injustice, and tackle climate change by 2030.

The Sustainable Development Goals, otherwise known as the Global Goals, build on the Millennium Development Goals, eight anti-poverty targets that the world committed to achieving by 2015. The MDGs, adopted in 2000, aimed at an array of issues that included slashing poverty, hunger, disease, gender inequality, and access to water and sanitation. Enormous progress has been made on the MDGs, showing the value of a uni-agenda underpinned by goals and targets. Despite this success, the indignity of poverty has not been ended for all.

SDG 3: Ensure healthy lives and promote well-being for all at all ages

TARGETS

3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births.
3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births.
3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.
3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.
3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.
3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents.
3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and program.
3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.
3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.
3.a Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate.
3.b Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the

full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all.

3.c Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States.

3.d Strengthen the capacity of all countries, developing countries, for early warning, risk reduction and management of national and global health risks.

Note: The details of SDG target and indicators is presented in ANNEX.

Table 1.5. Major Health Indicators of Karnali Province Vs National Targets

Indicator	Karnali	National	Target (National)
Maternal mortality ratio[1]	172	151	70 by 2030
Under five mortality rate2	46	33	20 by 2030
Infant mortality rate2	36	28	10 by 2030
Neonatal mortality rate2	26	21	12 by 2030
Total fertility rate2	2.6	2.1	2.1 by 2030
Contraceptive Prevalence, modern methods[2]	46	43	60 by 2030
Teenage pregnancy[2]	20.5	13.6	
Institutional delivery[2]	83.4	83.4	90 by 2030
Delivery by skilled birth attendant[2]	72	80	90 by 2030
Fully vaccinated (basic antigens) [2]	84	80	100 by 2030
Fully vaccinated (according to national schedule) [2]	55.8	52	
Children stunted[2]	36	24.8	15 by 2030
Children wasted[2]	4	7.7	4 by 2030
Human Development Index[3]	0.538	0.587	
Life expectancy at birth[3]	66.8	70.5 yrs	NA

Source: [1] *A Report of Maternal Mortality (National Population and Housing Census 2021*

[2] *NDHS 2022*

[3] *Nepal Human Development Report 2020*

2 FAMILY WELFARE

2.1 CHILD HEALTH AND IMMUNIZATION PROGRAM

2.1 National Immunization Program

2.1.1 Background

Immunization stands out as the most cost-effective initiative for child survival, preventing a significant quarter of mortality among children under the age of five. The effective implementation of this program directly contributes to reducing child morbidity and mortality, aligning with the goals of Sustainable Development Goal-3 and specifically targeting 3.2 on Child Mortality reduction. Recognized as a Priority 1 (P1) program, the National Immunization Program (NIP) in Nepal has a history dating back to 2034 B.S. when it was initiated as the Expanded Program of Immunization. Following the successful elimination of smallpox, Nepal introduced BCG and DPT antigens. Presently, the immunization program encompasses the delivery of 13 types of antigens through institutional clinics, outreach, and mobile clinic methods. Notably, Nepal has fortified its commitment to comprehensive immunization practices through legislative milestones, including the endorsement of the Immunization Act 2072.

Vision, Mission, Goal and Strategic direction of NIP

According to recent Comprehensive Multiyear Plan (cYMP) of Nepal 2017-2021 of NIP,

Vision - *"Nepal- a country free of Vaccine Preventable Diseases"*

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"*

Goal- *"Reduction of morbidity, mortality and disability associated with vaccine preventable diseases"*

Strategies

- ❑ Reach every child for full immunization.
- ❑ Accelerate, achieve and sustain vaccine preventable disease control, elimination and eradication;
    - Sustain polio-free status for the global eradication of the disease
    - Achieve measles elimination and rubella and CRS control by 2019
    - Accelerate JE Control
    - Sustain MNT elimination status
    - Accelerate hepatitis B vaccination
    - Expand surveillance of other vaccine preventable diseases
- ❑ Strengthen immunization supply chain and vaccine management system for quality immunization services;
- ❑ Ensure financial sustainability for immunization program;

- ❑ Promote innovation, research and social mobilization activities to enhance best practices

Target and Schedule

The target population of the National Immunization Programme are:

- Under 1-year aged children for BCG, DPT-HepB-Hib, OPV, FIPV, PCV, Rota and measles-rubella1 (MR1) vaccine.
- 12 months old children for Japanese encephalitis
- 15-month-old children for measles-rubella second dose (MRII) and Typhoid
- Pregnant women for tetanus toxoid and low dose diphtheria toxoid (Td) containing vaccine.

Table 2. 1.1 Target Population for Routine Immunization

Particulars	Target Population
Under 1- year children	36802
12–23-month population	36676
0-59 month population	182776
Expected pregnancy	45010

Table 2. 1.2 Immunization Schedule

S.N.	Type of vaccine	Doses	Schedule
1	BCG	1	At birth or on first contact with HFs
2	Oral polio vaccine (OPV)	3	6, 10 and 14 weeks of age
3	Rota	2	6, 10 weeks of age
4	DPT-Hep B-Hib	3	6, 10 and 14 weeks of age
5	f-IPV	2	14 weeks and 9 month of age
6	PCV	3	6 weeks,10 weeks and 9 months of age
7	Measles-rubella	2	9 months and 15 months of age
8	TCV	1	15 month of age
9	Japanese encephalitis	1	12 months of age
10	Tetanus and diphtheria toxoid (Td)	2	Pregnant women: 2 doses of Td one month apart in first pregnancy, and 1 dose in each subsequent pregnancy

(Source: National Immunization Schedule of Nepal)

Major Activities Carried Out in fiscal year 2079/80 (2022/23)

- Celebration of immunization month in Baisakh every year.
- Annual Provincial Review of Immunization and Supply Chain (ISC).
- Conduction of immunization training to newly recruited health workers.
- Microplanning of immunization
- Interventions for full immunization declaration wards, palikas and district

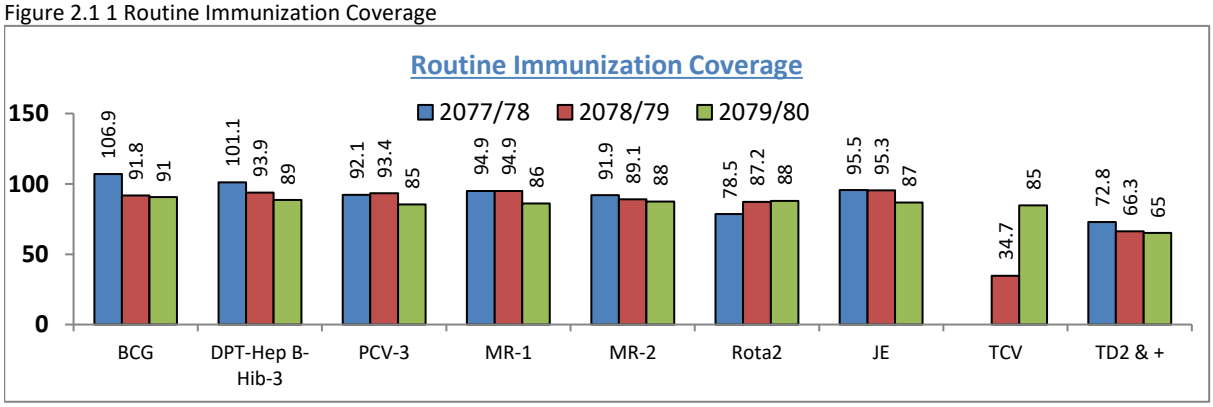
Provincial Vaccination Coverage 2079/80

Table 2. 1.3 Provincial vaccination coverage 2079/80

SN	Antigen	Target Population	Target	Achievement	Coverage %
1	BCG Doses	Under 1 year	36802	33363	90.66
2	DPT-HepB-Hib-1st	Under 1 year	36802	33902	92.12
3	DPT-HepB-Hib-2nd	Under 1 year	36802	33383	90.71
4	DPT-HepB-Hib-3rd	Under 1 year	36802	32589	88.55
5	OPV-1st	Under 1 year	36802	33748	91.70
6	OPV-2nd	Under 1 year	36802	33236	90.31
7	OPV-3rd	Under 1 year	36802	32438	88.14
8	FIPV-1st	Under 1 year	36802	29089	79.04
9	FIPV-2nd	Under 1 year	36802	23611	64.16
10	PCV-1st	Under 1 year	36802	33548	91.16
11	PCV-2nd	Under 1 year	36802	33083	89.89
12	PCV-3rd	Under 1 year	36802	31422	85.38
13	Rota-1st	Under 1 year	36802	33027	89.74
14	Rota-2nd	Under 1 year	36802	32370	87.96
15	Measles/Rubella-9-11 Months	Under 1 year	36802	31651	86.00
16	Measles/Rubella-12-23 Months	15 month	36676	32160	87.69
17	JE	12 month	36802	31806	86.42
18	Typhoid	15 month	36676	31068	84.70
19	TD (Pregnant Women)-2&2+	Pregnant	45010	29327	65.16

Analysis of Service Statistics

Figure 2.1 1 Routine Immunization Coverage



The data presented in Figure 2.1.1 illustrates the comparative annual immunization coverage trend for various vaccines following the National Immunization Schedule. The immunization coverage data for the fiscal years 2077/78, 2078/79, and 2079/80 reveals a declining trend in the coverage of vaccines such as BCG, DPT-HepB-Hib-3, PCV-3, MR-1, MR-2, JE, and TD2 & +. However, there is an increase in coverage for Rota 2nd. TCV coverage is reported only for 2079/80 and stands at 85 percent.

Figure 2. 1.2 BCG Coverage

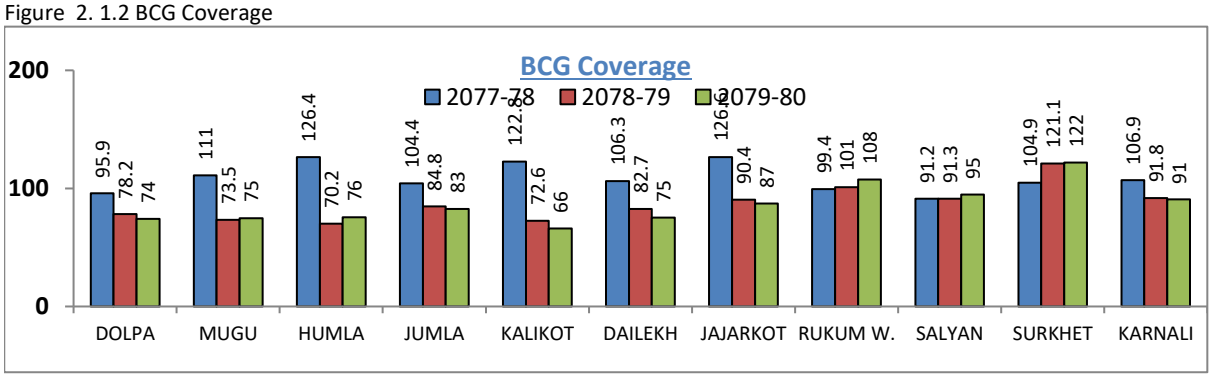


Figure 2.1.2 provides a district-wise overview of the BCG vaccination trend over the last three fiscal years. The analysis of immunization coverage across districts (2077-78, 2078-79, and 2079-80) indicates diverse patterns. Notably, several districts, including Dolpa (95.9 to 74.2), Mugu (111 to 74.8), Humla (126.4 to 75.6), Jumla (104.4 to 82.7), Kalikot (122.8 to 66), Dailekh (106.3 to 75.3), and Jajarkot (126.6 to 87.3), witnessed a decline in coverage. In contrast, Rukum West experienced an increase from 99.4 to 107.5. Salyan showed a slight increase from 91.2 to 94.8, and Surkhet exhibited a significant rise from 104.9 to 122. Karnali, as a province, recorded a decline in BCG vaccination coverage from 106.9 to 90.6 percent.

Figure 2.1.3 DPT-HepB-Hib3 Coverage

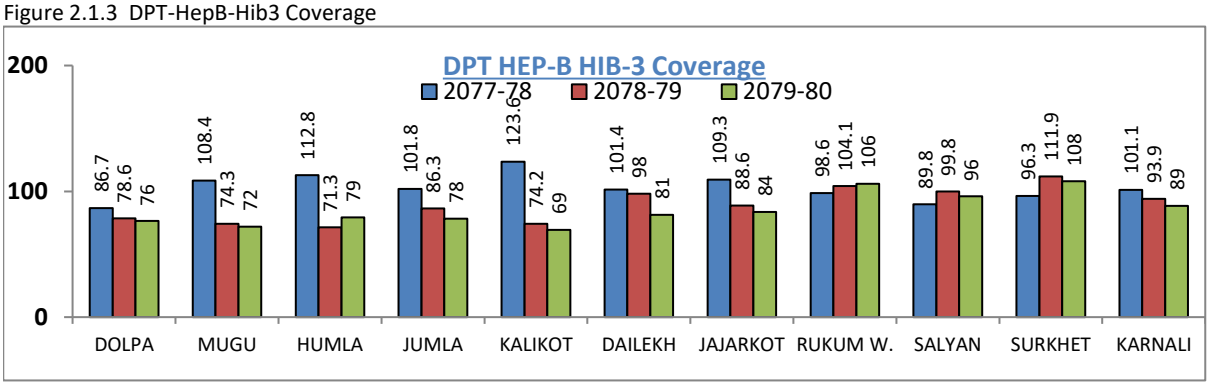
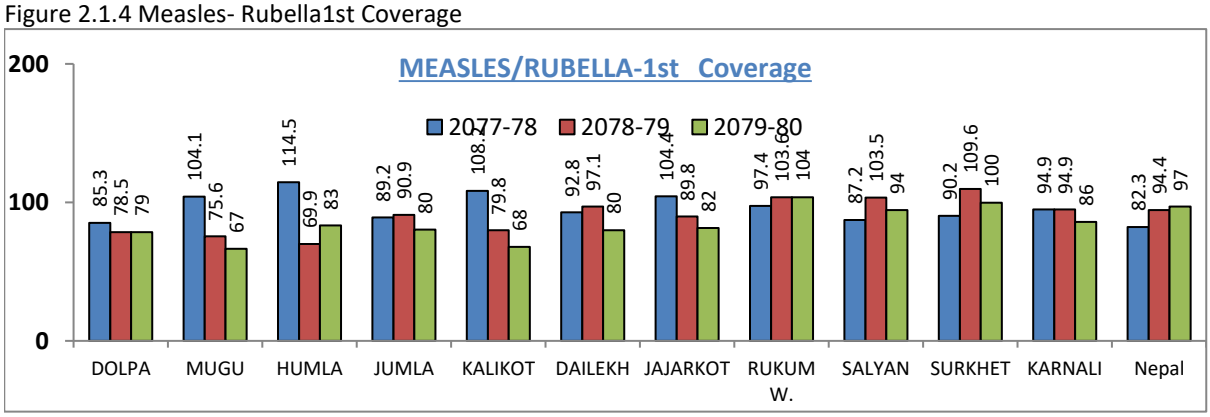


Figure 2.1.3 presents a detailed analysis of DPT-HepB-Hib-3 (Diphtheria, Pertussis, Tetanus, Hepatitis B, Haemophilus influenzae type b - Third dose) coverage in Karnali Province for fiscal years 2078/79 and 2079/80. The findings indicate a decline in overall DPT-HepB-Hib-3 coverage

in the province, dropping from 93.9% in 2078/79 to 89% in 2079/80. This decline is observed across most districts, with notable variations. Among the districts, Rukum West, Salyan, and Surkhet experienced coverage above 95%, demonstrating a relatively higher immunization rate. In contrast, the remaining seven districts (Dolpa, Mugu, Humla, Jumla, Kalikot, Dailekh, and Jajarkot) recorded coverage below 95%. However, the coverage in Rukum West and Humla districts increased in the fiscal year 2079/80 compared to 2078/79.

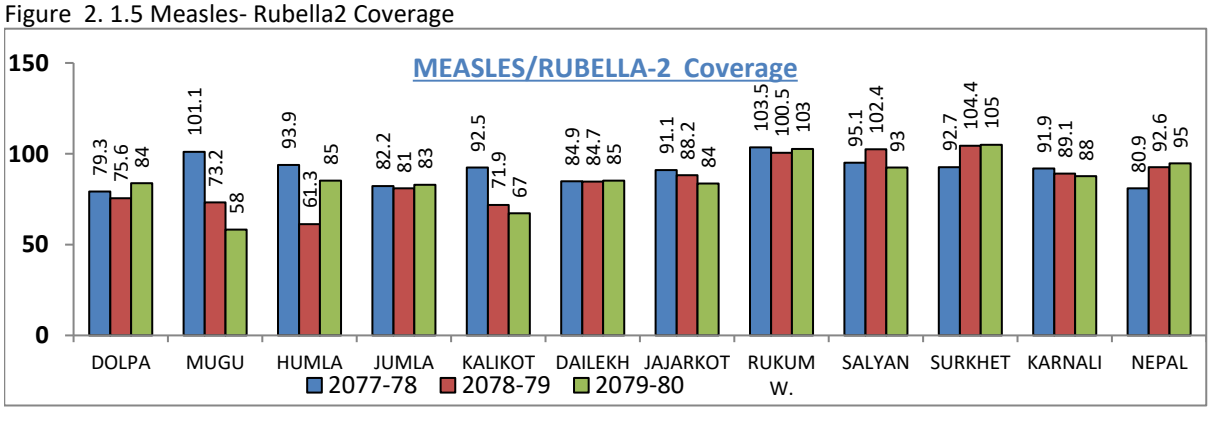
Figure 2.1.4 Measles- Rubella1st Coverage



The data depicted in Figure 2.1.4 reveals a decline in provincial coverage for the Measles/Rubella -1st in the current fiscal year 2079/80, registering at 86%, as opposed to the coverage recorded in the previous fiscal year 2078/79, which was 94.9%.

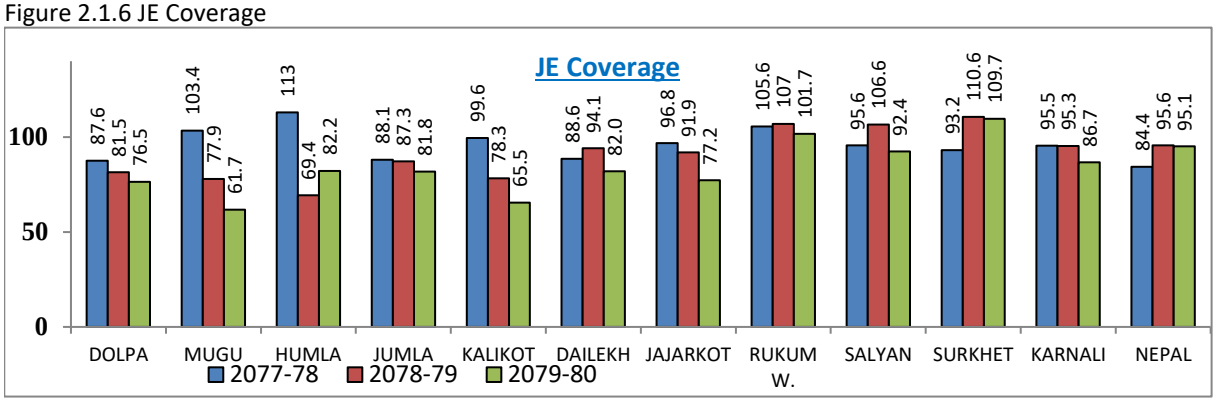
Analyzing district-wise trends, Rukum West exhibited the highest MR-1 coverage at 104%,. Surkhet and Salyan followed with coverage rates of 100% and 94%, respectively. Conversely, Mugu reported the lowest coverage among all districts, standing at 67%. This lower coverage in Mugu suggests a potential gap in the immunization program, necessitating targeted efforts to improve accessibility, awareness, or other factors contributing to lower vaccination rates.

Figure 2. 1.5 Measles- Rubella2 Coverage



The figure 2.1.5 depicts the coverage of MR 2nd dose of province has slightly decreased to 88 % in this fiscal year 2079/80 compared to last fiscal year 2078/79 (89.1%).The comparison of districts shows increased coverage in Dolpa, Humla, Jumla, Dailekh,Surkhet and Rukum west whereas decreased coverage in Mugu, Kalikot, Jajarkot & Salyan than previous year.

Figure 2.1.6 JE Coverage



The JE vaccination coverage of the province, as depicted in Figure 2.1.6, stands at 86.7% for the fiscal year 2079/80, representing a decrease from the previous fiscal year's coverage of 95.3% in 2078/79. Likewise, the comparison of districts reveals a decrease in coverage across all districts except Humla.

Figure 2.1.7 Td2 & Td2+ Coverage

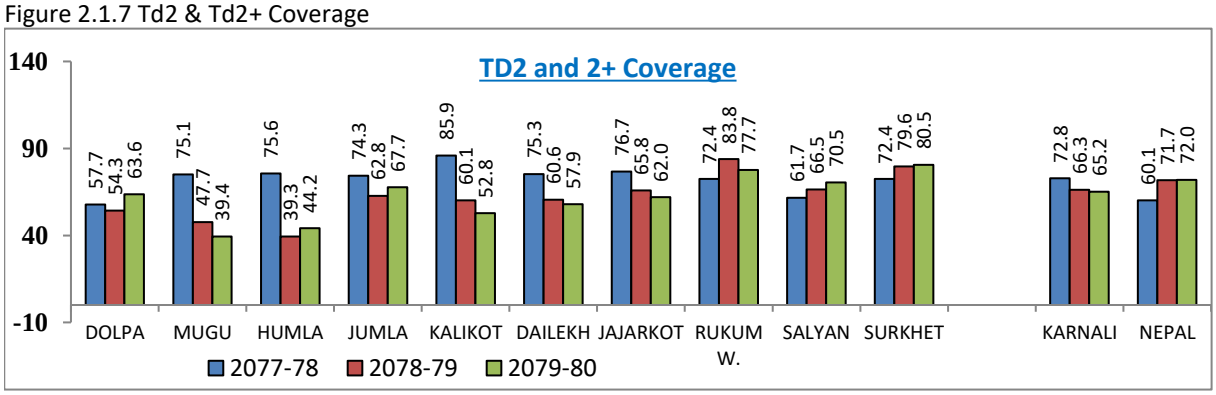


Figure 2.1.7 presents the trend of Provincial & district level coverage for Td (Td2 and Td2+) vaccination administered among pregnant women during last three years which shows the provincial coverage has been slightly decreased to 65.2% in 2079/80 from 66.3% in last fiscal year 2078/79. Similarly, the comparison of districts shows increased in coverage of Dolpa, Humla, Jumla & Salyan districts whereas decreased in coverage of Mugu, Kalikot, Dailekh, Jajarkot & Rukum West districts than the previous year.

Figure 2.1.8 Dropout Rate

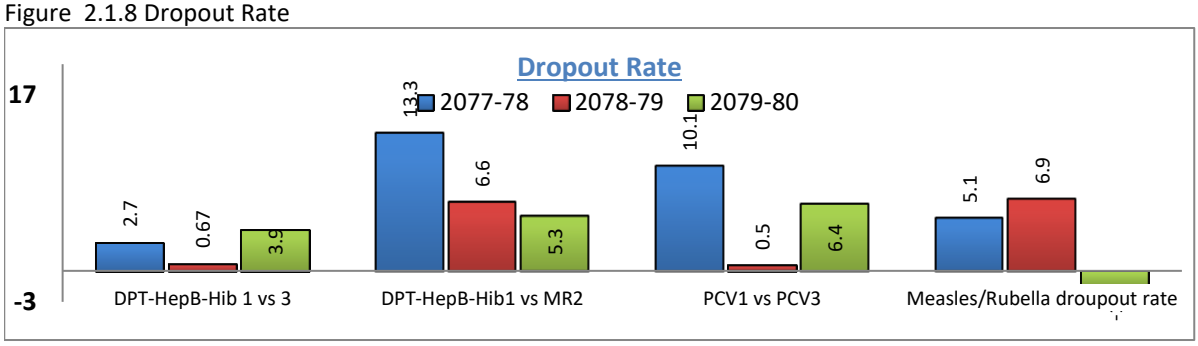


Figure 2.1.8 shows dropout rate of immunization program for overall Karnali province in three fiscal years which reflects that dropout rate in this FY 2079/80 is below as per the standard dropout rate which is less than 10% for all antigen.

Figure 2.1.9 Dropout Rate: DPT HepB-Hib1 Vs 3

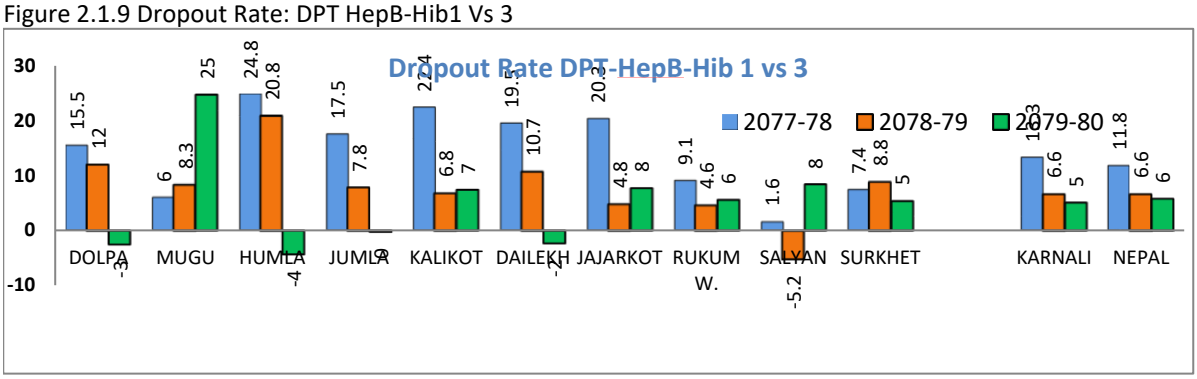


Figure re 2.1.9 shows the dropout rate of DPT HepB-Hib1 Vs 3 of province has significantly decreased to 5% in FY 2079/80 with comparison to the last fiscal year 2078/79. Similarly, the comparison of districts shows increased in dropout rate of Mugu, Kalikot, Jajarkot, Rukum West & Salyan districts whereas decreased in dropout rate of Dolpa, Humla, Jumla, Dailekh & Surkhet districts than the previous year.

Figure 2.1.10 Dropout Rate: PENTA1 Vs MR2

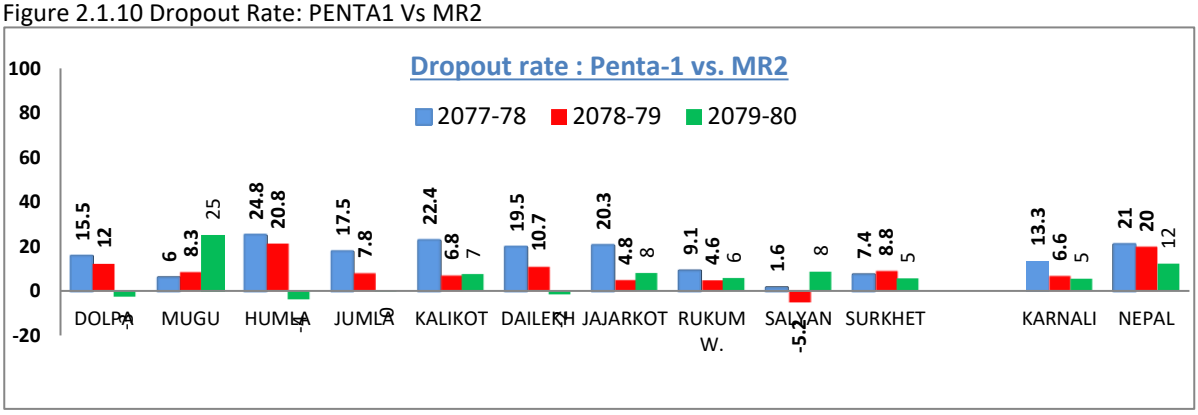


Figure 2.1.10 shows the dropout rate between Penta1 vs MR2 vaccine. The total provincial dropout rate is 5% in fiscal year 2079/80 which is slightly decreased from 6.6 % in fiscal year 2078/79. Similarly, the comparison of districts shows acceptable range of dropout rate in all districts which is less than 10% except Mugu district where dropout rate is 25%.

2.1.2 Access and Utilization of Immunization Services

The figure 2.1.11 shows the immunization information for category on the basis of access and utilization. The access represents the Penta 1 coverage and utilization is represented by drop-out rate between Penta 1 vs MR2 vaccine.

The figure 2.1.11 shows the categorization of 79 local levels of Karnali province based on access (DPT-Hep B-Hib1 coverage > 90%) and utilization (DPT-HebB-Hib1 vs MR2 dropout <10%) for fiscal year 2079/80. Among them, 23 (29.11%) are in category I (Good access, good utilization), 9(11.39%) are in category II (Good access, poor utilization), 35(44.3%) are in category III (Poor access, good utilization), and 12 (15.18%) are in category IV (Poor access and poor utilization).

Figure 2.1.11 Immunization Category

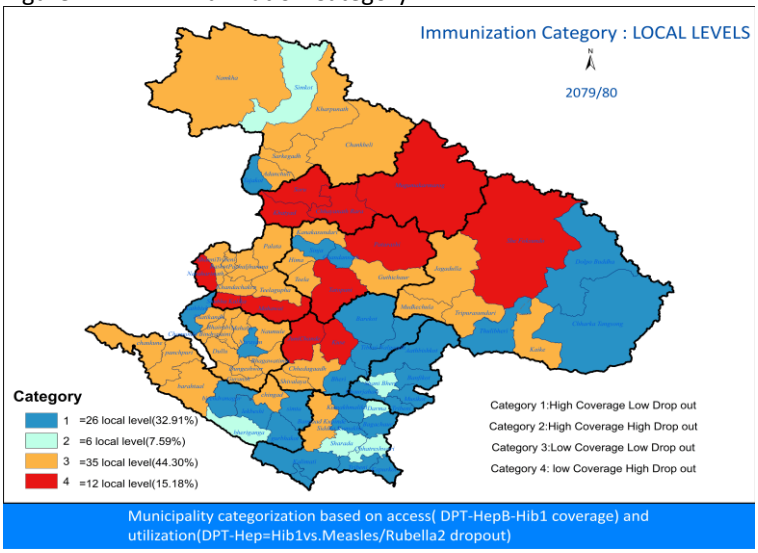


Table 2. 1. 4. Local Level Categorized based on Access and Utilization

	Category 1 : High Coverage (≥90%) Low Drop-Out (<10%)	***Category 2*** **:** High Coverage (≥90%) High Drop-out (≥10%)	***Category 3 :*** Low Coverage (<90%) Low Drop-out (<10%)	***Category 4*** : Low Coverage (<90%) High Drop-out (≥10%)
Province		***Karnali***		
2078/79	**Jajarkot, Rukum West, Salyan, Surkhet**	**Dailekh(1 District)**	**Mugu, Jumla, Kalikot (3 District)**	**Dopa, Humla (2 District)**
	Dolpobuddha RM, Thulibheri Mun, Charka Tangsong RM, Tanjakot RM, Sinja RM, Chandannath Mun, Aathbis Mun, Narayan Mun, Barekot RM, Bheri Mun, Nalgad Mun, Nalgaad Mun, Aathbiskot Mun, Bamphikot RM, Musikot Mun, Tribeni RM, Chaurjahari Mun, Kumakh RM, Siddha Kumakh RM, Baghaur Mun, Kalimati RM, Tribeni RM, Kapurkot RM, Simta RM, Chingad RM, Lekbeshi RM, Gurbhakot Mun, Bheriganga Mun, Birendranagar Mun, Barahatal RM,**(27 local levels)**	Thulibheri Mun, Kaike RM, SimkotRM, Hima RM, Mahabu RM, Bhairabi RM, Dullu RM, Bhagawatimai RM, Dungeshwor RM, Bheri Mun, Banphikot RM, Darma RM,Kalimati RM, Simta RM, Lekbeshi Mun (**15 local levels**)	Dolpo Buddha RM, Jagadulla RM, Tripurasundrai Mun, Chharka Tangsong RM, Mugum Karmarog RM, Chankheli RM,Patarasi RM,Tatopani RM, Tila RM, Pachaljharana RM, Sanni triveni RM, Naraharinath RM, Khandachakra RM, Tilagupha RM, Naumule RM, Kuse RM **(16 local levels)**	Shey Phoksundo RM, Mudkechula RM,Chhayanath Rara RM, Soru RM, Kharpunath RM, Namkha RM, Sarkegad RM, Tanjakot RM, Kanaka Sundari RM, Guthichaur RM, Palata RM, Raskot RM, Mahawai RM, Kalika RM, Thantikandh RM, Chamunda Bindrasaini Mun, Shivalaya RM **(17 local levels)**
	Karnali			
	Jajarkot ,Rukum West, Salyan, Surkhet		Dolpa, Humla, Jumla, Kalikot, Dailekh	Mugu
2079/80	Dolpobuddha RM, Thulibheri Mun, Charka Tangsong RM, Tanjakot RM, Sinja RM, Chandannath Mun, Aathbis Mun, Narayan Mun, Barekot RM, Bheri Mun, Nalgad Mun, Nalgaad Mun, Aathbiskot Mun, Bamphikot RM, Musikot Mun, Tribeni RM, Chaurjahari Mun, Kumakh RM, Siddha Kumakh RM, Baghaur Mun, Kalimati RM, Tribeni RM, Kapurkot RM, Simta RM, Lekbeshi RM, Gurbhakot Mun,	Simkot RM, Sanibheri RM, Darma RM, Chhatreshwori RM, Sharada Mun, Bheriganga Mun **(6 local levels)**	Jagadulla RM, Mudkechula RM, Tripurasundrai Mun, Kaike RM, Chankheli RM, Kharpunath RM, Namkha RM, Sarkegad RM, Adanchuli RM, Kanakasundari RM, Kanakasundari RM, Guthichaur RM, Tila RM, Hima RM, Palata RM, Pachaljharana RM, Raskot Mun, Sanni triveni RM, Khandachakra Mun, Tilagupha RM, Naumule RM,	Shey Phoksundo RM, Mugumkarmarog RM, Chhayanath Rara RM, Soru RM, Khatyad RM patarasi RM, tatopani RMNaraharinath RM, Mahawai RM, Kalika RM, Kuse, Junichande RM **(12 local levels)**

	Bheriganga Mun, Birendranagar Mun, **(26 local levels)**		Mahabu, Bhairabi RM, Thantikandh RM, Chamunda Bindrasaini Mun, Dullu Mun, Bhagawatimai RM, Dungeshwor RM, Gurans RM, Chhedagad Mun, Shivalaya RM, Bangad Kupinde Mun, Chingad RM Barahatal RM, Chaukune RM**(35 local levels)**	

(DPT-HepB-Hib1 coverage and Drop out DPT1 vs MR2) 2078/79- 2079/80

Fully Immunized Local levels

This initiative has been launched with the aim of ensuring that all targeted children are fully immunized within their first year of life, thereby securing their safety.

The launch of the officially declared fully immunized campaign began in the previously known Lakuri VDC (recently Dungeshwor RM) in Dailekh on the 14th day of Baisakh in 2071, marking a significant milestone. This effort gained official recognition when Dailekh was declared as a district of Karnali Province on Asar 4th, 2074. Building on this success, the campaign continued, and as of Asar 31, 2079, full immunization vaccination coverage has been declared in all districts of Karnali Province, including Rukum West.

Table 2.1. 5. Full Immunization Declared Local Levels

S.N	Districts	No of Local level	Declared Date	National Rank
1	Dailekh	11	2074/3/4	27
2	Surkhet	9	2075/1/30	43
3	Kalikot	9	2079/3/30	66
4	Rukum West	6	2079/3/31	67
5	Salyan	10	2079/05/01	68
6	Jajarkot	7	2079/5/12	69
7	Mugu	4	2079/5/22	70
8	Jumla	8	2079/5/23	
9	Humla	7	2080/1/30	71
10	Dolpa	8	2080/3/16	72
	Karnali Province	**79**		

Immunization Preventable Diseases Surveillance

"Accelerating, achieving, and sustaining the control, elimination, and eradication of vaccine-preventable diseases is a key strategic objective outlined in the cMYP 2017-21. The strategic approaches within this objective include maintaining polio-free status towards global eradication, as well as eradicating and eliminating vaccine-preventable diseases such as Measles & Rubella, Neonatal Tetanus, and JE. Surveillance of vaccine-preventable diseases (VPDs) is essential for assessing their current status. The World Health Organization-Immunization Preventable Diseases (WHO-IPD) has been instrumental in supporting the surveillance efforts for VPDs. Surveillance activities conducted in the fiscal year 2079/80 are detailed in Table 2.1.4.

Table 2.1.6 Immunization Preventable Diseases Surveillance

District	AFP Cases	Measles/Rubella		
	Reported	Case Reported	Confirm Measles	Confirm Rubella
Dailekh	0	3	0	1
Surkhet	0	4	0	0
Kalikot	0	1	0	0
Rukum West	0	17	4	0
Salyan	1	5	0	0
Jajarkot	0	12	1	2
Mugu	2	43	1	0
Jumla	0	62	2	1
Humla	2	28	3	0
Dolpa	1	122	7	2
Karnali Province	6	273	19	5

Integration of Hygiene Promotion through Routine Immunization Program

The Government of Nepal, Ministry of Health and Population, has expanded hygiene promotion through the national immunization program nationwide, integrating it into routine immunization services. The initiative includes introducing the Rota Vaccine, with technical support from WaterAid Nepal. Hygiene promotion has been integrated into vaccination sessions at a national scale for over three years and will continue as a routine aspect of the immunization program. Key reflections and learnings from the program include:

- The hygiene promotion refresher training served as a valuable platform to introduce the new hygiene promotion strategy and urban hygiene promotion session package. However, there have been challenges in implementing the new package at the field level due to delay in supply through the federal level.
- Out of the 16612 immunization sessions conducted in FY 2079/80 at Karnali Province, about 90% (n=15054) conducted hygiene promotion sessions. Notably, a significant number of unplanned hygiene promotion sessions occurred in urban areas where immunizations take place on a daily basis, particularly in private hospitals lacking the infrastructure to accommodate high flow mothers.
- Self-motivated health workers have been instrumental in delivering hygiene promotion behaviors, utilizing materials such as mirrors and danglers, even in the absence of hygiene promotion packages at immunization clinics.
- Refresher training and regular monitoring/onsite coaching support health workers in conducting hygiene promotion sessions smoothly at the immunization clinics.

Following challenges were observed for the smooth implementation of the hygiene

- integration in immunization:
- Difficult to conduct an interactive and engaging hygiene promotion session in outreach session where the targeted beneficiaries are less.
- In urban areas numbers of mothers/guardians are quite high and over-crowded, due to the limitation of infrastructure makes difficulties to conduct the session. Urban strategy and package has been roll out.
- Hygiene promotion materials at the Health Facility/immunization site running out of

- stock – timely replenishment is required.
- Least priority on hygiene behavioral change activities at local level, sensitization is required to internalize the hygiene agenda. Local body should be capacitate regularly to incorporate promotional activities in their annual plan.

COVID-19 Vaccine Coverage

Covid vaccination in Nepal started from Magh 4- 14, 2077. The vaccination started on campaign approach based on priority groups based on the age, co-morbidity, immune compromised groups. In the year 2079/80, covishield, verocell, J&J, Astrazeneca and Pfizer vaccines were vaccinated according to the priority age groups.

Table.2.1.7. Achievement of covid vaccination in year 2079/80 in total population

District	COVISHIELD			Vero Cell			Janssen (SD)		Astrazeneca			Pfizer Total				Moderna		
	1st dose	2nd Dose	Additional dose	1st Dose	2nd Dose	Additional dose	Single dose	Additional dose	1st Dose	2nd Dose	Additional dose	1st Dose	2nd Dose	1st Additional dose	2nd Additional dose	1st Dose	2nd Dose	Additional dose
Dolpa	5,264	3,976	2,291	16,991	12,392	877	221	2	256	656	2,997	4,878	3,774	1,346	1,979	3,353	2,591	148
Mugu	6,828	6,075	2,593	26,385	23,085	824	3,151	2,916	2,272	3,576	5,713	10,061	7,370	314	187	9,015	6,830	778
Humla	9,405	7,428	5,113	19,467	14,917	804	2,039	-	1,205	1,316	1,281	7,426	6,752	-	1,775	6,527	5,184	481
Jumla	16,929	12,694	9,011	49,984	33,938	2,505	7,939	485	2,572	3,223	12,485	13,660	13,857	1,066	748	21,886	10,676	1,120
Kalikot	10,902	13,480	12,907	48,282	39,320	4,633	6,364	-	4,358	2,948	7,746	20,606	15,670	9,486	9,590	21,889	18,558	2,484
Dailekh	21,374	22,880	16,929	67,429	62,510	10,351	38,028	3,757	3,312	9,174	20,869	36,421	34,240	12,354	15,264	40,675	33,049	10,166
Jajarkot	16,211	12,704	13,230	53,138	43,501	1,659	29,599	1,103	5,761	3,441	12,557	23,164	17,653	28,147	14,637	29,382	26,860	6,443
Rukum West	12,242	14,090	25,308	55,624	49,350	2,915	22,405	2,461	2,661	2,240	24,331	25,025	22,403	22,016	16,032	25,828	20,932	13,170
Salyan	13,275	12,461	17,093	88,626	77,569	2,710	22,315	327	6,692	7,520	33,236	31,698	28,421	5,942	11,952	30,904	27,344	12,196
Surkhet	39,708	28,963	48,128	146,859	129,909	6,241	32,679	129	33,322	33,541	40,296	104,640	64,962	46,168	6,002	58,968	48,680	13,303
Karnali Province	152,138	134,751	152,603	572,785	486,491	33,519	164,740	11,180	62,411	67,635	161,511	277,579	215,102	126,839	78,166	248,427	200,704	60,289

District	Achievement against total population				Achievement against target (5-11 yrs) population			Achievement against target ≥12 yrs population			
	1st dose (%)	Full dose (%)	1st Additional dose (%)	2nd Additional dose (%)	st dose (%)	ull dose (%)	Additional dose (%)	1st dose (%)	Full dose (%)	st Additional dose (%)	2nd Additional dose (%)
Dolpa	71.2%	54.7%	17.8%	4.6%	77.8%	60.2%	0.0%	78.2%	60.0%	23.2%	6.0%
Mugu	81.5%	74.8%	19.6%	0.3%	84.1%	61.0%	0.0%	89.0%	85.6%	26.3%	0.4%
Humla	79.0%	67.5%	13.8%	3.2%	82.1%	74.6%	0.0%	79.7%	67.3%	16.7%	3.9%
Jumla	87.7%	68.8%	22.3%	0.6%	65.6%	56.0%	0.0%	93.5%	72.3%	27.3%	0.8%
Kalikot	72.9%	66.3%	25.6%	6.6%	62.5%	54.9%	0.0%	70.8%	64.8%	29.9%	7.7%
Dailekh	66.6%	78.7%	29.3%	6.0%	71.1%	67.1%	0.0%	60.1%	74.0%	32.1%	6.6%
Jajarkot	67.2%	70.4%	33.3%	7.7%	56.1%	50.5%	0.0%	70.0%	75.2%	40.7%	9.4%
Rukum West	72.8%	78.9%	54.1%	9.6%	103.8%	93.4%	0.0%	73.8%	83.1%	68.1%	12.1%
Salyan	71.6%	73.5%	29.9%	5.0%	98.4%	87.0%	0.0%	65.7%	69.5%	33.7%	5.6%
Surkhet	91.6%	80.9%	36.8%	1.4%	99.1%	88.0%	0.0%	100.9%	89.0%	47.2%	1.8%
Karnali	77.3%	74.7%	32.1%	4.6%	80.9%	71.6%	0.0%	78.1%	76.7%	38.7%	5.5%

Source: FWD, NIP, COVID -19 vaccination coverage tracking sheet by Palika (02 Shrawan 2080)

The table shows the total COVID-19 vaccination coveragge in Karnali provice. Total 77.3% of total population were vaccinated in 1st dose of vaccination campaign, 74.4% of total population were vaccinated in 2nd dose and 32.0% of total population were also vaccinated as an additional dose.

2. Nutrition Program

National Nutrition Program is a priority program of the government and is being implemented by nutrition section of Family Welfare Division (FWD) for improving nutritional status of children, pregnant women, lactating and adolescents. It aims to achieve nutritional wellbeing of all people to maintain healthy life to contribute to the socio-economic development of the country. Nutritional well-being is crucial for attaining many of the Sustainable Development Goal 2- *End hunger, achieve food security and improved nutrition and promote sustainable agriculture*. The Multi Sectoral Nutrition Plan-II provides a broader policy framework within and beyond the health sector under a Food and Nutrition Security Secretariat of National Planning Commission that coordinates its implementation. Steering committee is also in place at Provincial level.

Ministry of health and population has been implementing various nutrition specific as well as nutrition sensitive interventions across the country to address maternal, adolescents and child malnutrition. However, malnutrition remains a public health threat in Karnali Province. A huge prevalence of stunting among children under five (55 percent) calls for comprehensive and sustainable nutrition interventions. According to Nepal Demographic Health Survey (NDHS) 2022, the underweight children under 5 years of age in Karnali Province is 36 %, Stunting stands at 4%, Wasting 18% Underweight and Overweight 3.%, while Nepal's Underweight stands at 19%, Stunting 25%, Wasting 4% and Overweight 1%.

Nationwide programs

- Growth monitoring and counselling
- Prevention and control of iron deficiency anemia (IDA)
- Prevention, control and treatment of vitamin A deficiency (VAD)
- Prevention of iodine deficiency disorders (IDD)
- Control of parasitic infestation by deworming
- Mandatory flour fortification in large roller

Scale-up programs

- Maternal, Infant, and Young Children Nutrition (MIYCN) program
- Integrated Management of Acute Malnutrition (IMAM)
- Micronutrient Powder (MNP) distribution linked with infant and young child feeding (IYCF) in 5 districts (Surkhet, Salyan, Dailekh, Jajarkot and RukumWest)
- School Health and Nutrition program
- Vitamin A supplementation to address the low coverage among children aged 6–11-months
- Multi-sector Nutrition Plan (MSNP)
- Maternal and Child Health Nutrition program 5 districts(Dolpa, Mugu, Humla, Jumla, Kalikot)
- Comprehensive Nutrition Sensitive Interventions (CNSI) in 5 districts

Goal

National Nutrition program aims to achieve nutritional well-being of all people to maintain healthy life to contribute to the socioeconomic development of the country by implementing improved nutrition program in collaboration with other sectors. The overall objective of the national nutrition program is to enhance nutritional well-being, reduce child and maternal mortality and contribute to equitable human development.

The specific objectives of the program are as follows:

- To reduce protein-energy malnutrition among children under 5 years of age and women of reproductive age
- To improve maternal nutrition
- To reduce the prevalence of anemia among adolescent girls, women and children
- To eliminate iodine deficiency disorders and vitamin A deficiency and sustain 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 use of food needed for a 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 lifestyle related diseases including coronary disease, hypertension, tobacco related diseases, cancer and diabetes
- To improve the health and nutritional status of schoolchildren
- To reduce the critical risk of malnutrition and life during very difficult circumstances
- To strengthen the system for analyzing, monitoring and evaluating the nutrition situation Behavior change communication and nutrition education at community levels
- To align health sector programs on nutrition with the Multi-Sectorial Nutrition Initiative

Major Activities Carried Out in fiscal year 2079/80 (2022/23)

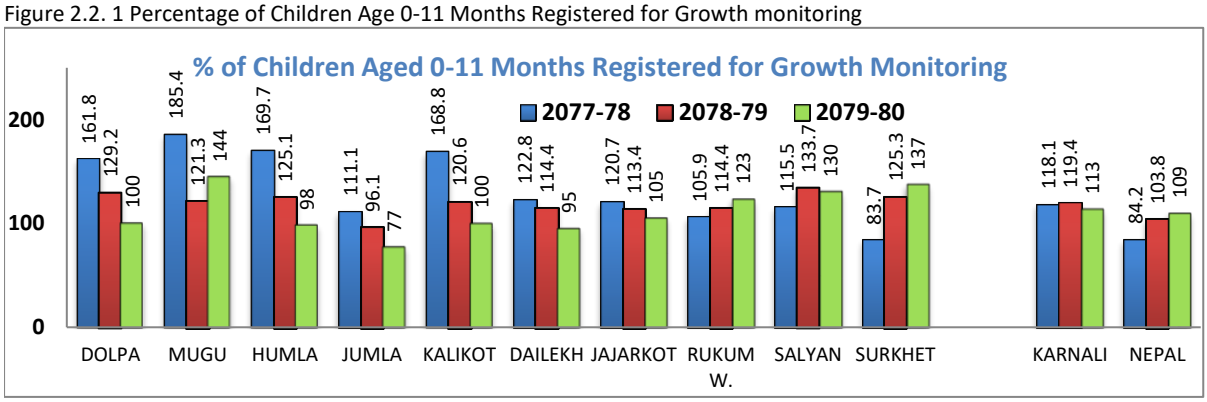
- Ensured the delivery of Growth monitoring and counselling services through Health Facilities (HF)
- Conducted two rounds of National Vitamin A distribution to all 6-59 months children
- Celebrated Breastfeeding Week (August 1-7)
- Other nutrition related day, Egg Day, Nutrition week, world food day were observed
- Continuation of Integrated Management of Acute Malnutrition at districts
- CNSI training to all level has been completed
- Celebrated IDD month in all the districts at the month of February for intensification of promotional activities.
- Continued Weekly IFA supplementation to Adolescent girls

- Continued Distribution of fortified flour to improve Maternal and Child health Nutrition (MCHN) in higher hills (5 districts) of Karnali province
- Continued distribution of iron and folate tablets to pregnant and lactating women through Hospital, PHCC, HPs, ORCs, and FCHVs
- Promotional activities for local foods
- Establishment of breastfeeding corner in different places,

Analysis of Service Statistics

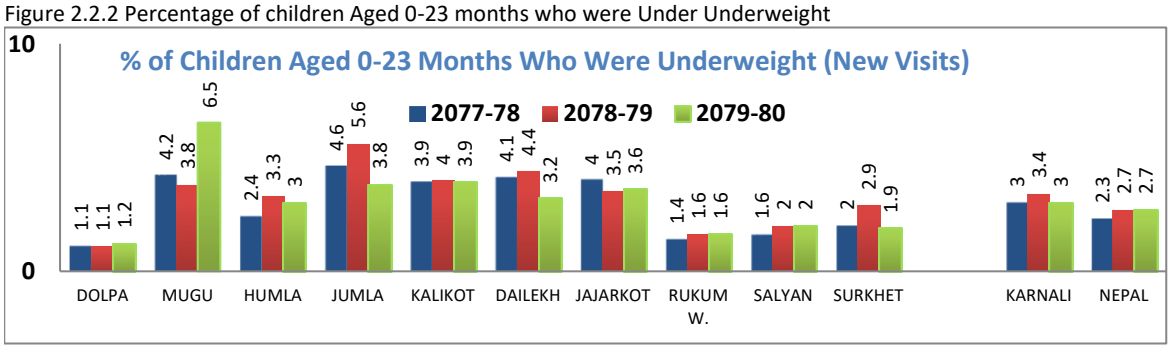
New Growth monitoring

Figure 2.2. 1 Percentage of Children Age 0-11 Months Registered for Growth monitoring



Weight-for-age serves as an essential indicator for assessing the nutritional status of children under the age of two. Health facilities, in collaboration with Primary Health Care (PHC) and Outreach (PHC/ORC) services, offer growth monitoring and counseling. In the fiscal year 2079/80, Figure 2.2.1 indicates that 113% of children aged 0-11 months were registered for growth monitoring. Particularly noteworthy is that districts like Mugu, Jajarkot, Rukum West, Salyan, and Surkhet show enrollment rates exceeding 100% for children aged 0-1 month, while others, such as Humla and Jumla, fall below this threshold. This data underscores the crucial importance of effectively monitoring and addressing nutritional needs, especially in regions with insufficient enrollment rates.

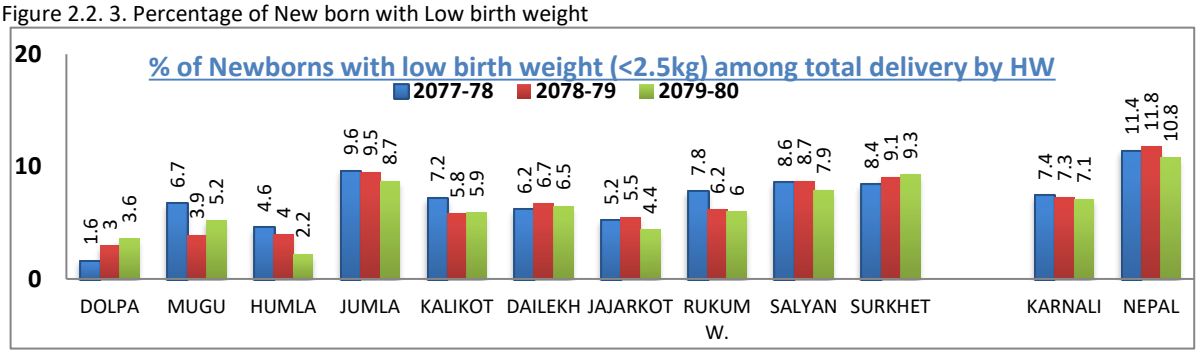
Figure 2.2.2 Percentage of children Aged 0-23 months who were Under Underweight



The Figure 2.2.2 illustrates the proportion of underweight among total growth monitored (0-23) months children. The proportion of underweight children among growth monitoring has

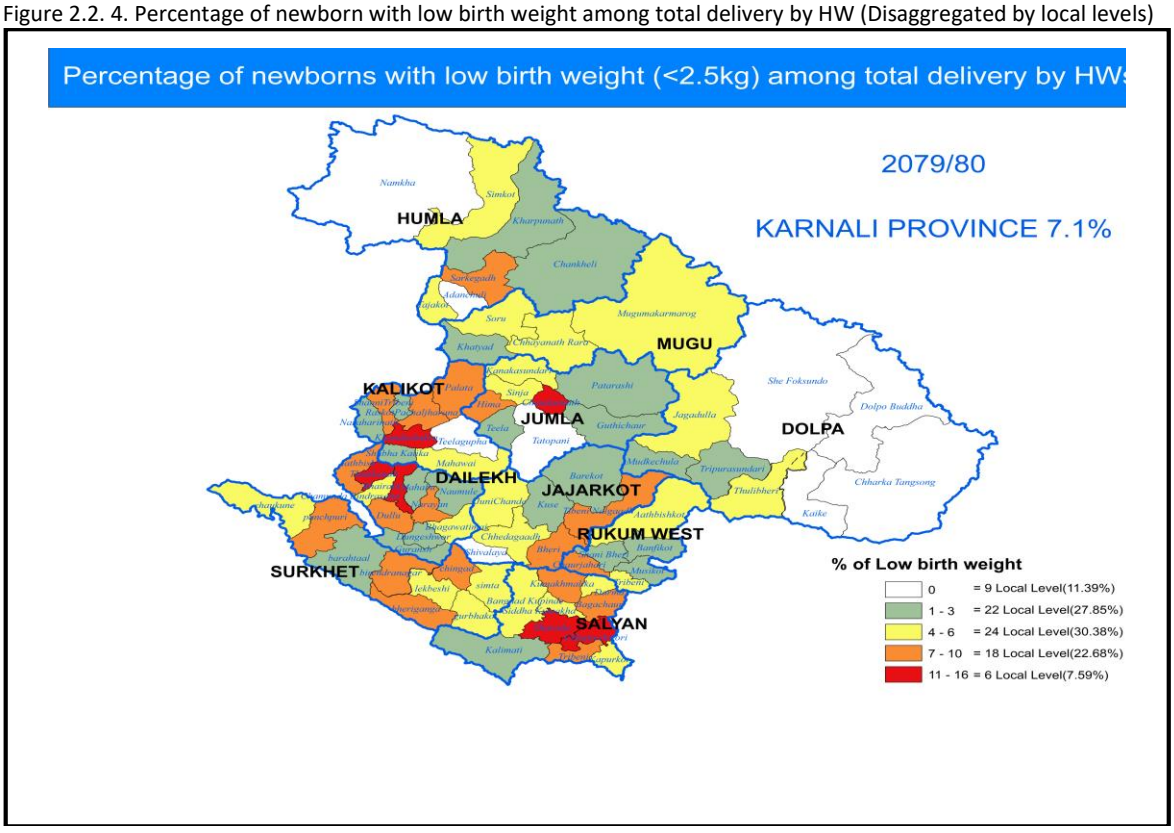
decreased from 3.4% in fiscal year 2078/79 to 3 in the fiscal year 2079/80. The graph highlights fluctuations and varying levels of undernutrition, like Mugu's notable increased and Dolpa, Humla, Kalikot, Rukum West and Salyan relative stability in underweight percentages.

Figure 2.2. 3. Percentage of New born with Low birth weight



The both figure 2.2.3 and 2.2.4 shows the newborn with low birth weight (LBW) among total delivery reported by health workers. The figure shows the percentage of LBW slighly decreased

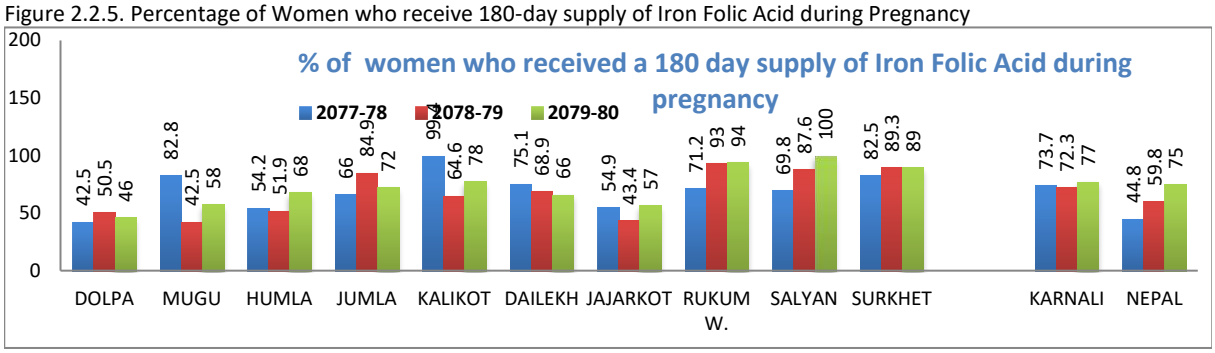
Figure 2.2. 4. Percentage of newborn with low birth weight among total delivery by HW (Disaggregated by local levels)



than previous year. But Dolpa, Mugu, Kalikot and Surkhet the percentage of LBW is nominal increased compared to previous years.

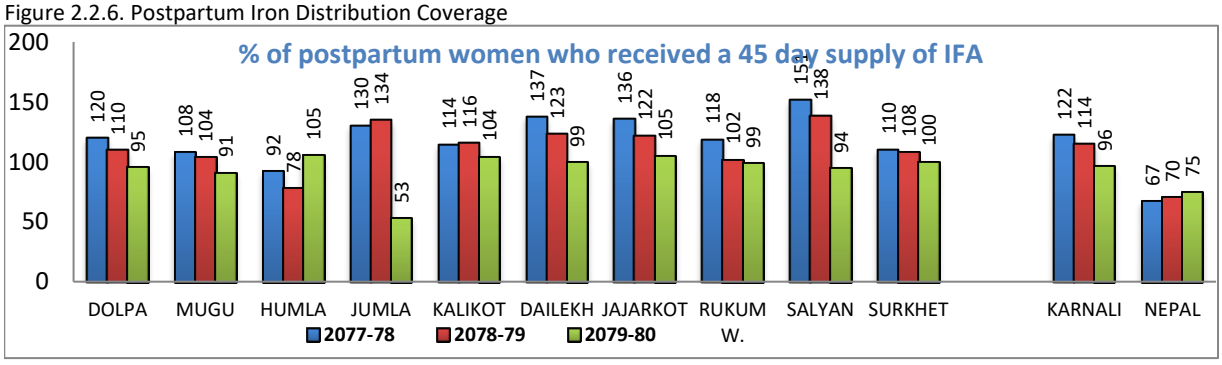
Prevention and control of iron deficiency Anemia

Figure 2.2.5. Percentage of Women who receive 180-day supply of Iron Folic Acid during Pregnancy



Iron Folic Acid supplementation program is being implemented in all districts of the country to prevent iron deficiency anemia among pregnant and postpartum mothers. In fiscal year 2079/80 total 77.5% of women were supplied with IFA in Karnali. The lowest coverage of IFA is in Dolpa(46%) and Mugu(58%).

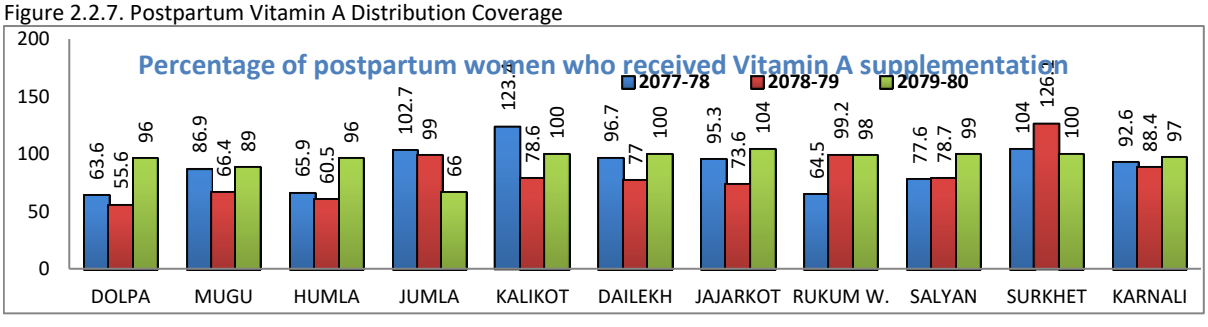
Figure 2.2.6. Postpartum Iron Distribution Coverage



Postpartum mothers are provided with iron and folic acid (IFA) tablets for up to 45 days after delivery. In Karnali province, all postpartum mothers received IFA supplementation in the fiscal year 2079/80 (Figure 2.2.6). However, the coverage of IFA supplementation among postpartum mothers has decreased from 122% in 2077-78 to 96% in 2079-80, reflecting a decline of 26 percentage over the period. This decrease in coverage has been observed in all districts except for Humla. Notably, the most significant declines were seen in Jumla, whereas Humla experienced a notable increase from 78% to 105%.

Postpartum Vitamin A supplementation

Figure 2.2.7. Postpartum Vitamin A Distribution Coverage



In the fiscal year 2079/80, 97% of postpartum mothers in Karnali province received vitamin A supplementation, representing an increase from 88.4% in the previous fiscal year 2078/79. The coverage was highest in Jajarkot at 104%, followed closely by Kalikot, Dailekh, and Surkhet at 100.2%. However, the lowest coverage of vitamin A supplementation for postpartum mothers was observed in Jumla at 66%.

Integrated Infant and Young Child Feeding and Micro Nutrient Powder (Baal Vita) Community Promotion Programme

Based on the findings of NDHS 2022, a total of 40% of children aged 6-59 in Karnali Province were identified as anemic. This alarming statistic is primarily attributed to inadequate Infant and Young Child Feeding (IYCF) practices. Consequently, there has been a concerted effort to address iron deficiency anemia in the 6–23-month age group through the endorsement of multiple micronutrient powder (MNP) sprinkles as a key intervention.

Recognizing the severity of the issue, the national Nutrition Priority workshop sanctioned the use of micronutrient powder in 2007 as a preventive measure. Subsequently, in 2009, the Ministry of Health and Population (MOHP) initiated a pilot program for the home fortification of MNP, coupled with complementary feeding, across six districts. The success of the pilot led to the expansion of this program to all districts.

In the context of Karnali Province, the MNP program is implemented in Surkhet, Salyan, Jajarkot, Dailekh, and Rukum West.

Table 2.2.1. MNP (Baal vita) coverage

District	% of children aged 6-23 months who received at least one cycle (60 Sachets) Baal Vita (MNP)			% of children aged 6-23 months who received 3 cycle (180 Sachets) Baal Vita (MNP)		
	2077 /78	2078/79	2079/80	2077 /78	2078/79	2079/80
*Dolpa	0	0	0	0	0	0
*Mugu	27.3	0	0	0.16	0	0
* Humla	6.6	0	0	0	0	0
*Jumla	0	0	0.05	0	0	0
*Kalikot	0	0	0	0	0	0
Dailekh	104.9	35.1	51.7	2.6	6.9	11.9
Jajarkot	27.2	34.6	20.8	0.95	2.4	3
Rukum West	45.3	21.6	23.2	5.3	2.4	2
Salyan	0.07	11.5	10.3	0	0.03	0.36
Surkhet	0.02	25	79.3	0.02	0.19	1.1
Karnali Province	25.8	18.2	29.5	1.1	1.6	2.7

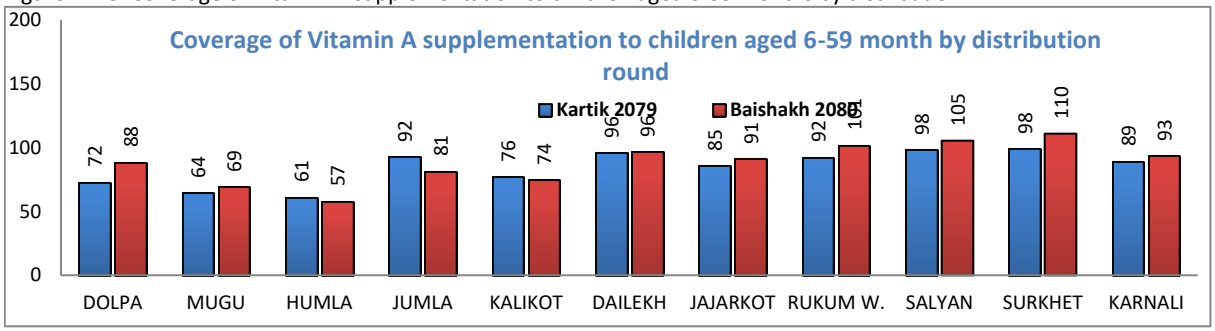
*Note: * districts which are not MNP supplementation program implemented districts.*

The table 2.2.1 shows all the children of Karnali Brovince (29.5%) of age 6-23 received Baalvita the first cycle of MNP supplementation in this fiscal year 2079/80. The compliance of MNP supplementation seems slightly increasing Trend however substantial gap in last 3 fiscal year.

Control of Vitamin A Deficiency Disorder

National Vitamin A program was initiated by government since 1993 to prevent the vitamin A deficiency among the children of 6-59 months of age and reduce the child mortality associated with vitamin deficiency disorders. Vitamin A supplementation program is continuing as biannual supplementation to all the targeted children of age 6-59 months. The program is done in campaign model in which FCHVs distribute Vitamin A capsule to the targeted age group of children twice in a year i.e., Kartik (October) and Baisakh (April) every year.

Figure 2.2.8. Coverage of Vitamin A supplementation to children aged 6-59 months by distribution



The figure 2.2.8 shows that the coverage of vitamin A mass distribution conducted in Kartik and Baisakh. The coverage of Vitamin supplementation in Dolpa, Mugu, Humla, Jumla and Kalikot is less than 90% still needs of additional efforts to cover the target children.

Biannual Deworming Tablet Distribution to the children aged 12-59 months

The Government of Nepal has implemented a biannual distribution program providing deworming tablets to children aged 12-59 months. This initiative aims to reduce childhood anemia by controlling parasitic infestations through the supplementation of deworming tablets to the targeted children. The distribution of deworming tablets is integrated with the distribution of vitamin A, taking place in Kartik (October) and Baisakh (April) each year.

Figure 2.2.9 Round wise coverage of deworming tablets distribution of 12-59 months aged children

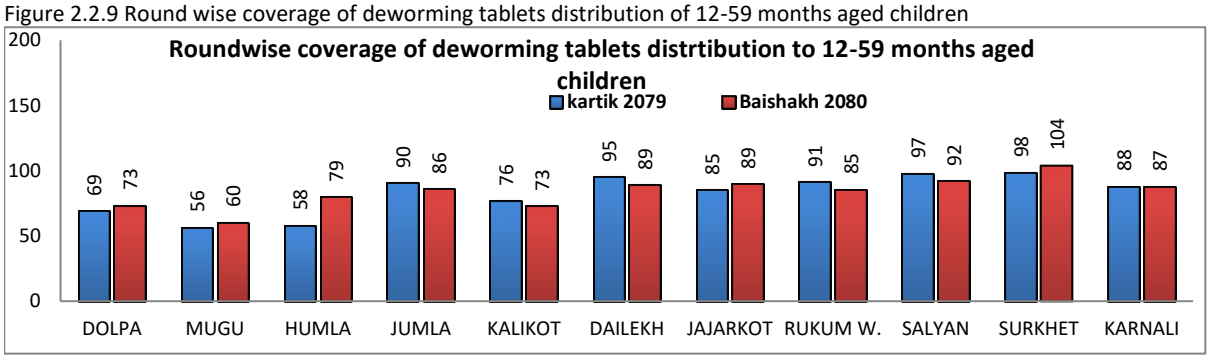


Figure 2.2.9 illustrates the deworming tablet distribution coverage in Karnali Province, showcasing higher coverage in Kartik 2079 compared to Baisakh 2080. The data reveals the percentage coverage of albendazole distribution across various districts during these two months. In Kartik 2079, coverage ranged from 56% in Mugu to 98% in Surkhet, indicating

significant distribution throughout the province. However, during Baisakh 2080, while most districts maintained or slightly improved their coverage, Surkhet notably exceeded 100%.

Integrated Management of Acute Malnutrition (IMAM) Service statistics

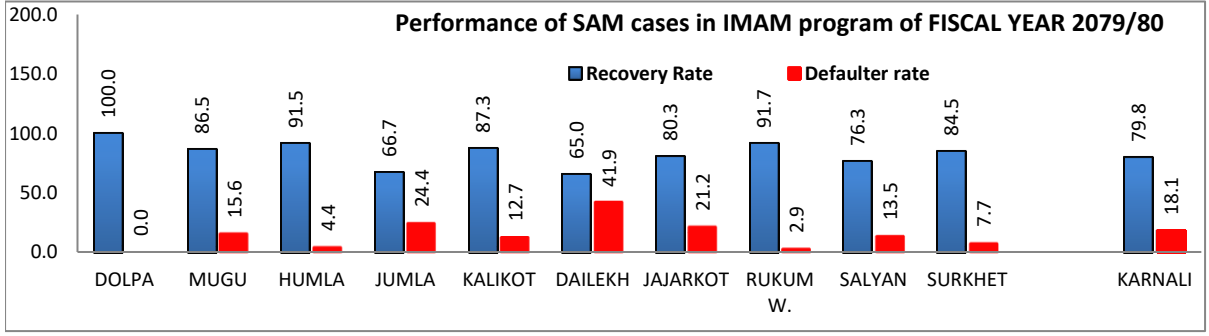
The Integrated Management of Acute Malnutrition (IMAM) program, previously known as community-based management of acute malnutrition, is being implemented across all 10 districts of Karnali province. This initiative targets children aged 0-59 months suffering from severe acute malnutrition (SAM) by providing outpatient services at health facilities and community levels. IMAM focuses on addressing wasting and emergency nutrition situations by expanding services and designating certain health facilities as Outpatient Therapeutic Centers (OTCs). These OTCs cater to severely malnourished children aged 6-59 months without medical complications and with normal appetites. Children admitted to OTCs receive treatment with Ready-to-Use Therapeutic Food (RUTF) for a minimum of 42 days and a maximum of 90 days. Cases with medical complications are referred to higher-level centers at district-level hospitals. Additionally, post-COVID-19 pandemic, moderately acute malnourished (MAM) cases are also eligible for RUTF supplementation alongside SAM cases.

Table 2.2. 2. IMAM Service Statistics in OCT fiscal year 2079/80

District	Moderate Acute Malnutrition (MAM)					Severe Acute Malnutrition (SAM)				
	Admission		Discharge	Defaulter	Death	Admission		Discharge	Defaulter	Death
	New	Re				New	Re			
*Dolpa	5	0	12	0	0	8	0	3	0	0
*Mugu	137	0	129	20	0	160	0	89	12	0
* Humla	57	3	57	3	0	56	3	47	2	0
*Jumla	232	7	282	14	0	60	2	51	10	0
*Kalikot	83	0	93	4	0	138	4	142	16	0
Dailekh	212	9	352	75	0	144	6	183	54	0
Jajarkot	68	4	106	15	0	129	4	137	24	0
Rukum West	66	2	53	5	0	65	4	72	2	0
Salyan	78	1	129	26	0	49	3	59	7	0
Surkhet	205	3	287	27	1	78	5	84	6	0
KARNALI	1143	29	1500	189	1	887	31	867	133	0

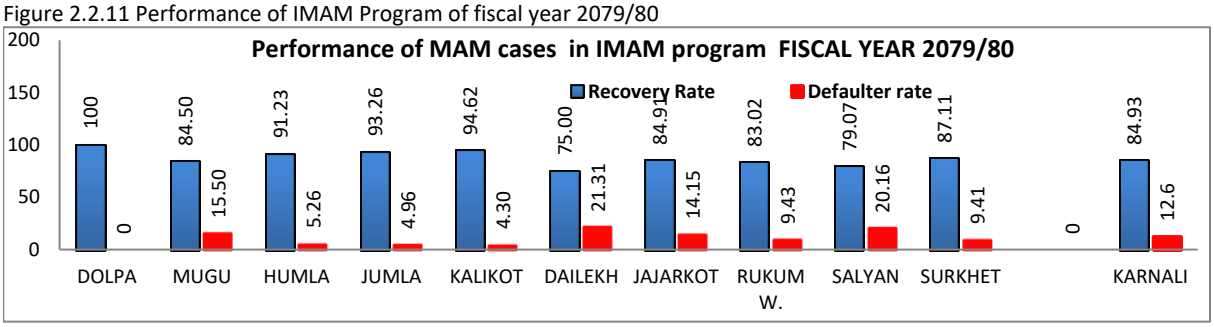
Table 2.2.2 presents data on the occurrence of Moderate Acute Malnutrition (MAM) and Severe Acute Malnutrition (SAM) among children across various districts, highlighting admission, discharge, default, and death rates. Karnali district notably exhibits high figures, with

Figure 2.2.10 Performance of SAM cases in IMAM program



1143 new admissions for MAM and 887 for SAM, along with 1500 discharges for MAM and 867 for SAM cases. In contrast, districts like Dolpa and Humla display lower numbers across all metrics.

Figure 2.2.11 Performance of IMAM Program of fiscal year 2079/80



In fiscal year 2079/80, the performance of the Integrated Management of Acute Malnutrition (IMAM) program in Karnali Province varied significantly across districts. Dolpa achieved a remarkable 100% recovery rate, with Humla and Rukum West closely following at 91.5% and 91.7% respectively, and minimal default rates. Conversely, Dailekh and Jumla faced challenges, with recovery rates of 65.0% and 66.7% respectively, along with high default rates, notably in Dailekh. Mugu and Kalikot showed moderate recovery rates of 86.5% and 87.3% respectively. Jajarkot, Salyan, and Surkhet demonstrated notable success, surpassing SPHERE standards in recovery rates. Overall, Karnali Province achieved a recovery rate of 79.8%, slightly below the program's average, with an 18.1% defaulter rate.

Mother and Child Health Nutrition (MCHN) Program

The Mother and Child Health Nutrition (MCHN) program, overseen by the Ministry of Health and Population Nepal, aims to enhance the health and nutritional status of pregnant and lactating women (PLW) and their young children. This initiative provides take-home rations of fortified food at health facilities, where basic services like Ante-Natal Care, Post-Natal Care, growth monitoring, and MIYCN counseling services are accessible alongside Social Behavior Change Communication (SBCC) messaging and health education. Upon completion of these mandatory services, each pregnant and lactating woman, or a child aged 6 to 23 months, receives a monthly ration of 3 KG Fortified Blended Food (FBF) called “Paushtik Ahaar”. The program The program has been implemented in Mugu, Jumla, Humla, Dolpa and Kalikot districts under a five-year Country Strategic Plan (CSP) from 2019 to 2023, outlined in the Operational Agreement between the Government and WFP. In the fiscal year 2079/80, a total of 699.024 MT of fortified flour “Super Cereal” was distributed to the targeted population.

Table 2.2. 3. Trend of fortified blended food distribution

Key Indicator	Plan	Achievement (Year wise)				
		2075/76	2076/77	2077/78	2078/79	2079/80
PLW received fortified blended food	9931	10647	11180	11361	10890	9933
Children 6-23 month received fortified blended food	19195	18872	18757	170943	17042	19195
Distribution of fortified blended food	1048.536	405.738	616.006	496.978	816.85	699.024

2.3 Integrated Management of Neonatal and Childhood Illness (IMNCI)

2.3.1 Background

Community-Based Integrated Management of Neonatal and Childhood Illness (CB-IMNCI) program is an integrated package of newborn/child-survival interventions and addresses major newborn & childhood diseases like Pneumonia, Diarrhea, Malaria and Measles. Since fiscal year 2071/72, CB-IMCI & CB-NCP programs have been merged as CB-IMNCI program and has been scaled up to all districts of Karnali. It is a cost-effective evidence and community-based child survival intervention contributing SDG-3.2. By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1000 live births and under-5 mortality to at least as low as 25 per 1000 live births. CBIMNCI also includes management of infection, Jaundice, Hyperthermia, and counseling on breastfeeding for newborn & young infants less than 2 months of age.

Karnali province exhibits significantly elevated mortality rates among Neonates (26), Infants (36), and children (46) per thousand live births, notably surpassing the national averages of Neonate (21), Infant (28), and children (33) mortality rates, respectively (NDHS, 2022).

Goal - *Improve newborn and child survival and healthy growth and development.*

Targets -

- To reduce neonatal mortality from the current rate to 11 per thousand live birth by 2035.
- To reduce still birth rates to 13 per thousand live births by 2035
- To reduce under 5 mortality rates to 21 per thousand live births by 2035
  (Nepal's Every New Born Action Plan-NENAP)

Objectives

- To reduce neonatal morbidity and mortality by promoting essential New-born care services & managing major causes of illness
- To reduce morbidity and mortality by managing major causes of illness among under 5 years children

Strategies

The following strategies have been adopted by CB-IMNCI program:

- Quality of care through system strengthening and referral services for specialized care
- Ensure universal access to health care services for newborn and young infant
- Capacity building of frontline health workers and volunteers
- Increase service utilization through demand generation activities
- Promote decentralized and evidence-based planning and programming

Major Activities Carried Out in fiscal year 2079/80 (2022/2023)

- Ensuring effective implementation of free newborn care program and IMNCI program
- CB-IMNCI training to health workers through a province level

Analysis of Service Statistics

Table 2.3.1: Status of CB IMNCI program monitoring indicators by District

Data	% of institutional deliveries			% of newborns who had CHX applied immediately after birth (Facility)			% of infants aged 0-2 months with PSBI receiving a complete dose of Gentamycin			% of children U5 years with Pneumonia treated with antibiotics (Amoxicillin)			% of children under five years with diarrhea treated with zinc and ORS		
Period	2077/ 78	2078/79	2079/80	2077/ 78	2078/79	2079/80	2077/ 78	2078/79	2079/80	2077/ 78	2078/79	2079/80	2077/ 78	2078/79	2079/80
DOLPA	47.7	45	49.1	85.3	84.8	91.1	62.1	38.5		87.8	91.6	100	77.1	72	90.7
MUGU	86.7	59.7	67.4	92.8	87	96.3	20	37.5	200	97.7	97.6	99.5	85.5	83.4	94.9
HUMLA	65.7	56.8	63.5	79.1	85.1	91.5	60	76.2	100	93	90	99.3	76.3	80.1	91.9
JUMLA	59.6	59.2	77.7	73.1	80.7	61.9	38.5	75	46.1	91.6	98.7	98.6	83.2	91	94.2
KALIKOT	98.7	63.9	67.8	84.6	88.2	87.9	63.9	74	76	101.1	104.5	98.8	100.6	98.7	99.7
DAILEKH	64.2	63	74.7	88.5	96.3	97	70.8	71.1	68.4	98.5	96.5	98.1	100.4	93.3	94.1
JAJARKOT	51.4	43	58.1	68.4	71.2	77.2	71.7	83.9	76.1	101	101.9	99.9	99.4	99	99.7
RUKUM WEST	66.8	85.3	102	60.7	91.2	95.6	77.7	79	68.8	98.2	100	99.8	96	95.6	99.8
SALYAN	44.7	50.6	79.4	89.2	92.1	93.9	51.5	75	64.8	100.4	100.4	98.7	99.9	99	99.1
SURKHET	91.6	113.8	124.6	50.5	97.4	98.4	67.1	76.5	98.3	83.9	99.3	99.7	98.7	97.5	99.5
Karnali Province	69.5	69.8	83.4	72.7	90	91.1	65.2	75.4	88.6	96.1	99.4	99.2	96.3	94.8	97.3

The various monitoring indicators of the CB-IMNCI program are outlined in Table 2.3.1, covering the most recent three fiscal years. Provincial coverage for institutional deliveries in the fiscal year 2079/80 appears to have experienced a significant increase, rising by 83.4 percent. Notably, Surkhet exhibited the highest increase at 124.6%, while Dolpa showed the lowest increase at 49.1%. The application rate of Chlorhexidine during institutional deliveries reached 98. %, indicating a commendable level of adherence. However, Kalikot and Jajarkot reported coverage rates below 90%, contrasting with other districts where rates surpassed 90%. Jumla recorded the lowest coverage at 61.9%.

The PSBI cases among under two months old children received a complete dose of Inj. Gentamycin at the provincial level was 98.3 in FY 2079/80. It was 76.5 percent in the last fiscal year 2078/79, which has increased significantly this fiscal year. Use of amoxicillin for pneumonia treatment was 99.7%, with provincial in fiscal year 2079/80. In the year 2079/80, 99.5% of U5 children suffering from diarrhoea were treated with ORS and Zinc at Provincial

level. According to the monitoring indicator of CB-IMNCI, in the fiscal year 2079/80, the condition of all the indicators in Karnali Province was more than 90 percent.

Table 2.3. 2.: Classification and treatment of 0-28 days Newborn cases by district (Health Facility + Out Reach Clinic)

Data	Total Cases Facility + Outreach Clinic			Possible Severe Bacterial Infection (PSBI) Facility+ Outreach Clinic			Local Bacterial Infection(LBI) Facility + Outreach Clinic			Jaundice Facility + Outreach Clinic			Pneumonia-(8 to 28 days) Facility+ Outreach Clinic
District	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2079/80
Dolpa	90	37	14	21	5	0	47	21	23	0	1	1	10
Mugu	75	68	44	4	4	0	20	30	18	0	0	2	14
Humla	80	52	44	0	9	2	62	34	22	1	11	1	8
Jumla	74	60	52	8	6	11	43	38	17	2	1	1	6
Kalikot	311	203	243	57	53	57	114	109	95	14	7	6	24
Dailekh	331	265	233	72	67	34	153	67	96	2	5	1	22
Jajarkot	252	152	142	56	30	30	121	87	60	7	2	5	16
Rukum West	297	266	371	81	70	52	105	80	50	27	17	15	40
Salyan	273	180	261	69	38	40	91	53	87	10	3	2	11
Surkhet	365	462	1348	54	93	310	210	203	614	17	23	49	191
Karnali	2148	1745	2752	422	375	536	966	722	1082	80	70	83	342

Table 2.3. 3.: Classification and treatment of 29-59 days cases by district (Health Facility + Out Reach Clinic)

Data	Total Cases			PSBI			LBI			Jaundice			Pneumonia
District	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2079/80
Dolpa	127	109	94	8	8	0	83	49	41	1	2	0	17
Mugu	251	83	61	26	4	1	120	54	18	1	1	4	13
Humla	142	179	71	5	33	2	120	98	44	2	14	0	9
Jumla	57	47	57	5	2	2	27	24	24	0	0	1	8
Kalikot	182	94	159	51	24	18	126	63	68	3	3	1	22
Dailekh	177	126	164	24	16	23	75	51	66	5	2	1	28
Jajarkot	203	114	133	36	26	16	117	58	53	2	3	0	33
Rukum West	281	292	383	85	78	25	92	98	78	16	26	20	51
Salyan	177	107	173	32	18	14	86	33	50	2	0	2	10
Surkhet	225	432	1461	31	103	295	130	158	646	6	11	25	218
Karnali	1822	1583	2756	303	312	396	976	686	1088	38	62	54	409

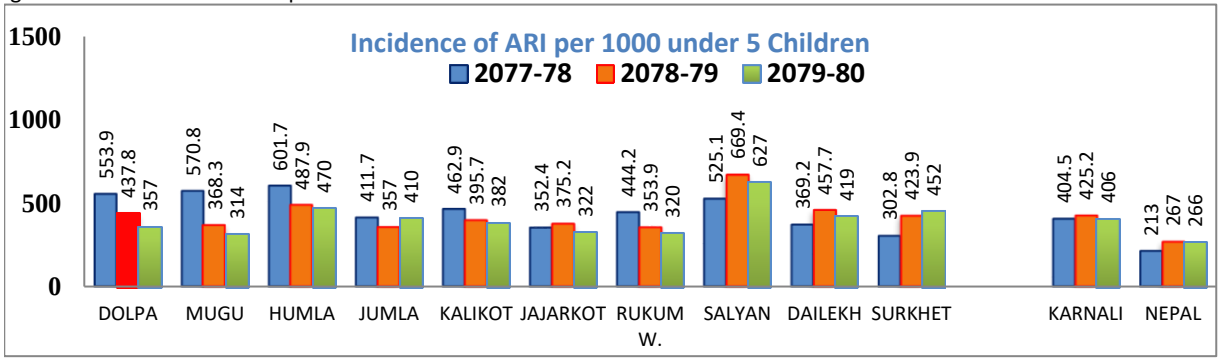
A total of 5508 (0-28 days 2752 and 29-59 days 2756) cases were registered and treated both in the health facility and the PHC/ORC clinic during FY 2079/80. The trend shows that the treatment of under two-month cases in HF and PHC/ORC clinics has increased with compared

to last fiscal year 2078/79. The highest cases reported from Surkhet in all age group (Under 59 days) and lowest of 14 in Dolpa. Similarly, among the newborns within 28 days, the lowest number of cases is seen in Dolpa and among the infants from 29 days to 59 days, is seen in Mugu.

In total 932 cases (0-28 days 536 cases and 29-59 days total 396) and were classified as Possible Severe Bacterial Infection (PSBI) at the Provincial level. The proportion of PSBI was highest in Surkhet (21.5 %), followed by Kalikot (18.7%) and lowest in Mugu (0.95 %). On the other hand, in Dolpa, it is seen that no any cases within 59 days are treated.

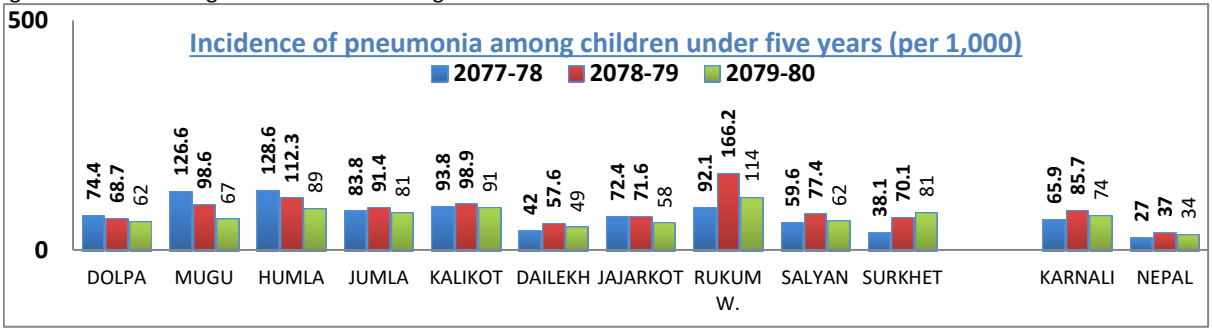
Control of Acute Respiratory Infection (ARI)

Figure 2.3. 1. Incidence of ARI per 1000 under 5 Children



Reported ARI cases per thousand under-five population in Karnali Province decreased to 406 in fiscal year 2079/80 from 425.2 cases in the fiscal year 2078/79 (Figure 2.3.1). Highest number of Incidence of ARI has been reported from Salyan with 627, followed by Humla with 470 and Surkhet 452 per 1000 under five children respectively.

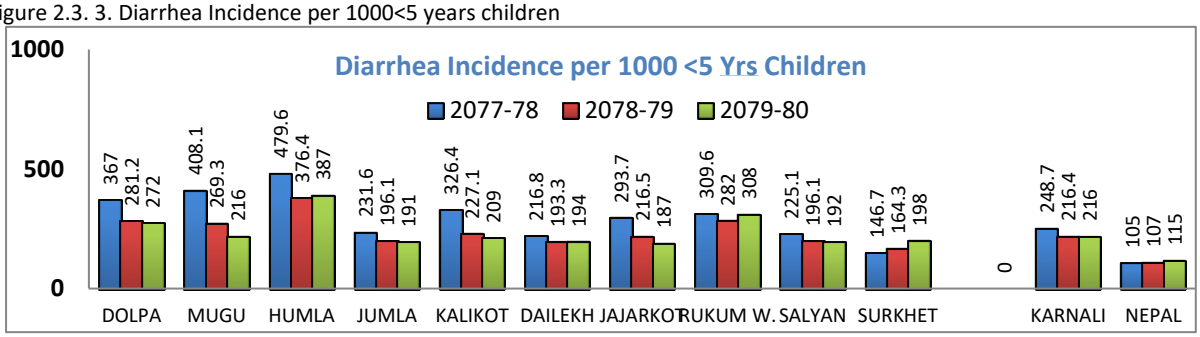
Figure 2.3.2. Percentage of Pneumonia among New ARI Cases



The incidence of Pneumonia among New ARI cases is given in figure 2.3.2. The incidence of pneumonia among under-five children of Karnali Province in fiscal year 2079/80 is 74 which decreased from 85.7 in fiscal year 2078/79.

Diarrhea

Figure 2.3. 3. Diarrhea Incidence per 1000<5 years children



The figure 2.3.3 describe the trend of diarrhea incidence of per thousand under five children. Acording to figure the average diarrhea incidence of Karnali Province decreased from 248.7 in fiscal year 2077/78 to 216.4 in 2078/79 and remain the same at 216 in 2079/80. Although Humla had the highest incidence, there was an increase from 376.4 in 2078/79 to 387 in 2079/80.

Figure 2.3. 4. Percentage of Severe Dehydration among Total Diarrheal Case

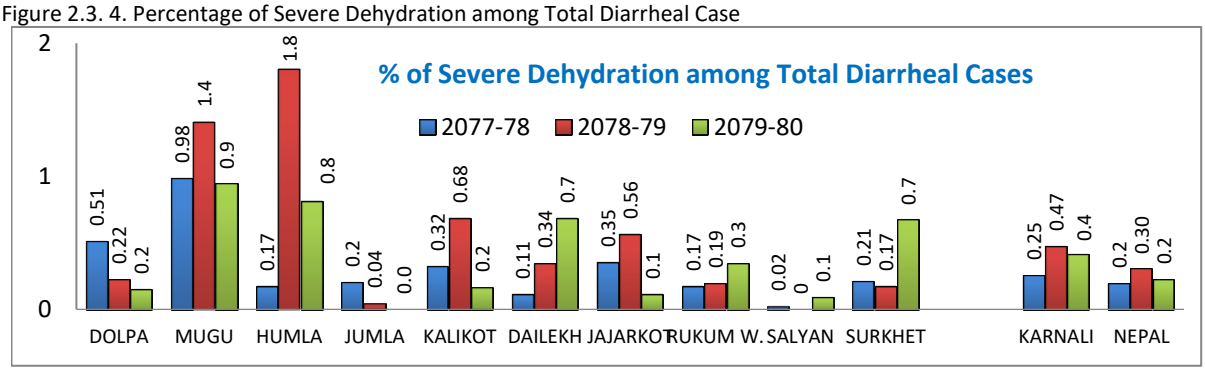


Figure 2.3.4 depicts the increasing trend of severe dehydration (0.4%) among total diarrheal cases in the Karnali Province compared to previous fiscal years (0.47%). Percentage of Severe Dehydration among total Diarrheal cases is highest in Mugu (0.9%) followed by Humla (0.8%) and Surkhet (0.7%) in fiscal year 2079/80.

Figure 2.3.5 illustrates, in fiscal year 2079/80, percent of diarrheal cases treated with both Zinc and ORS in Karnali Province was 97 %.

Figure 2.3. 5. Percentage of Children Under Five Years with Diarrhea Treated with Zinc and ORS

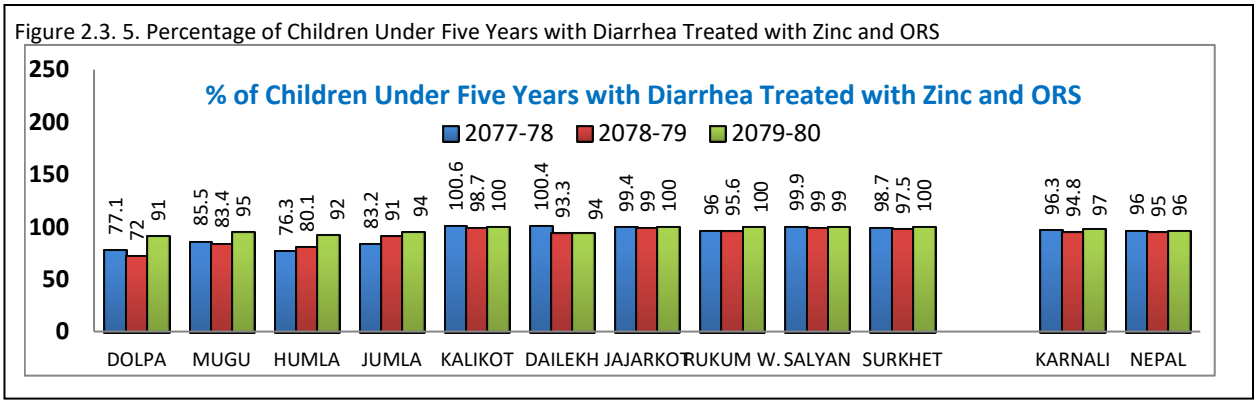


Figure 2.3. 6. Percentage of Newborn Applied with Chlorohexidine Immediately After Birth (Health Facility)

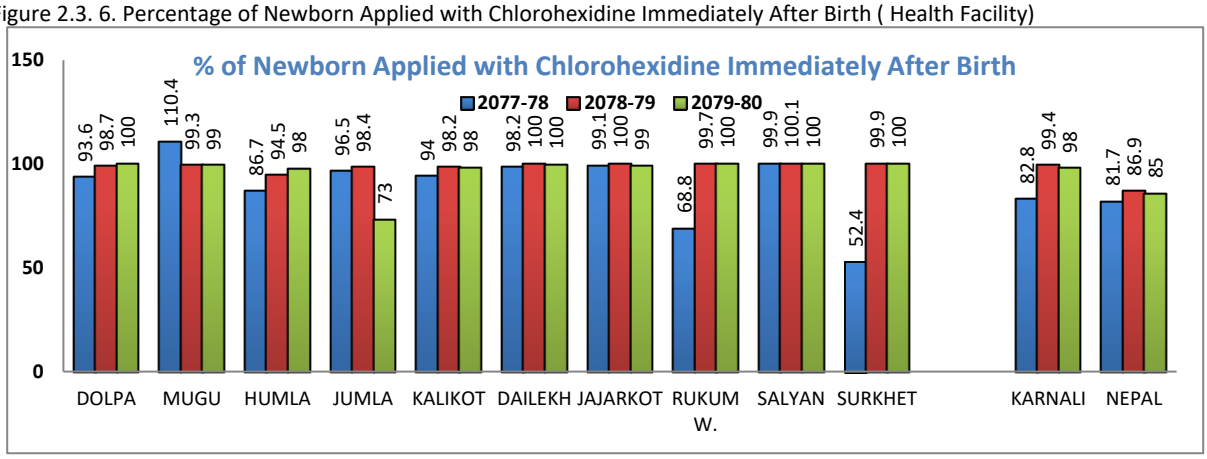


Figure 2.3.6 illustrates, Percentage of Newborn Applied with Chlorohexidine Immediately After Birth (Health Facility). The overall trend for the Karnali region shows a slightly decreased from 99.4% in 2078-79 to 98 % in 2079-80. Most districts show an increase in the percentage of newborns applied with Chlorhexidine over the three fiscal years. Jumla district experienced a decrease from 98.4% in 2078-79 to 72.9% in 2079-80. Except Jumla All districts have achieved above 90% of application of CHX among newborn in fiscal year 2078/79.

2.4 Safe-Motherhood and Newborn Health

Background

The Constitution of Nepal guarantees citizens the fundamental right to access free basic health services from the State. Maternal and Newborn Health (MNH) has consistently held a position of paramount importance in Nepal. The Right to Safe Motherhood and Reproductive Health Act of 2018, along with its accompanying regulations, underscores the commitment to safeguarding and fulfilling women's rights to safe motherhood and reproductive health services, ensuring their safety, quality, and accessibility.

Furthermore, the Public Health Service Act of 2018 and its subsequent regulations in 2020 recognize safe motherhood and newborn health services as essential components of basic healthcare. Nepal, as a signatory to the Sustainable Development Goals, has pledged to achieve significant targets, including reducing the Maternal Mortality Ratio to less than 70 per 100,000 live births and decreasing the Newborn Mortality Rate to less than 12 per 1000 live births by 2030.

In 1998, the Government's Safe Motherhood Policy implemented two primary strategies aimed at enhancing maternal health: ensuring that selected health facilities offer round-the-clock emergency obstetric care services and promoting the presence of health personnel equipped with midwifery skills to proficiently deliver safe and effective care.

In 2001, only nine percent of Nepali women opted to deliver in health institutions, with financial constraints being a significant barrier to accessing healthcare for two out of three women. Access to health facilities varied significantly across Nepal's geography, with rural households facing greater distances to reach facilities compared to urban households. Disparities were also evident based on wealth, as fewer individuals from the poorest quintile lived within close proximity to health institutions compared to wealthier counterparts. Recognizing these challenges, the Nepal Government prioritized encouraging women to give birth in health institutions as a key strategy to improve maternal health.

The Family Welfare Division (FWD) created the Safe Motherhood and Newborn Health (SMNH) Roadmap for 2030 to guarantee the health and well-being of all mothers and newborns. The roadmap aims to eliminate preventable maternal and newborn deaths by leveraging the achievements of the SMNH Programme and tackling persisting challenges, particularly by enhancing community health systems and enhancing institutional quality of care in an equitable manner. The anticipated outcomes of the roadmap include:

1. Increased the availability of high-quality maternal and newborn health services leaving no one behind.
2. Increased the demand for and utilization of equitable maternal, and newborn health services.
3. Improved governance and ensured accountability of maternal, and newborn health services.
4. Improved monitoring and evaluation of maternal, and newborn health services.
5. Strengthened emergency preparedness of maternal, and newborn health services.

Goal

- A reduction in the maternal mortality ratio from the current 239 per 100,000 live births to 125 per 100,000 by 2020, and 70 per 100000 live births by 2030 as per SDG
- A reduction in the neonatal mortality ratio from the current 21 per 1,000 to 17 per 1,000 by 2020, and 12 per 1000 live birth and end preventable neonatal death by 2030 as per SDG

Strategies

1. Promoting inter-sectoral coordination and collaboration at Federal, Provincial, Districts and Local levels to ensure commitment and action for promoting safe motherhood with a focus on poor and excluded group
2. Strengthening and expanding delivery by skilled birth attendants and providing basic and comprehensive Obstetric care services (including familyplanning) at all levels.
   Interventions include the following:
   - Developing the infrastructure for delivery and emergency obstetric care
   - Standardizing basic maternity care and emergency obstetric care at appropriate levels of the healthcare system
   - Strengthening human resource management- training and deployment of advanced skilled birth attendant (ASBA), SBA, anesthesia assistant and contracting short term human resources for expansion of service sites
   - Establishing a functional referral system with airlifting for emergency referrals from remote areas, the provision of stretchers in Local level wards and emergency referral funds in all remote districts
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

Major Activities carried out in fiscal year 2079/80

- Ensured regular ANC, PNC services, Institutional delivery from service delivery points
- Free referral services for complicated pregnancy and delivery of remote district to appropriate site
- Implementation of Free Newborn Care program in all the hospitals of Karnali Province
- Maternal and Perinatal Death Surveillance and Response (MPDSR) monitoring and on-site coaching
- Provincial MPDSR and Adolescent Sexual and Reproductive Health (ASRH) Review
- SBA, MNH update training conducted by provincial hospital and districts

Analysis of Service Statistics

Availability of safe motherhood services

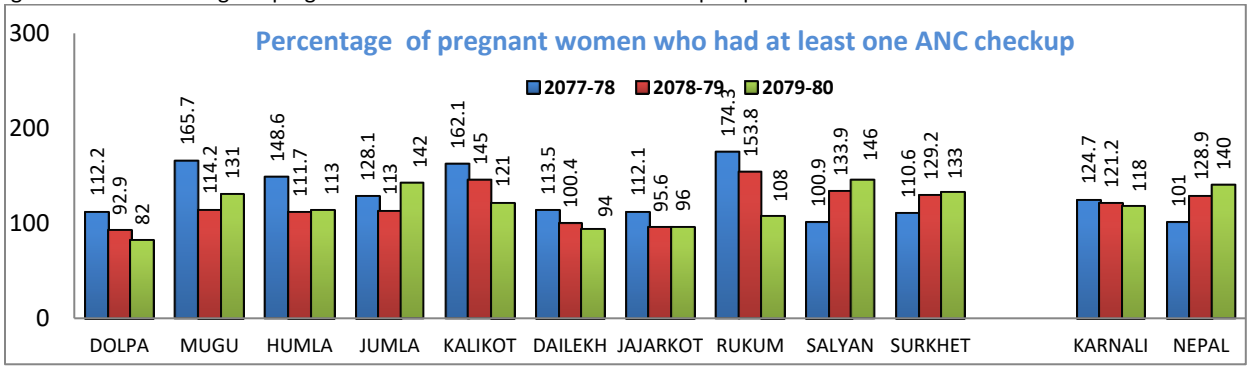
Table 2. 4. 1 Status of CEONC/BEONC and Birthing Sites (fiscal year 2077/78 to 2079/80)

S. N.	Districts	CEONC			BEONC			Birthing Centers		
		2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80
1	Dolpa	1	1	1	0	0	0	13	15	77
2	Mugu	1	1	1	1	1	1	16	27	44
3	Humla	1	1	1	0	0	0	28	31	50
4	Jumla	1	1	1	1	1	1	25	26	31
5	Kalikot	1	1	1	0	1	1	31	33	23
6	Dailekh	1	1	1	3	3	3	68	77	26
7	Jajarkot	1	1	1	3	3	3	27	28	33
8	Rukum West	2	2	2	0	1	1	19	22	16
9	Salyan	1	1	1	2	2	2	45	46	30
10	Surkhet	1	2	2	4	3	3	46	50	29
Karnali Total		**11**	**12**	**12**	**14**	**15**	**15**	**15**	**355**	359

The Basic Emergency Obstetric Newborn Care (BEONC) site offers functions that are administration of parental drugs (post-partum hemorrhage, infection and pre-eclampsia, eclampsia), Manual Removal of Placenta, Removal of retained product by MVA, Assisted Vaginal Delivery (Vacuum), Resuscitation of Newborn Care and referrals. Whereas the Comprehensive Emergency Obstetric Newborn Care (CEONC) offers additional functions i. e. C/S operation, Laparotomy, Anesthesia and Blood transfusion services. The above table shows the district-wise availability of designated services over the last three year. Twelve hospitals provide CEONC services, 15 health facilities provide BEONC services.

Antenatal Care

Figure 2. 4. 1 Percentage of pregnant women who had First ANC checkup as protoc



The figure 2.4.1 illustrates that first ANC visit (as per protocol) was 118% in fiscal year 2079/80. In all districts except Dolpa, it has been found that the percent of ANC visit for the first time is

more than 90 percent. In the last 3 years, the coverage of ANC first visit has been more than 100 percent , however, the coverage has decreased slightly compared to last fiscal year.Similarly, district wise status ranged from lowest 82% in Dolpa to highest 146% in Salyan followed by 133% in Surkhet and 131 in Mugu.

Figure 2. 4. 2 Four ANC Visit as per protocol as % of Expected Live birth

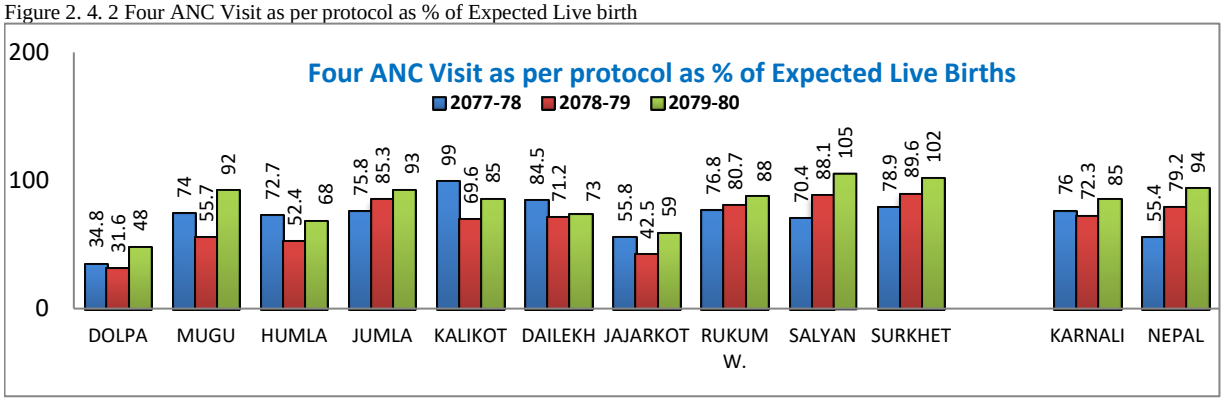
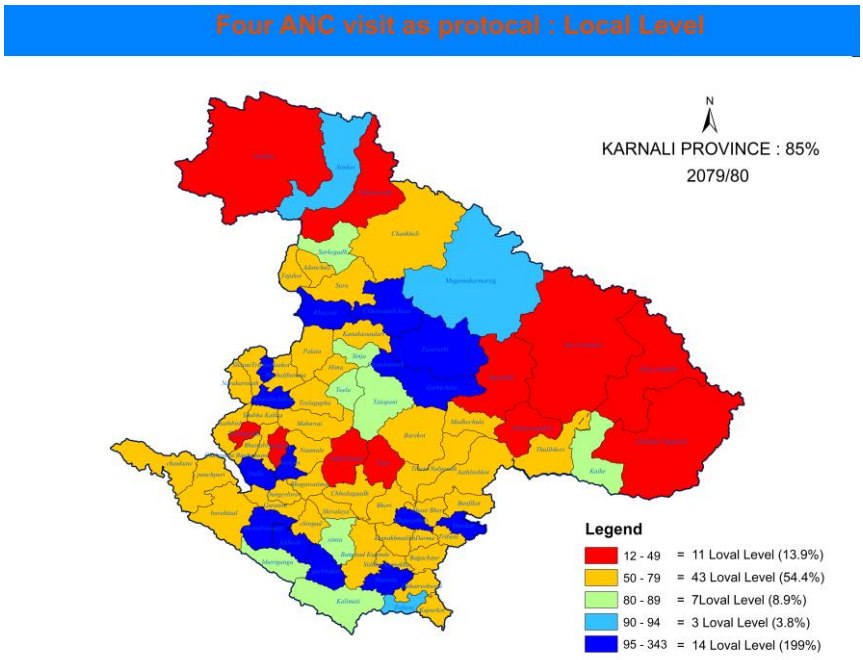


Figure 2.4.2 shows the Four ANC visit as per protocol in Karnali Province is 85% in fiscal year 2079/80. The coverage of Four ANC visit as per protocol is increased than previous year by 12.7 %. While observing the district coverage, out of 10 districts Mugu. Jumla, Salyan and Surkhet has secured above 90% coverage and Dolpa has lowest coverage (48%) followed by Jajarkot (59%) and Humla (68%).

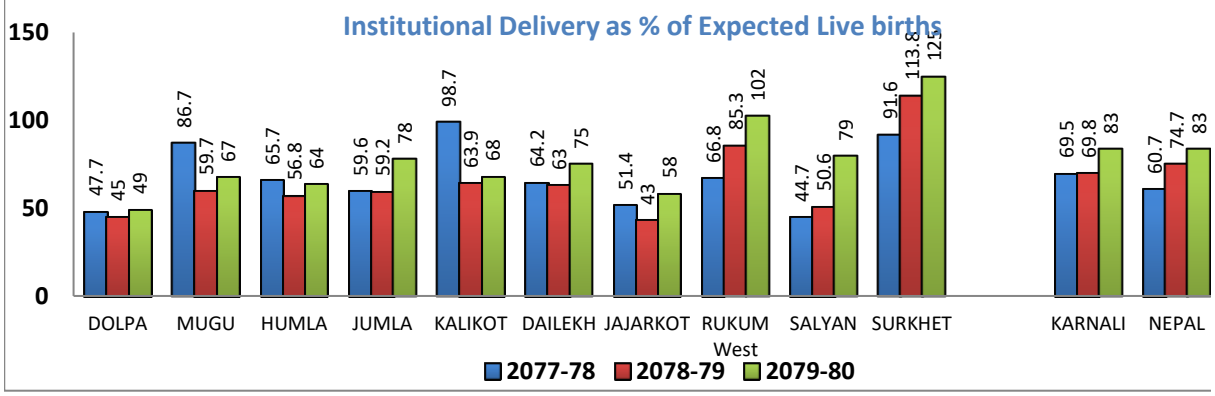
The figure 2.4.3 illustrates the Four ANC visits as per protocol by local level. Out of 79 local levels in Karnali Province, 17 local levels have achieved more than 90% and rest of the local levels have achieved below the target of SDG 2030. The range of coverage below 50% are 11 local level.

Figure 2. 4. 3 Percentage of Pregnant women with four ANC visit (as per protocol) 2078/79



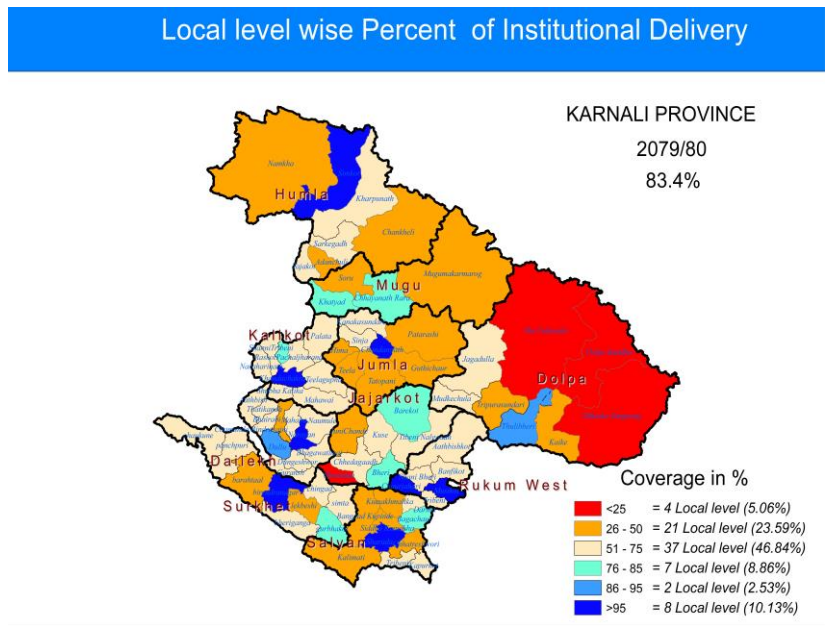
Institutional Delivery

Figure 2. 4. 4 Institutional Delivery as percentage of Expected live birth



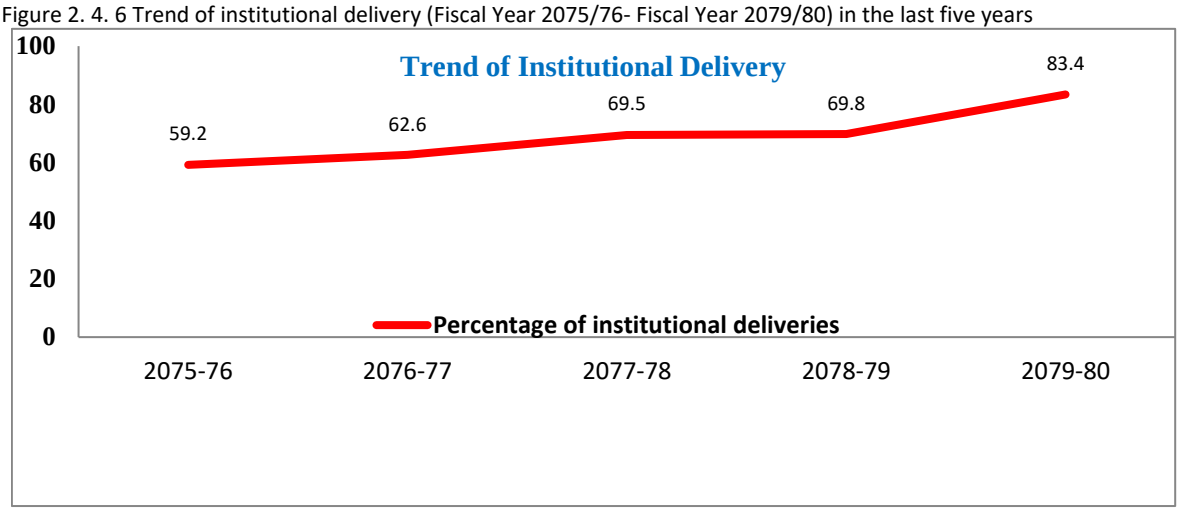
In Figure 2.4.4, the data illustrates the percentage of deliveries conducted in institutions as a proportion of expected live births in the Karnali region, indicating an 83% rate. This reflects a notable increase of 13.2% compared to the previous fiscal year. Surkhet exhibits the highest institutional delivery rate at 125%, followed by Rukum West at 102%, while Dolpa has the lowest rate at 49%.

Figure 2.4.5 Percentage of Institutional delivery by local level



The figure 2.4.5 illustrates the percentage of institutional delivery at local level. Out of 79 local levels in Karnali Province, 11 local levels have achieved more than 90% and rest of the local levels have achieved below the target of SDG 2030. The range of coverage below 50% are 25 local level. The fact that Shey Phoksundo, Dolpo Buddha, and Charka Tangson have less than 25% institutional delivery among live births underscores a significant concern regarding the utilization of healthcare facilities for childbirth in these areas.

Figure 2. 4. 6 Trend of institutional delivery (Fiscal Year 2075/76- Fiscal Year 2079/80) in the last five years



The figure 2.4.6 illustrates the last five years trend of institutional delivery. This province has experienced a continuous increase in the percentage of institutional deliveries, starting at 59.2% in 2075-76 to 83.4% in 2079-80, reflecting positive advancements in the utilization of healthcare facilities for childbirth

Postnatal Care

Figure 2. 4. 7. PNC first visit within 24 hours of delivery as percentage of expected live birth

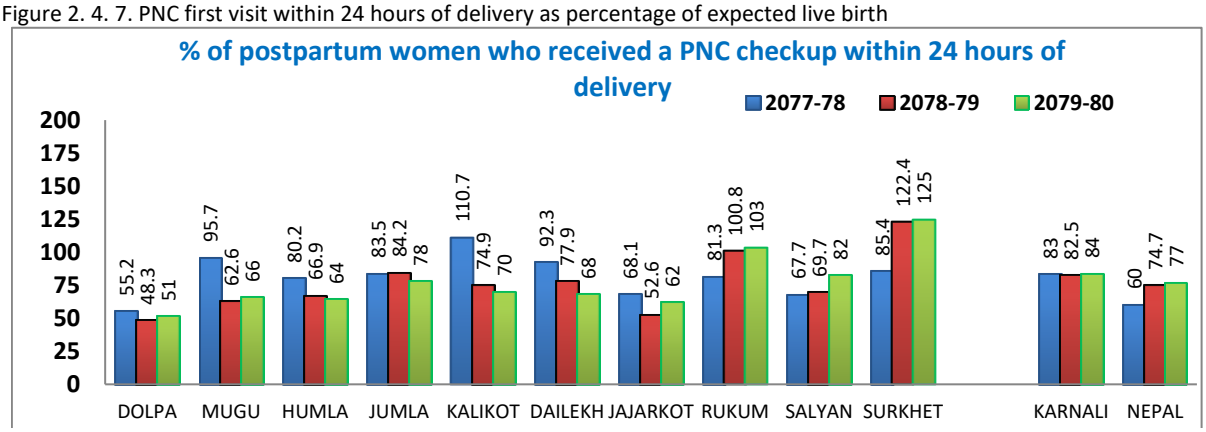
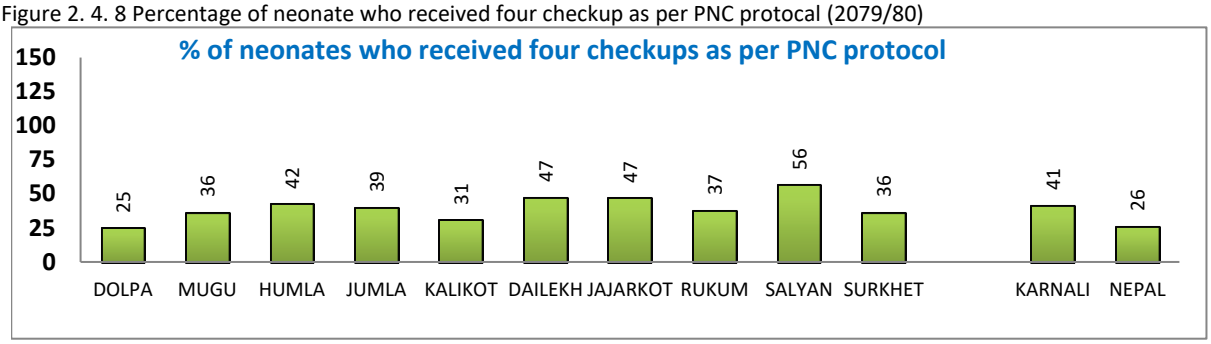


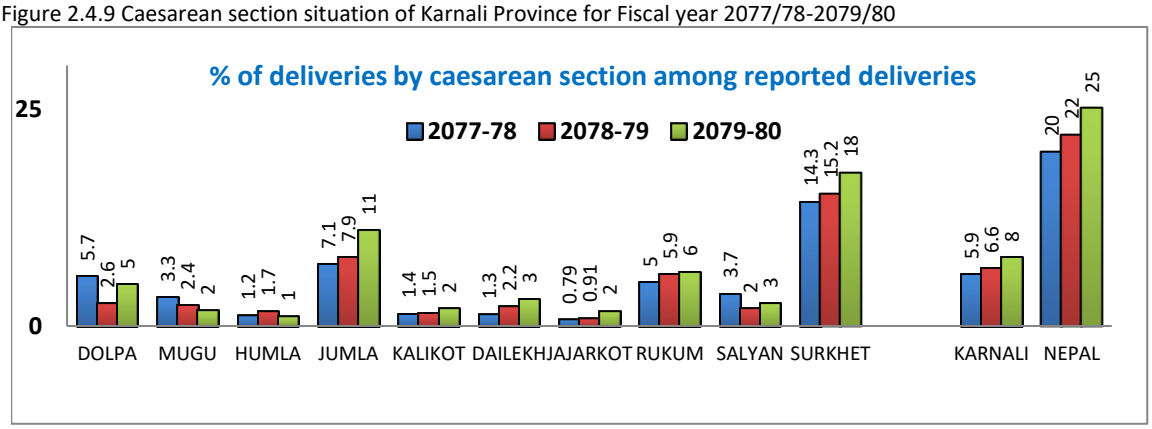
Figure 2.4.7 illustrates a comparison of the Postnatal Care (PNC) first visit as a percentage of expected live births in the last three fiscal years (from 2077/78 to 2079/80). The provincial PNC visit within 24 hours after delivery was reported at 84%, with Surkhet recording the highest percentage at 125% and Dolpa registering the lowest at 51%.

Figure 2. 4. 8 Percentage of neonate who received four checkup as per PNC protocal (2079/80)



The figure 2.4.8 above shows the proportion of four neonate checkup (1st 24 hours, 2nd within 3rd day, 3rd within 7 -14 days and 4th 42 days of delivery) as per protocol among expected live birth in Karnali Province. A total of 41 % of women had received 4 neonate checkup as per protocol in fiscal year 2079/80. Highest visit as per protocol is reported from Salyan(56%) and lowest from Dolpa(25%).

Figure 2.4.9 Caesarean section situation of Karnali Province for Fiscal year 2077/78-2079/80



The figure 2.4.9 represents district-wise and total percentage of caesarean deliveries in Karnali Province for the last three fiscal years.

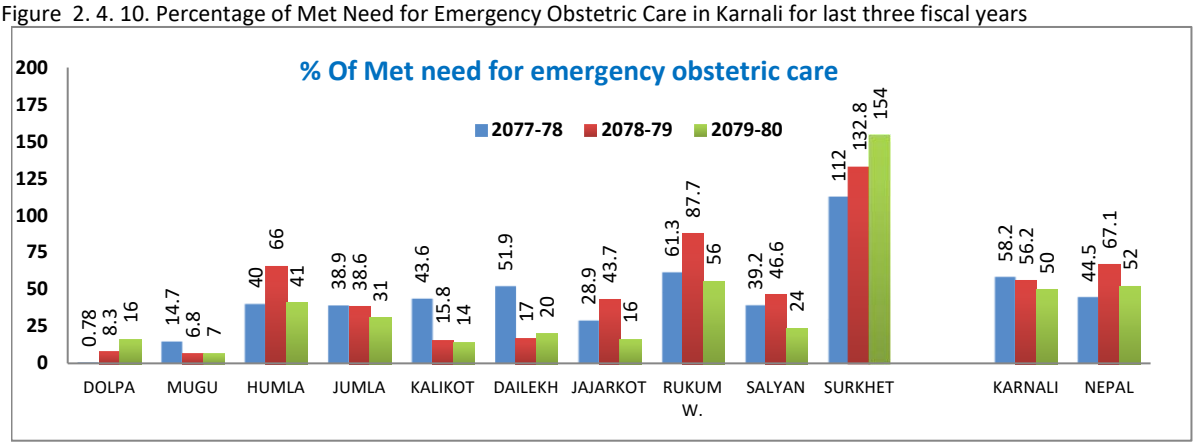
Karnali Academy of Health Sciences and Province Hospital are identified as major referral hubs for delivery services. Chaurjhari Hospital is mentioned as a non-governmental service provider offering caesarean section services. 6% of total deliveries were conducted through caesarean section in the fiscal year 2079/80. Surkhet had the highest proportion of CS rate at 18%. Jumla followed with an 11.0% CS rate. The overall CS delivery rate in Karnali slightly increased from the fiscal year 2078/79 to 2079/80.

EOC Met Need in Karnali

Out of total expected live birth, 15% of women are expected to have obstetric complication and need emergency obstetric services (EOC). At least 10% of women who are estimated to have obstetric complications should be treated in EOC facilities. The figure 2.4.12 represent the

percentage of Obstetric Met Need, and it seems to vary across districts and fiscal years. For instance, Surkhet consistently shows high percentages, indicating a relatively high met need for obstetric care, while other districts may experience fluctuations. Additionally, the overall Obstetric Met Need for Karnali Province has decreased slightly over the three fiscal years. In the fiscal year 2079-80, the district of Surkhet exhibited a remarkably high Obstetric Met Need percentage of 153.9%, indicating a substantial demand for and utilization of emergency obstetric care services in the province.

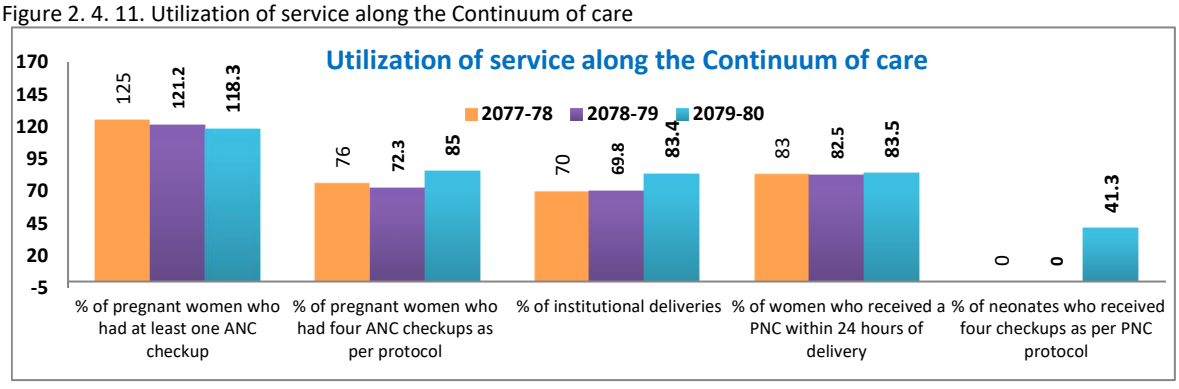
Figure 2. 4. 10. Percentage of Met Need for Emergency Obstetric Care in Karnali for last three fiscal years



Utilization of service along the Continuum of care

According to the Maternal and Newborn Health (MNH) roadmap, a key strategy in reducing maternal and newborn deaths is the implementation of comprehensive health checks, including eight times during pregnancy and four times during the postnatal period. Figure 2.4.13 visually

Figure 2. 4. 11. Utilization of service along the Continuum of care



represents the utilization of services across the continuum of care, highlighting variations and differences in service utilization. This approach underscores the importance of consistent and thorough healthcare interventions throughout the maternal and newborn health journey to improve outcomes and minimize mortality rates.

The data in table 2.4.2 illustrates the maternal healthcare indicators for various districts in Karnali Province over three fiscal years (2077/78, 2078/79, and 2079/80). Notably, the figures reveal the values for antenatal care (ANC) visits, both in terms of timing and adherence to protocols, as well as institutional deliveries and PNC visit. The increasing values in institutional deliveries across the province suggest a positive trend towards improved maternal healthcare practices.

Table 2. 4. 2 Service utilization along the continuum of care

S. N	Districts	ANC first visit any time			ANC visit within 12 weeks	Four ANC Visits as per Protocol			Institutional delivery		
		2077/78	2078/79	2079/80	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80
1	DOLPA	964	976	835	415	299	332	488	410	473	499
2	MUGU	2098	2138	2353	847	937	1043	1661	1098	1117	1216
3	HUMLA	1757	1684	1654	1008	859	791	996	777	857	926
4	JUMLA	3249	2858	3480	1941	1922	2158	2274	1512	1497	1908
5	KALIKOT	5179	5594	4561	2227	3163	2683	3207	3152	2464	2547
6	DAILEKH	7039	5797	5299	3463	5242	4112	4153	3980	3639	4225
7	JAJARKOT	4554	4447	4378	2379	2267	1978	2677	2087	2002	2643
8	RUKUM WEST	6770	5066	3481	2452	2983	2658	2838	2594	2809	3295
9	609 SALYAN	6019	6263	6665	3370	4202	4118	4778	2668	2366	3628
10	610 SURKHET	9866	9329	9264	4959	7043	6468	7068	8168	8221	8674
Karnali Total		47495	44152	41970	23061	28917	26341	30140	26446	25445	29561

S. N	Districts	PNC Visit							
		within 24 hour visit			At Home-2 times	3 times Visits			4 Visits times
		2077/78	2078/79	2079/80	2079/80	2077/78	2078/79	2079/80	2079/80
1	DOLPA	474	508	522	408	141	344	443	250
2	MUGU	1211	1172	1182	876	598	722	844	658
3	HUMLA	948	1009	937	810	605	790	774	620
4	JUMLA	2119	2129	1911	1661	1356	1560	1442	962
5	KALIKOT	3535	2888	2630	1933	2315	2060	1893	1178
6	DAILEKH	5723	4494	3850	3305	3453	3357	3244	2695
7	JAJARKOT	2768	2449	2819	2487	1643	1688	2444	2137
8	RUKUM WEST	3156	3321	3332	1955	1146	1821	2160	1207
9	SALYAN	4040	3260	3761	3302	1478	1949	3144	2556
10	SURKHET	7615	8844	8677	4257	2479	4888	3969	2510
Karnali Total		31589	30074	29621	20994	15214	19179	20357	14773

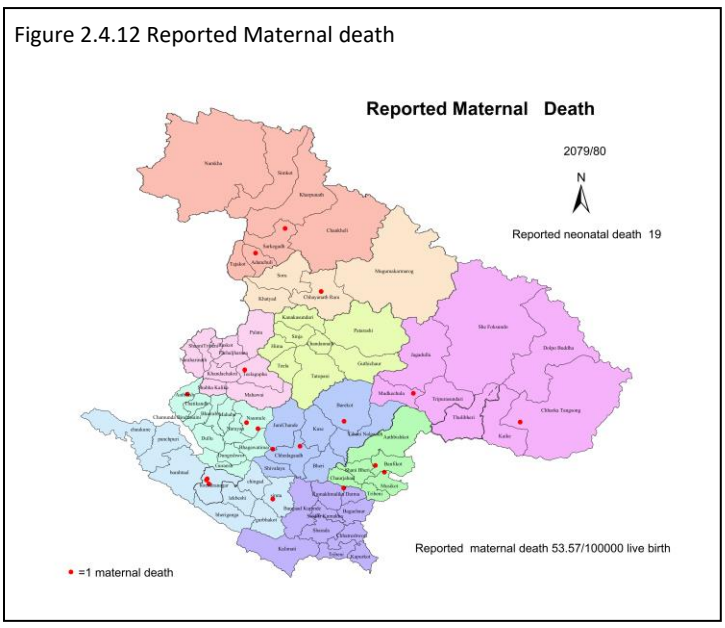
Maternal, Neonatal Death and Still Births

Table 2. 4. 3. District Wise Maternal, Neonatal Death and Still Births

Districts	Maternal deaths			Neonatal deaths			Still births		
	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80
Dolpa	1	2	2	3	6	4	12	6	6
Mugu	0	0	1	10	12	2	24	18	9
Humla	1	0	2	4	2	4	6	14	8
Jumla	1	1	0	39	34	29	37	25	31
Kalikot	4	1	1	16	12	4	60	38	40
Dailekh	1	5	3	22	19	25	87	61	52
Jajarkot	5	1	3	32	18	13	36	34	32
Rukum	0	0	2	10	16	7	50	32	36
Salyan	0	1	1	22	20	21	59	32	30
Surkhet	7	6	4	60	60	59	148	151	124
Karnali	20	17	19	218	199	168	519	411	368

The data provided in Table 2.4.3, titled "District Wise Maternal, Neonatal Death, and Still Births," reveals the total number of maternal deaths, neonatal deaths, and stillbirths for the fiscal year 2079/80 in Karnali. In Dolpa, there were 1, 2, and 2 maternal deaths, 3, 6, and 4 neonatal deaths, and 12, 6, and 6 stillbirths across the respective years. Similarly, districts such as Mugu, Humla, Jumla, Kalikot, Dailekh, Jajarkot, Rukum, Salyan, Surkhet, and Karnali exhibited varying patterns in maternal and neonatal health outcomes. For instance, Surkhet experienced 7, 6, and 4 maternal deaths, 60, 60, and 59 neonatal deaths, and 148, 151, and 124 stillbirths during the corresponding years. Karnali, as a whole, reported 20, 17, and 19 maternal deaths, 218, 199, and 168 neonatal deaths, and 519, 411, and 368 stillbirths during the respective fiscal years.

Figure 2.4.12 Reported Maternal death



MPDSR

Maternal and Perinatal Death Surveillance and Response (MPDSR) activities would be useful in preventing the preventable maternal and newborn deaths. These activities are also important in preventing three delays for maternal death. Interventions for Preventing illnesses, obstetric complication, and maternal nutrition along with improving access to health information, maternity emergency services, health services, positive care practices are in place for improving maternal health. However,

to address the basic causes of maternal death at societal level improving women's status in society, control over the resources and decision making multi-sectorial response from all development sector is crucial. In Karnali Province, hospital based MPDSR has been implemented in 7 hospitals (Humla, Dolpa, Mugu, Jumla, Kalikot, Province hospital and Mehelkuna hospital) and community based MPDSR has been implemented in three districts of Karnali (i.e. Surkhet, Jumla and Dailekh).

Findings of MPDSR

The followings are the findings from MPDSR review at hospital of Karnali Province.

- The major cause of maternal deaths is Hypertensive disorder , Obstructive haemorrhage, pregnancy related infection.
- Major response taken to prevent maternal and perinatal deaths in future are orientation of staff's members, onsite coaching, and procurement of equipment
- Review meeting has been conducted after each maternal death for the review of maternal deaths and its cause as per protocol.
- Review meeting for perinatal death conducted monthly in hospitals for the review of perinatal deaths in hospitals.

Free Newborn Care Services

Despite of tremendous progress in reduction in child mortality, there are still unfinished agenda in child health. Still, the reduction of neonatal mortality rate is not satisfactory to achieve the SDG target of Nepal. The constitution of Nepal has clearly stated the basic right of people to have access to health services. In this regard, neonatal mortality due to poverty and inequality is another aspect to address. In order to address the access everyone in reach of free newborn care services this program has been rolled out. The program has been implemented in all the public hospital of Nepal. In this aspect, all the hospital at district and province level of Karnali have been providing free newborn care services based on its package.

The goal of the FNC package is to increase access to newborn care services and hence reduce newborn deaths. The FNC program makes the provision of disbursing cost of care to respective health institutions required for providing free care to inpatient sick newborns. As per the FNC Guideline, the cost per care will be disbursed in line with the packages of care provided by the institutions.

The package 0 referred to the newborn care activities on government's free health services and package A are offered through the newborn corners in the birthing centers. The last two packages are meant for special newborn care unit (SNCU) and the neonatal intensive care unit (NICU). To keeping the up-to date record of service data, the hospitals offering free newborn care package were provided 'In-patient Sick Newborn Registers'.

Table 2.4.4. Packages, services and costs under free newborn care program in Nepal

Packages	Services	Cost
Package 0	• Resuscitation • KMC • Antibiotics as per IMNCI protocol	No cost
Package A	• Medicines- Antibiotic and other drugs as per national neonatal clinical protocol, NS, RL, 5% Dextrose, 10% Dextrose, Potassium chloride, adrenaline, Buro set, IV canula • Laboratory services- Blood TC, DC, Hb, Micro ESR, CRP, Blood Sugar, Blood Grouping, Serum Bilirubin (total and direct) • Oxygen supply by box/ nasal prong • X- ray/ USG	Rs 1000
Package B	• Photo therapy • Laboratory services- Blood Culture, RFT (Sodium, Potassium, Urea, Creatinine), Serum calcium • Lumber Puncture and CSF analysis • Medicine- Dopamine, Dobutamine, Phenobarbitone, Phenytoin, Midazolam, Calcium Gluconate, Aminophylline • Bubble CPAP (Continuous positive airway pressure)	Rs 2000
Package C	• NICU Admission (Must) • NICU beside ultrasonography (USG) • NICU bedside portable X- ray • Lab: ABG, Magnesium, chloride, Serum Osmolality, Urine Specific Gravity, Urine Electrolyte • Double Volume exchange transfusion, blood transfusion • Medicine: caffeine • Mechanical ventilation	Rs 5000

Proportion of Male female in out come of delivery

Table 2.4.5. Proportion of male female in different fiscal years from 2075/76 to 2077/78

Outcome of Delivery	2077/78			2078/79			2079/80		
	Single	Twins	Triplet	Single	Twins	Triplet	Single	Twins	Triplet
Mothers	33033	157	2	29892	143	2	29455	158	0
Live birth									
Female	15574	115	4	13964	149	1	13403	147	0
Male	17107	162	0	15616	126	2	15743	164	0

The table shows the proportion of male and female as outcome of delivery. There was single child, twin's child and triplet child delivered throughout the fiscal years from 2077/78 to 2079/80. In every fiscal year, the number of males were found higher than the female.

Safe Abortion Services (SAS):

Figure 2. 4. 13 Number of Clients who received abortion services

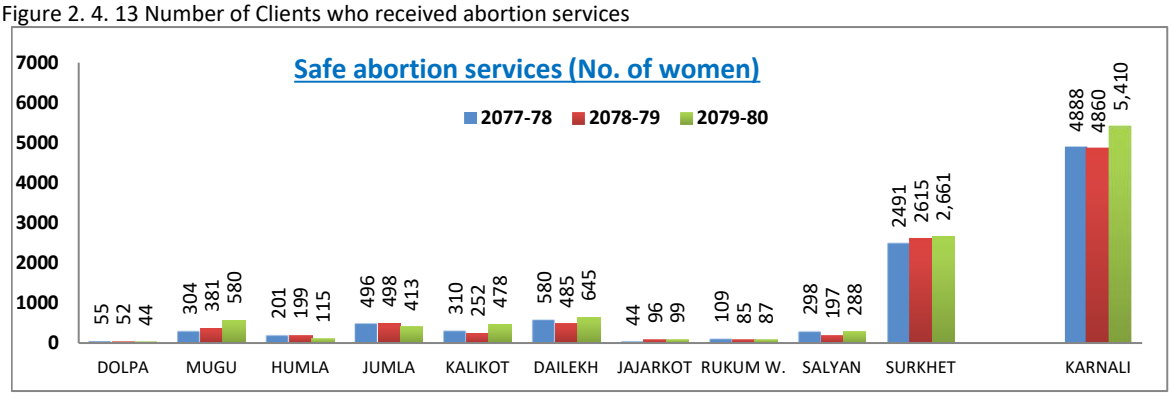
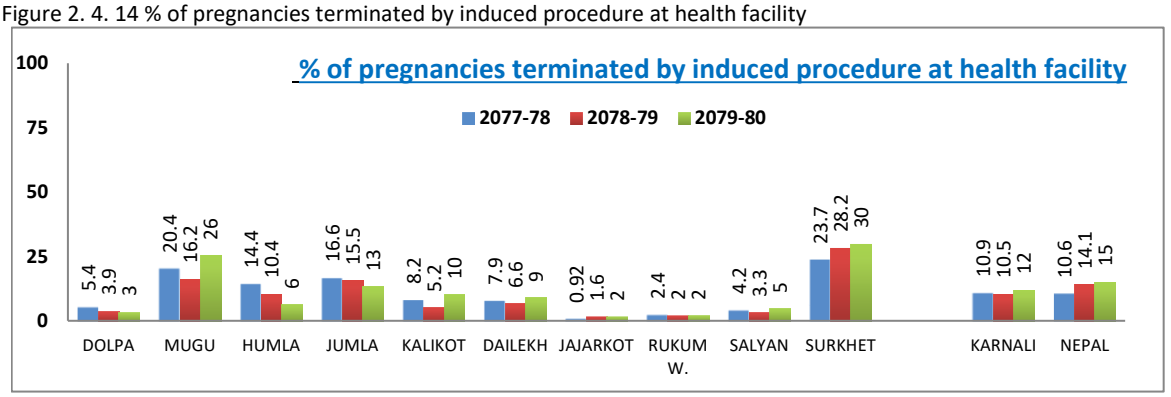


Figure 2.4.13 reflects total number of clients for Safe Abortion Services (SAS) in Karnali Province.In the fiscal year 2079/80, a total of 5,410 abortions were conducted within the health facilities of the province, exclusively through Safe Abortion Service Delivery sites. Among these, the majority of services were provided by health facilities in Surkhet (2,261), Dailekh (654), Mugu (580), and Jumla (419). Conversely, Dolpa recorded the lowest number of abortions with 44, followed by Rukum West with 87, and Jajarkot with 99. This data emphasizes variations in the utilization of safe abortion services across different districts within the province during the specified fiscal year.

Figure 2. 4. 14 % of pregnancies terminated by induced procedure at health facility



The analysis of Figure 2.4.14 reveals significant variations in the percentages of pregnancies terminated by induced procedures across different districts in Karnali Province for the fiscal years 2077-78, 2078-79, and 2079-80. Surkhet consistently exhibits higher percentages, reaching 153.9% in the last fiscal year, indicating a substantial proportion of pregnancies terminated by induced procedures. Some districts show fluctuations in the percentage of induced procedures over the years. Jumla experienced a decrease from 38.9% to 30.9%, Rukum West saw a decline from 87.7% to 55.7% between the first and last fiscal years.

2.5 Family Planning and Reproductive Health

Background

The Family Planning (FP) program has a significant presence in Nepal, aiming to facilitate individuals and couples in meeting their reproductive needs and rights through the voluntary adoption of high-quality FP methods, based on informed decision-making. The Government of Nepal (GoN) is committed to providing fair and rights-based access to voluntary, high-quality FP services for all individuals, with a special focus on reaching out to hard-to-reach communities and other vulnerable groups, thus ensuring inclusivity. Family planning holds a position of priority (P1) within the government's agenda. It is regarded as a pivotal component of the reproductive health package and a fundamental element of the basic healthcare package under the Health Sector – Strategic Plan 2079/80-2087/88. This contributes to the achievement of SDG3, target 3.7, which aims to ensure universal access to sexual and reproductive health-care services, including family planning, information, and education. Additionally, it emphasizes the integration of reproductive health into national strategies and programs by the year 2030.

Objectives, Policies and Strategies

The overall objective of Nepal's family planning program is to improve the health status of all people through informed choice on accessing and using voluntary family planning. The specific objectives are as follows:

- To increase access to and the use of quality family planning services that are 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 labor migrants and adolescents.
- To increase and sustain contraceptive use, and reduce unmet need for family planning, unintended pregnancies and contraception discontinuation.
- To create an enabling environment for increasing access to quality family planning services to men and women including adolescents.
- To increase the demand for family planning services by implementing strategic behavior change communication activities.

Policies

1. *Enabling environment*: Strengthen the enabling environment for family planning
2. *Demand generation*: Increase health care seeking behavior among populations with high unmet need for modern contraception
3. *Service delivery*: Enhance family planning 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 family planning service delivery
5. *Research and innovation*: Strengthen the evidence base for program implementation through research and innovation

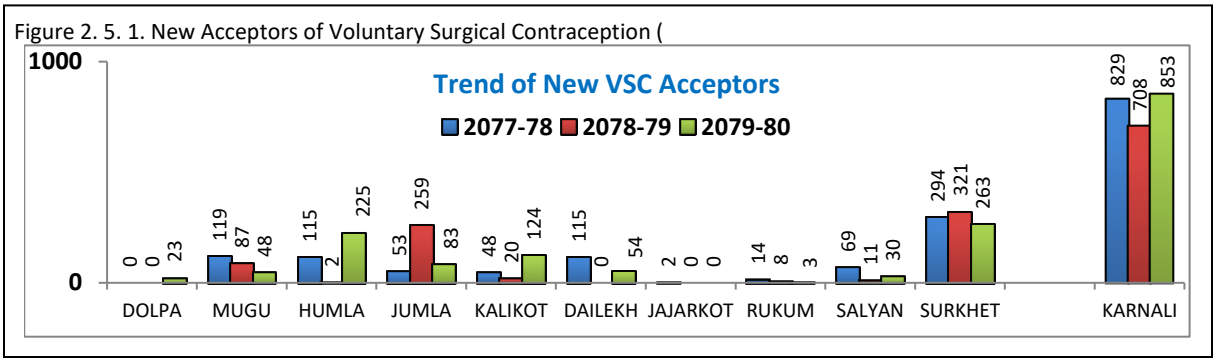
Major Activities carried out in fiscal year 2079/80 (2022/2023)

- Ensured Voluntary Surgical Contraception (VSC)- Institutional and camp
- Family Planning Counseling and Referral services continued by districts
- FP strengthening, Implant, IUCD, Sterilization Training
- LARC services extended in Health Facilities

Analysis of Service Coverage

New Acceptors – Voluntary Surgical Contraception (VSC)

Figure 2. 5. 1. New Acceptors of Voluntary Surgical Contraception (



The data presented in Figure 2.5.1 illustrates the trend of new VSC (Voluntary Surgical Contraception) acceptors over the last three fiscal years. In the fiscal year 2079/80, a total of 853 individuals, both male and female, became new acceptors of VSC. Notably, there is an overall decrease in new VSC acceptors compared to the previous fiscal year.

However, despite the overall decline, there is a positive trend in specific districts. In fiscal year 2079/80, Humla, Kalikot, Dailekh, and Salyan experienced an increase in new VSC acceptors compared to the fiscal year 2078/79.

Table 2. 5. 1. Disaggregation of VSC New Acceptors of fiscal year 2077/78-2079/80

District	Total Sterilization			Disaggregation by 2079/80			
				Facility type		Service through	
	2077/78	2078/79	2079/80	Public	Non-Public	Institutions	Camp
Dolpa	0	0	23	23	0	23	0
Mugu	119	87	48	48	0	0	48
Humla	115	2	225	225	0	127	98
Jumla	53	259	83	83	0	83	0
Kalikot	48	20	124	124	0	18	106
Dailekh	115	0	54	54	0	16	38
Jajarkot	2	0	0	0	0	0	0
Rukum W	14	8	3	1	2	3	0
Salyan	69	11	30	30	0	6	24

Surkhet	294	321	263	263	0	189	74
Karnali	829	708	853	851	2	465	388

The data presented in Table 2.5.1 provides a district-wise breakdown of new acceptors of Voluntary Surgical Contraception (VSC) over three consecutive fiscal years, spanning from 2077/78 to 2079/80 in the province. The overall trend of VSC new acceptors shows a decrease in the last two fiscal years, with a total of 829 in 2077/78, 708 in 2078/79, and 853 in 2079/80. The data reveals that the majority of clients availing Voluntary Surgical Contraception (VSC) services were served through public health facilities and camp settings.

New Acceptors - All FP Services

Contraceptive Prevalence Rate (CPR) as percentage of WRA

Figure 2. 5. 1. Family Planning Acceptors as percentage of WRA

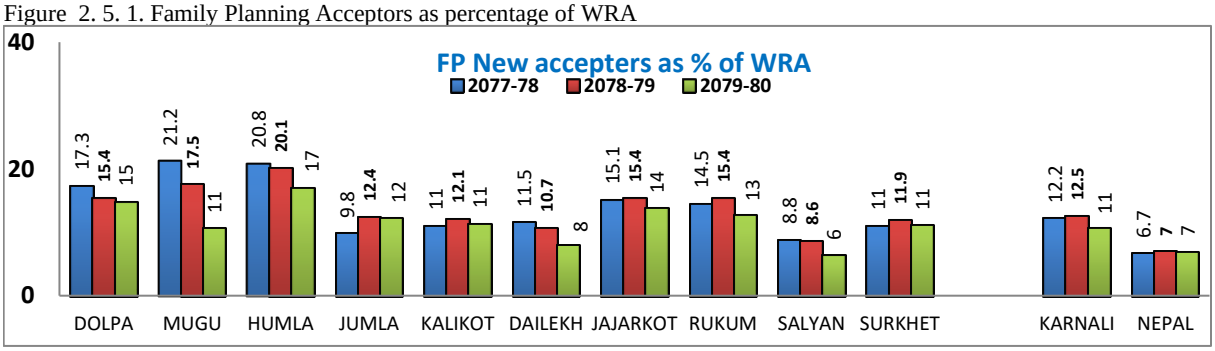


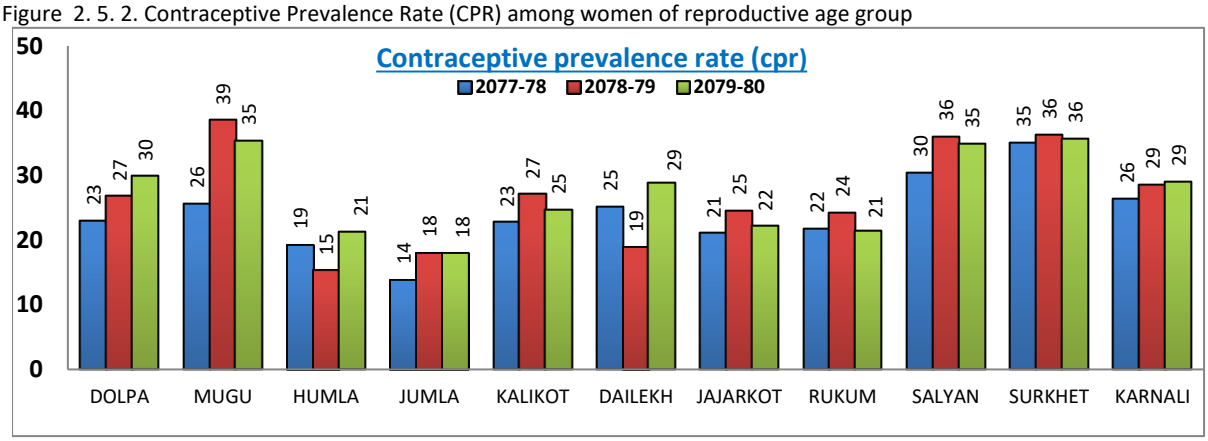
Figure 2.5.1 illustrates the percentage of new users adopting family planning methods in various districts of Karnali Province across three fiscal years (2077-78, 2078-79, and 2079-80). The data reveals notable variations in family planning adoption rates among districts. Dolpa witnessed a gradual decrease in adoption rates from 17.3% to 14.8% over the three years, maintaining a moderate level of adoption in comparison to other districts. In Mugu, despite an initially high adoption rate of 21.2% in 2077-78, there was a decline to 10.6% in 2079-80, although it consistently maintained relatively higher adoption rates compared to some counterparts. Overall, Karnali Province reported a decrease in family planning adoption rates from 12.5% to 10.7% during this period.

Table 2. 5. 2. Tempory and permanent Disaggregation of VSC New Acceptors of fiscal year 2077/78-2079/80

District	Female population aged 15-49 years	Temporary Method (Current User)						Permanent	All Total	CPR
		Condom	Pills	Depo	IUCD	Implant	Total			
Dolpa	12088	277	486	1208	119	1182	327	315	3587	29.8
Mugu	17539	324	341	1800	48	1824	433	1785	6122	35.2
Humla	14671	418	475	1568	42	181	268	318	3002	20.8
Jumla	31792	736	505	1861	63	1497	466	617	5279	17
Kalikot	36705	1017	492	3492	204	3019	822	516	8740	24.2
Dailekh	71469	1821	120	4018	854	3678	115	8411	19985	28.7
Jajarkot	50534	950	630	3879	296	3381	913	1347	10483	20.9
Rukum W	48678	994	956	3379	227	3969	952	680	10205	21.1

Salyan	71341	2691	119	4811	181	6992	175	6486	23989	34.3
Surkhet	127075	3382	223	6091	179	9419	229	21020	43941	35.3
Karnali	481892	12609	852	3210	545	35142	938	41495	135332	28.6

Figure 2. 5. 2. Contraceptive Prevalence Rate (CPR) among women of reproductive age group

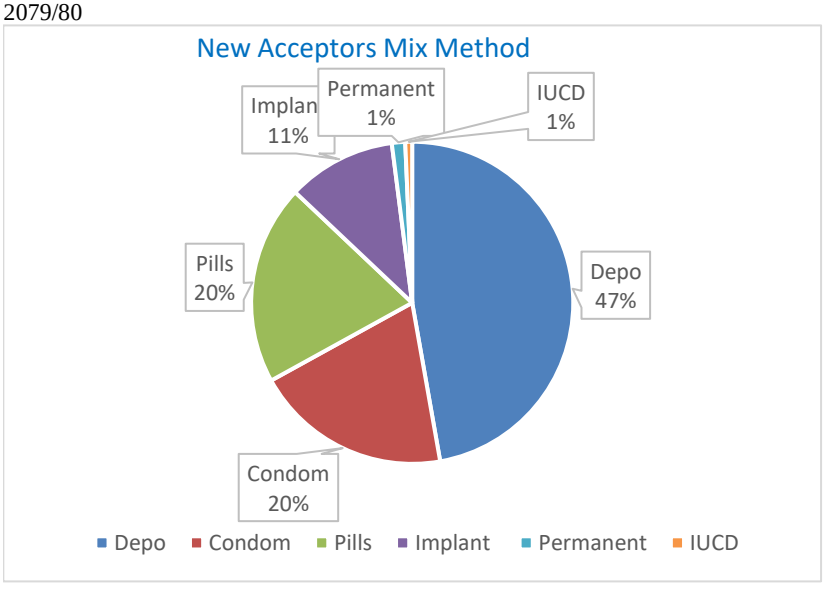


As of fiscal year 2079/80, the Contraceptive Prevalence Rate (CPR) among females aged 15-49 stands at 28.6%. Notably, there are variations among districts, with Jumla having the lowest CPR at 17%, followed by Jajarkot at 20.8%, and Rukum West at 21.1%. Conversely, Mugu exhibits a higher CPR at 35.2%, as illustrated in Figure 2.5.2.

The figure 2.5.3 illustrates the Mix Method of FP modern methods among the new acceptors in the fiscal year 2079/80 in Karnali Province.

Among new contraceptive users, 47% prefer Depo, while Pills and Condoms combined account for 20%, Implant for 11%, and IUCD and Permanent Methods combined for 1%

Figure 2.5.3 Mix Method Mix of FP modern methods among the new acceptors 2079/80



2.6 Adolescent Sexual and Reproductive Health (ASRH)

Background

Adolescents aged 10 to 19 represent 24% (6.4 million) of Nepal's population. According to the Nepal Demographic and Health Survey 2022 report, 14% of women aged 15–19 have experienced pregnancy, including 10% who have given birth, 2% who have had a pregnancy loss, and 4% who are currently pregnant. In Karnali Province, this figure rises to 20.5% of women aged 15–19 who have ever been pregnant, indicating heightened risks regarding adolescent sexual and reproductive health. The rapid physical, mental, and psychosocial changes during adolescence may exacerbate these health risks, underscoring the importance of recognizing and addressing their specific health needs.

The target of SDG is to reduce the adolescent fertility rate to 30 per 1000. National Adolescent Sexual and Reproductive Health (ASRH) is one of the priority programs. Nepal is one of the country in South Asia to develop and endorse the first National Adolescent Health and Development (NAHD) Strategy in 2000. To address the needs of emerging issues of adolescents in the changing context, the NAHD strategy is revised in 2018 to address the problem face by the adolescent in Nepal. Karnali Province 123 Adolescent Sexual and Reproductive Health (ASRH) friendly clinics to address the specific health needs of adolescents, reflecting ongoing efforts to safeguard their well-being.

Vision

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

Mission

Maximum 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 status of adolescents**.**

General Objectives

- By the year 2025, all adolescents will have positive lifestyles to enable them to lead healthy and productive lives.

Strategic Principles and Direction

1. Participation and leaderships of adolescent
2. Equality and equity
3. Right with responsibility
4. Strategies partnerships
5. Role of central, province, and local government

Major Activities Carried Out in fiscal year 2079/80 (2022/2023)

- Adolescent friendly Service provided through listed AFS health facilities
- ASRH Training to health care providers
- Promotional activities for ASRH
- ASRH Review in Province

Major Service Statistics fiscal year 2079/80 (2022/2023)

Service utilized by Adolescent populations

Table 2.6.1 Service Utilization by new clients of age 10 to 19 years old

S. N	District	New Clients Served 10 to 19 Years, Female			New Clients Served 10 to 19 Years, Male			New Clients Served 10 to 19 Years, Total		
		2077 / 78	2078/79	2079/80	2077 / 78	2078/79	2079/80	2077 / 78	2078/79	2079/80
1	Dolpa	5743	4608	5712	4911	3965	5304	10654	8573	11016
2	Mugu	7545	6680	7043	6586	5918	6073	14131	12598	13116
3	Humla	12299	9545	11440	8994	8659	10491	21293	18204	21931
4	Jumla	12574	13612	19836	11484	13051	19027	24058	26663	38863
5	Kalikot	18499	15917	19569	17612	14839	17455	36111	30756	37024
6	Dailekh	29118	26098	31412	22643	19508	23718	51761	45606	55130
7	Jajarkot	23688	20192	22670	17462	14422	16947	41150	34614	39617
8	Rukum	33246	30921	32275	24368	23005	24771	57614	53926	57046
9	Salyan	28901	24220	25685	20230	16958	18203	49131	41178	43888
10	Surkhet	47598	53106	66096	33977	39183	53405	81575	92289	119501
	Total	219211	204899	241738	168267	159508	195394	387478	364407	437132

Table 2.6.1 presents data on service utilization by new clients aged 10 to 19 in Karnali Province during the fiscal years 2077/78, 2078/79, and 2079/80. In the latest fiscal year (2079/80), a total of 437,132 new clients received services. The table indicates an increasing trend in service utilization by this age group compared to the previous fiscal years. Furthermore, it is consistently observed that female clients outnumber male clients in all three fiscal years, indicating a persistent pattern of higher utilization of services by females in the 10 to 19 years age group.

Table 2. 6. 2. Major FP Services to adolescents (FP New users < 20 yrs)

S. N	Districts	AFS Sites	Female Adolescents' population (10-19)	Depo			Pills			IUCD			IMPLANT		
				2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80
1	Dolpa	11	4446	164	134	85	71	71	44	0	0	0	2	11	5
2	Mugu	14	7309	370	223	90	71	89	49	0	0	0	10	16	13
3	Humla	13	5802	179	163	85	146	150	67	0	0	0	14	7	1
4	Jumla	21	13478	246	204	155	84	74	65	0	0	0	5	23	9

5	Kalikot	22	17236	151	143	156	36	85	50	0	0	0	19	6	6
6	Dailekh	25	28249	452	324	261	263	114	101	18	5	2	45	8	17
7	Jajarkot	17	22345	684	608	546	249	210	117	1	0	2	42	8	15
8	Rukum	14	17525	535	509	390	295	202	114	1	0	2	32	16	24
9	Salyan	8	23882	601	472	299	138	79	74	1	1	0	73	44	38
10	Surkhet	29	40857	979	1168	701	555	695	449	9	8	3	134	166	113
	Total	174	181130	4361	3948	2768	1908	1769	1130	30	14	9	376	305	241

Table 2.6.2 provides data on new users in family planning. In the fiscal year 2079/80, the Depo service attracted the highest number of new users under the age of 20, followed by Pills and Implant. IUCD is the least preferred family planning service within this age group. The analysis of new family planning users indicates a decreasing trend over the past three fiscal years.

Table 2. 6. 3. Major Safe motherhood and safe abortion Service statistics (< 20 yrs)

District	Antenatal Checkup-First ANC Visit (any time)			Four ANC Visits as per Protocol			Safe Abortion Service Medical			Safe Abortion Service Surgical		
	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80
Dolpa	233	203	167	34	49	60	2	3	4	0	0	0
Mugu	559	680	644	154	275	306	52	51	36	1	11	6
Humla	372	364	353	149	117	133	50	32	6	20	0	1
Jumla	898	727	576	353	454	367	30	43	36	13	11	6
Kalikot	916	962	757	390	386	457	4	5	19	1	0	1
Dailekh	1468	1140	940	851	696	626	29	40	25	23	9	16
Jajarkot	1377	1209	1284	618	513	677	5	10	6	0	0	1
Rukum	2009	1381	921	981	661	596	0	5	5	12	2	0
Salyan	1595	1509	1520	957	904	928	9	17	10	3	4	5
Surkhet	2362	2007	1622	1533	1298	1200	169	202	108	73	124	42
Karnali	11789	10182	8784	6020	5353	5350	350	408	255	146	161	78

Table 2.6.3 provides statistics on safe motherhood and safe abortion for individuals under the age of 20. The data indicates a decrease in the number of antenatal care (ANC) visits and postnatal care (PNC) visits following protocols within the <20 years age group during the fiscal year 2079/80. Furthermore, there has been a decline in the utilization of safe abortion services among this age group. Similarly, there is a downward trend observed in the use of safe abortion services through surgical methods from the fiscal year 2077/78 to 2079/80.

Table 2. 6. 4 Proportion of adolescent ANC among total ANC visit by district

S. N.	District	Depo New Acceptors			Pills New Acceptors			First ANC Visit (any time)			Four ANC visit as protocal		
		2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80
1	Dolpa	14.56	13.20	8.39	11.56	14.46	9.89	24.17	20.80	20.00	11.37	14.76	12.30
2	Mugu	17.81	14.06	8.57	10.03	15.03	15.41	26.64	31.81	27.37	16.44	26.37	18.42
3	Humla	8.31	9.95	6.40	15.42	13.84	9.97	21.17	21.62	21.34	17.35	14.79	13.35
4	Jumla	10.78	8.85	6.54	11.34	10.41	7.70	27.64	25.44	16.55	18.37	21.04	16.14
5	Kalikot	4.89	4.74	5.65	4.46	11.84	6.59	17.69	17.20	16.60	12.33	14.39	14.25
6	Dailekh	7.26	6.61	7.40	10.94	6.16	8.44	20.86	19.67	17.74	16.23	16.93	15.07
7	Jajarkot	12.28	11.50	11.15	11.72	11.38	7.87	30.24	27.19	29.33	27.26	25.94	25.29
8	Rukum	11.64	10.34	9.92	13.12	10.70	6.96	29.68	27.26	26.46	32.89	24.87	21.00
9	Salyan	13.69	12.24	11.67	9.29	7.28	8.56	26.50	24.09	22.81	22.77	21.95	19.42
10	Surkhet	14.34	15.78	10.51	13.89	16.31	9.81	23.94	21.51	17.51	21.77	20.07	16.98
	Karnali	11.38	10.99	9.19	11.87	12.18	8.83	24.82	23.06	20.93	20.82	20.32	17.75

The data in Table 2.6.4 indicates the proportion of adolescent antenatal care (ANC) visits among the total ANC visits, considering both the first ANC visit (anytime) and four ANC visits as per protocol. Additionally, it highlights a decreasing trend in the proportion of adolescent family planning new acceptors and visits for antenatal care during the fiscal year 2079/80 when compared to the preceding fiscal years.

2.6.1 Reproductive Health (RH) Morbidity

Reproductive Health (RH) Morbidity refers to the incidence, prevalence, and impact of health issues and conditions related to the reproductive system. This encompasses a wide range of physical, mental, and social health challenges that affect individuals in the context of reproduction and sexual health.

Safe Maternity and Reproductive Health Rights Act 2075 states that every woman will have the right to examination, counselling and receive treatment related to reproductive health diseases from health institutions. The ICPD of 1994 played a pivotal role in recognizing the importance of reproductive health, and within that context, it emphasized the necessity of screenings for cervical cancer, uterine prolapse, and breast cancer as integral components of comprehensive women's healthcare.

Cervical cancer screening is an essential healthcare practice aimed at early detection and prevention. Health institutions typically conduct screenings using methods such as Pap smears or HPV tests to identify abnormalities in the cervix. Early detection allows for timely intervention and reduces the risk of cervical cancer development. Positive results from screenings often lead to further diagnostic assessments and appropriate medical care, contributing to improved women's health outcomes.

Breast cancer screening typically involves methods such as mammography, clinical breast exams, and self-exams. Early detection is crucial for effective treatment. Obstetric fistula surgery is a medical procedure that repairs a tear between the vagina and rectum or bladder,

often caused by prolonged obstructed labor during childbirth. This condition can lead to incontinence and other complications.

Uterine prolapse screening involves evaluating the descent of the uterus from its normal position into the vaginal canal. Surgical intervention may be recommended in severe cases.

Health institutions conduct screenings for HPV, breast cancer, obstetric fistula, and uterine prolapse, referring individuals to hospitals where surgical services are available. Notably, obstetric fistula surgery services are specifically offered at provincial hospitals, emphasizing the importance of specialized care in addressing women's health issues and contributing to overall healthcare improvements in the community.

The disaggregated data for services related to cervical cancer, breast cancer, obstetric fistula, and uterine prolapse has been incorporated to HMIS since 2079/80.

A total of 16,228 individuals underwent screenings for HPV/DNA, VIA, and pap smear in the Karnali Province, with 636 individuals testing positive across all districts. In parallel, 1,115 individuals were screened for breast cancer, resulting in the identification of 3 positive cases. Additionally, screening for obstetric fistula involved 2,129 women, with subsequent surgical interventions conducted in 31 cases. Similarly, 10,114 women underwent screenings for pelvic organ prolapse, revealing that 1,443 had of prolapse. Among them, 1,244 women applied a Ring pessary, and a total of 36 surgeries were performed across the province. Notably, the majority of clients seeking screenings and undergoing surgical interventions were concentrated in Surkhet.

Table 2.6.1 RH Morbidity data

District	Cervical cancer		Breast Cancer-		Obstetric Fistula-			Pelvic Organ Prolapse-			
	Screened	Positive	Screened	Suspected	Screened	Suspected	Surgery	Screened	Prolapsed	Ring Pessary Applied	Prolapse-Surgery
Dolpa	442	0	0	0	464	0	0	446	66	49	0
Mugu	256	5	46	0	81	6	0	251	37	28	3
Humla	128	9	2	0	0	0	0	629	39	45	0
Jumla	1151	107	254	0	9	0	0	624	15	85	3
Kalikot	1121	58	0	0	145	0	0	589	38	42	2
Dailekh	1230	14	435	3	250	0	0	1039	306	167	8
Jajarkot	680	39	37	0	51	0	0	178	46	71	0
Rukum	1521	15	117	1	1068	3	0	1318	329	145	0
Salyan	386	7	0	0	7	0	0	1301	333	360	0
Surkhet	12668	382	224	0	64	22	31	3739	234	252	20
Karnali	16228	636	1115	4	2139	31	31	10114	1443	1244	36

2.7 Primary Health Care Outreach Program (PHC/ORC)

Background

The Primary Health Care Outreach (PHC/ORC) Program was initiated with the objective of enhancing access to fundamental health services, including family planning, child health, and safe motherhood, particularly in rural households. The program extends its reach through PHC outreach clinics, acting as service extensions beyond Primary Health Care Centers (PHCC), Health Posts (HP), and other health facilities, bringing services directly to the community level.

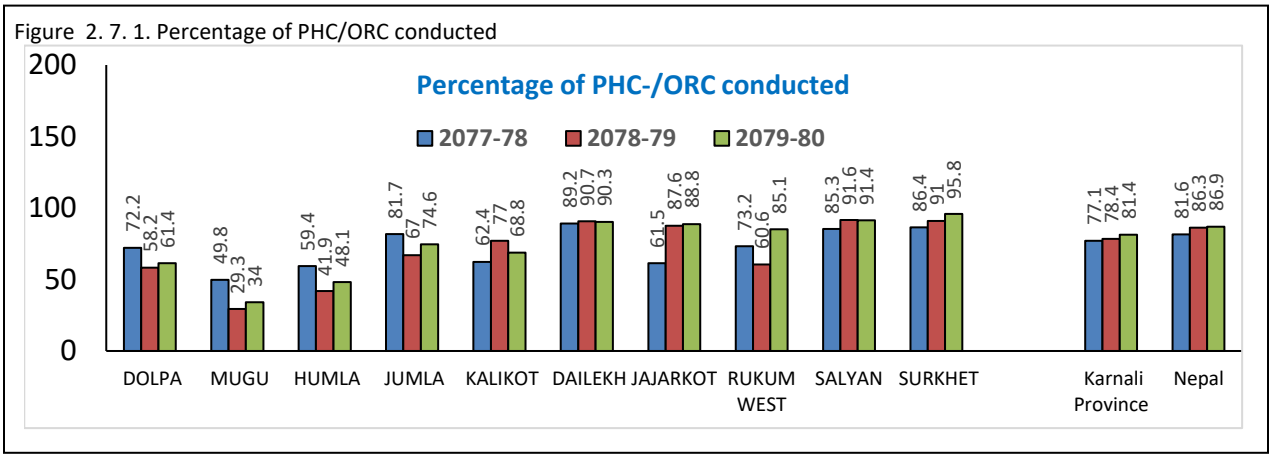
As part of this initiative, a specific number of clinics, as dictated by the demand and necessity, are typically set up in each catchment area of Health Facilities (HFs). These clinics are managed by Auxiliary Health Workers (AHWs) and Auxiliary Nurse Midwives (ANMs) on a monthly basis at pre-determined times. Throughout these sessions, AHWs and ANMs provide essential Primary Health Care (PHC) services, encompassing family planning, antenatal care (ANC) services, health education, and minor treatments. This structured approach ensures the consistent delivery of crucial health services to the community, addressing a range of health needs and promoting overall community well-being.

The clinics are strategically placed in proximity to communities, allowing for accessibility. The schedule is predetermined, ensuring that the clinics operate consistently once a month. In addition to AHWs and ANMs, Female Community Health Volunteers (FCHVs) and local-level organizations play a supportive role in facilitating and conducting these clinics.

This outreach program not only addresses the geographical challenges associated with healthcare access in rural areas but also emphasizes community involvement and support in delivering essential health services. Through these outreach clinics, the PHC/ORC Program strives to make primary health care more accessible and responsive to the needs of rural populations, promoting overall community health and well-being.

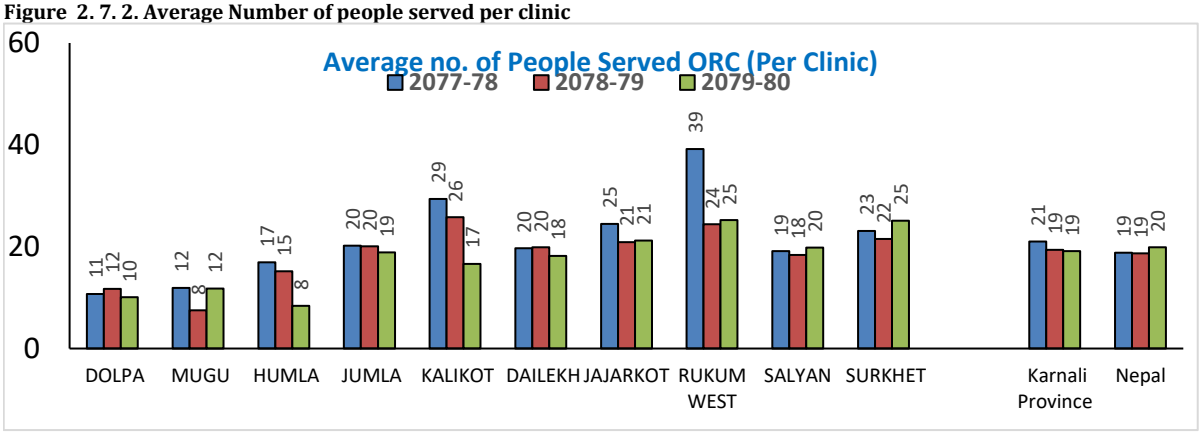
Analysis of Service Statistics

Figure 2. 7. 1. Percentage of PHC/ORC conducted



A total of 816 Primary Health Care Outreach Clinics (PHC/ORC) were conducted through 7952 sessions in the fiscal year 2079/80 in Karnali Province. This program is a routine initiative aimed at delivering primary health services at the community level. The primary beneficiaries targeted for PHC/ORC are primarily pregnant women and children under the age of five. The sessions are closely monitored by local health facilities to ensure effectiveness and quality of care. The percentage of Primary Health Care Outreach Clinics (PHC-ORC) conducted at the provincial and district levels for the last three fiscal years is illustrated in Figure 2.7.1. In Karnali, out of the total targeted PHC-ORCs, 81.4% of clinics were conducted in the fiscal year 2079/80, marking a 3% increase compared to the previous fiscal year.The lowest percentages of Primary Health Care Outreach Clinic (PHC-ORC) clinics were conducted in Mugu and Humla districts during the

Figure 2. 7. 2. Average Number of people served per clinic



consecutive fiscal years 2078-79 and 2079-80, with Mugu having rates of 29.3% and 34%, and Humla having rates of 41.9% and 48.1%, respectively.

The figure 2.7.2 shows the district-wise trend of number of people served from each outreach clinics in the last three years (fiscal year 2077/78 to 2079/80). In an average, one outreach clinics has served 19.9 people in the Karnali Province. Jumla, Rukum West and Surkhet are the districts with an average of more than 25 people, while the lowest number of service users is 8 in Humla.

Table 2. 7. 1. PHC/ORC performance indicator

SN	Districts	% of planned primary healthcare outreach clinics conducted			Average number of clients served per PHC outreach clinic			% of women who received a contraceptive injectable			% of women who received ANC checkup at PHC outreach clinic		
		2077 /78	2078 /79	2079 /80	2077 /78	2078 /79	2079 /80	2077 /78	2078 /79	2079 /80	2077 /78	2078 /79	2079 /80
1	Dolpa	72.2	58.2	61.4	10.7	11.7	10.1	12.8	6.7	12.9	22.9	24.2	26.8
2	Mugu	49.8	29.3	34	11.9	7.5	11.8	8.2	0.88	0.85	14.2	2.6	2.3
3	Humla	59.4	41.9	48.1	16.9	15.2	8.4	8.3	5.9	1.1	12.9	8.9	2.1
4	Jumla	81.7	67	74.6	20.2	20.1	18.9	13.6	11	6.8	32.1	24.2	16.8
5	Kalikot	62.4	77	68.8	29.4	25.8	16.6	15.7	11.6	6.1	5	2.9	1.1

6	Dailekh	89.2	90.7	90.3	19.7	19.9	18.2	18.9	23	25.2	16.1	14.7	15
7	Jajarkot	61.5	87.6	88.8	24.5	20.9	21.2	26.5	20.8	24.5	15.4	10.8	15
8	Rukum	73.2	60.6	85.1	39.2	24.4	25.2	30.9	15.7	7.5	11.3	6.9	4.7
9	Salyan	85.3	91.6	91.4	19.1	18.4	19.8	43.5	46.4	53.5	19.9	16.5	20.6
10	Surkhet	86.4	91	95.8	23.1	21.5	25.1	20.6	17.3	16.4	13.9	10.1	12.1
	Karnali	**77.1**	**78.4**	**81.4**	**21**	**19.4**	**19.1**	**24**	**20.9**	**20.7**	**15.7**	**11.6**	**12.6**

Table 2.7.1 highlights variations in the performance of planned primary healthcare (PHC) outreach clinics across districts in Karnali Province during fiscal years 2077/78, 2078/79, and 2079/80. Notably, Dailekh consistently excelled in conducting PHC clinics, achieving a high percentage of 90.7% in 2078/79. Meanwhile, Rukum West witnessed a significant increase in the average number of clients served per PHC clinic, escalating from 39.2 in 2077/78 to 85.1 in 2079/80. Salyan exhibited consistent improvements in the percentage of women receiving contraceptive injectables, surging from 19.1% to 53.5%, and ANC checkups, reaching 20.6% in 2079/80. Despite variations at the district level, Karnali Province overall reported enhancements in the percentage of conducted PHC clinics and the average number of clients served.

3. NURSING AND SOCIAL SECURITY

3.1 Female Community Health Volunteer (FCHV) Program

Background

Government initiated a Female Community Health Volunteer program since fiscal year 2045/46 in 27 districts and expanded to all districts. The major role of FCHV is to advocate healthy behavior focusing on counseling and education of local mothers and community members for the promotion of safe motherhood, mother and child health, family planning and community health are mobilized by local health facilities. Additionally, FCHV distribute pills, condom, ORS packet and vitamin A capsule, along with they are directly involved in immunization campaigns, iron distribution and deworming. The FCHVs are selected through the health mothers' group members. In Karnali 4273 FCHVs are dedicated to promoting the health of mother and children in FY 2078/79. FCHVs are recognized for having played a major role in reducing maternal and child mortality and general fertility through community-based health interventions.

Goal

Improve the health of local communities 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

- Mobilize a pool of motivated volunteers to connect health programs with communities and to provide community-based health services,
- Activate women to tackle common health problems by imparting relevant knowledge and skills,
- Increase community participation in improving health,
- Develop FCHVs as health motivators and
- Increase the use of health care services

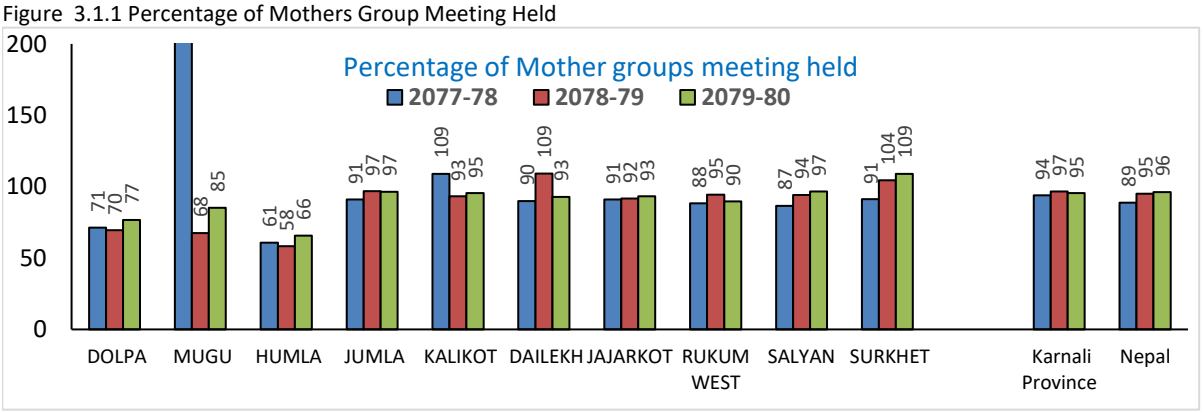
Major Activities Carried Out in fiscal year 2079/80 (2022/2023)

- Continued Behavioral Change Communication (BCC) activities through FCHVs.
- FCHVs Day Celebration
- Strengthening and revitalization of Health Mother's Group
- Reward for voluntary retirement
- Dress allowance to FCHV
- Training orientation and mobilization for health activities

Analysis of Service Statistics

The Health Mothers' Group serves as a robust community network within Nepal's health system. There exists a significant opportunity for community mobilization, advocacy, and communication, with a focus on promoting more equitable access to and utilization of available health services, particularly basic health services. This can be achieved through active and meaningful participation in mothers' group meetings. Each Female Community Health Volunteer (FCHV) is expected to organize monthly mothers' group meetings to address health issues.

Figure 3.1.1 Percentage of Mothers Group Meeting Held



As depicted in Figure 3.1.1, FCHVs successfully conducted 95% of mothers' group meetings in the fiscal year 2078/80. Surkhet achieved a 109% rate of mothers' group meetings in this fiscal year, demonstrating exceptional dedication. However, some districts reported lower rates, with Humla at 66% and Dolpa at 77%, highlighting areas where additional support and attention may be beneficial for improvement.

Figure 3.1.2. FCHV's contribution in selected health services

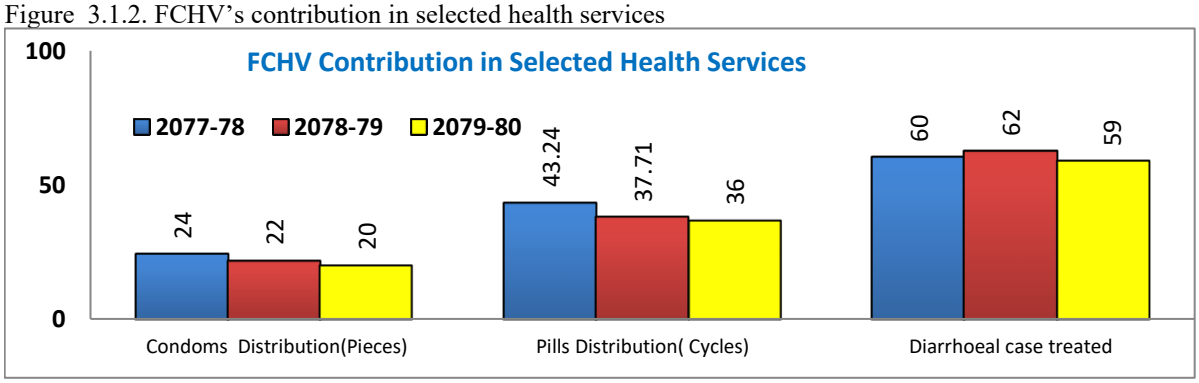


Figure 3.1.2 illustrates the contribution of Female Community Health Volunteers (FCHVs) in selected health services. Notably, there has been a slight decrease in the distribution of condoms, pills, and the management of diarrheal cases by FCHVs in fiscal year 2079/80. During this period, FCHVs distributed a total of 376,841 pieces of condoms, 32,351 cycles of pills, and treated 55,781 cases of diarrhea. The distribution of condoms accounted for 20 percent of their

total contribution, while pills distribution represented 36 percent. Additionally, FCHVs played a significant role in the treatment of diarrheal cases, contributing 59 percent to this health service.

Average Number of People served by FCHVs per month

Table 3.1.1. Average Number of People served by FCHVs per month

SN	Districts	Fiscal Year 2077/78	Fiscal Year 2078/79	Fiscal Year 2079/80
1	Dolpa	6	6	6
2	Mugu	8	6	7
3	Humla	7	6	7
4	Jumla	16	15	16
5	Kalikot	31	30	27
6	Dailekh	19	17	20
7	Jajarkot	31	32	28
8	Rukum West	18	18	17
9	Salyan	24	25	25
10	Surkhet	17	19	22
	Karnali	19	19	20

Table 3.1.1 presents the number of people served per Female Community Health Volunteer (FCHV) per month in three consecutive fiscal years, with a total of 924,182 individuals served by FCHVs in Karnali Province during FY 2079/80. The average number of people served by each FCHV per month remained relatively stable around 20 people during this fiscal year. Significant differences were observed between mountainous and hilly districts across all consecutive fiscal years. Mountainous districts such as Dolpa, Mugu, and Humla reported a lower number of people served by a single FCHV per month, while hilly districts such as Jajarkot, Kalikot, and Salyan reported a higher number of people served per FCHV per month.

3.2 School Health Nurse program

The school nurse program in Nepal is strategically aligned with the Public Health Act 2075 and the National Health Policy 2076, emphasizing a collaborative approach with the education sector. This coordination aims to promote positive changes in students' lifestyles by addressing the imperative of enhancing overall health, hygiene, and specifically, the sexual and reproductive health of adolescents. The program, governed by these legislative frameworks, underscores the interconnectedness of health and education, with school health nurses playing a pivotal role in implementing these policies effectively. This integrated approach ensures a comprehensive focus on the well-being of students, encompassing physical, mental, and reproductive health dimensions within the broader healthcare and educational context of the country. School health nurses in Nepal play a pivotal role in promoting student well-being by

conducting health education programs covering topics such as hygiene, nutrition, preventive measures, and sexual health. They routinely assess students' health, conduct check-ups, and actively participate in school-based immunization programs according to the national schedule. Emergency preparedness is emphasized, with nurses trained in first aid for immediate care during injuries or health emergencies on school premises. Their responsibilities extend to preventing and controlling communicable diseases, offering guidance to parents, collaborating with teachers, and addressing mental health issues. Furthermore, school health nurses advocate for a healthy school environment, promoting nutritious meals, physical activity, and maintaining a safe and clean setting

3.3 One Stop Crisis Management Center

The One Stop Crisis Management Center (OCMC) is a specialized facility established by the Government of Nepal in 2011 to provide comprehensive support to individuals facing crises, particularly those related to violence or abuse. This center serves as a centralized hub for immediate assistance, offering integrated services such as medical aid, counseling, and legal support. The OCMC operates 24/7, maintaining confidentiality and fostering collaboration among various agencies to ensure a coordinated and accessible response to crises.

Specifically, in the Karnali Province, the OCMC is operational in key healthcare facilities, including the Province Hospital Karnali, Academy of Health Sciences, eight district hospitals, and Mehelkuna Hospital. This extensive network spans across 11 hospitals, aiming to identify survivors, provide crucial and free hospital-based health services, offer medical treatment, psychosocial counseling, and medico-legal assistance. The OCMC in Karnali Province also collaborates with law enforcement and rehabilitation services, addressing the multifaceted challenges associated with gender-based violence (GBV) and providing indicated services to the target beneficiaries.

Table. Number of new reported case by service of Gender Based Violence by district for different fiscal years

S.N.	Organization/Unit	Fiscal Year 2077/78	Fiscal Year 2078/79	Fiscal Year 2079/80
1	Dolpa	6		
2	Mugu Hospital	0	17	16*
3	Humla Hospital	0		130*
4	KASH Jumla	14	250	430**
5	Kalikot Hospital	111	74	139**
6	Dailekh	210	425	39*
7	Jajarkot Hospital	310	125	119*
8	Rukum West	NA	105	143
9	Salyan	70	129	20*
10	Surkhet			
10.1	Mehelkuna Hospita	0	0	15
10.2	Province Hospital	323	360	501*

Sources: - DHIS-2, review presentation***

4. EPIDEMIOLOGY AND DISEASE CONTROL

4.1 Malaria

Background

The Malaria Control Program was initiated in 1954 under the "Insect Borne Disease Project." Subsequently, in 1958, the malaria eradication program was introduced as a dedicated vertical initiative, marking the nation's inaugural public health program. The primary goal was to completely eliminate malaria from the country within a specified timeframe. However, as experiences unfolded, it became evident that achieving malaria eradication required more time and comprehensive efforts. Consequently, in 1978, the strategy shifted towards a malaria control approach to better address the persistent challenges posed by the disease.

Nepal is dedicated to reducing indigenous malaria cases to zero by 2022 and maintaining zero malaria-related deaths. The goal includes achieving a 5 percent Annual Blood Examination Rate (ABER) in the malaria risk population. Ensuring the availability of essential drugs and Rapid Diagnostic Test (RDT) kits in all health facilities is a priority.

In alignment with micro-stratification, the government is distributing Long-Lasting Insecticidal Nets (LLIN) to populations identified as high and moderate risk. Additionally, community-based volunteers have been mobilized to support the collection of samples and conduct malaria tests in high-risk areas, contributing to the overall efforts in malaria prevention and control.

Nepal's current National Malaria Strategic Plan (NMSP-2014-2025) is structured into two distinct phases: "achieve malaria Pre-elimination by 2018" and "attain Malaria Elimination by 2025." The plan outlines the following vision, mission, goals, and objectives:

Vision

To create a malaria-free Nepal, ensuring the well-being of all communities.

Mission

Ensure universal access to quality assured malaria services for prevention, diagnosis, treatment and prompt response in outbreak.

Goals

Reduce the indigenous malaria cases to zero by 2022 and sustain thereafter. Sustain zero malaria mortality.

Objectives

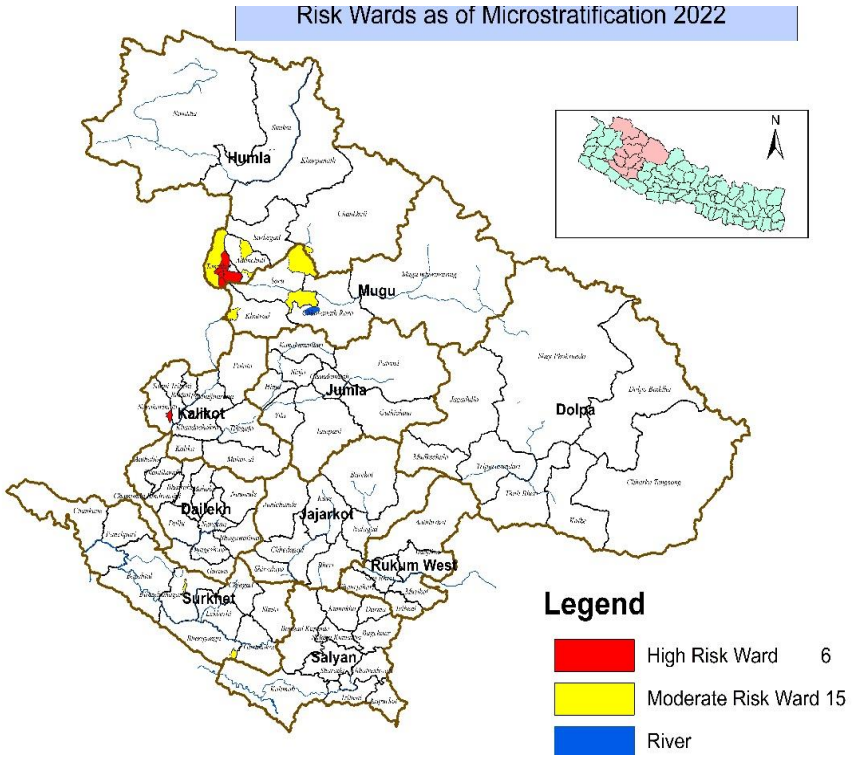
To ensure proportional and equitable access to quality assured diagnosis and treatment in health facilities and implement effective preventive measures to achieve malaria elimination. The updated NMSP (2014-2025) will attain the elimination goals through the implementation of following five strategies:

- Strengthen surveillance and information system on malaria for effective decision making.

• Ensure effective coverage of vector control interventions in malaria risk areas to reduce transmission.
• Ensure universal access to quality assured diagnosis and effective treatment for malaria.
• Ensure government committed leadership and engage community for malaria elimination.
• Strengthen technical and managerial capacities towards malaria elimination.

The malaria micro-stratification carried out by EDCD in 2022. In Karnali Province total 13 wards are malarious risk wards among them 4 wards were high-risk wards and 9 wards were identified as moderate risk wards. The high risk wards were from Humla (Tanjakot 2,3,4) and Kalikot (Khadachakra-2) and, and Moderate risk ward were Adanchuli 2,5, Chankheli 2, and Tanjakot 1 in Humla district. Similerly, Soru 4,5 and Khatyad 8 in Mugu District, and Bheriganga-7, and Birendranagar 7 in Surkhet district. In 2021, there were 21 wards risk area in Karnali Province.

Figure 4. 1. 1. Ward Level Risk Classification 2022



Major Activities Carried Out in fiscal year 2079/80 (2022/2023)

In lining with the National Malaria strategic plan 2014-2025 to reduce indigenous malaria case to zero by 2022 and sustain thereafter, sustain zero malaria mortality Karnali Province government has been conducting the following activities in malaria program:

1. **Malaria disease surveillance:**
   To eliminate any disease, high standard surveillance system should be in place. Same thing applies in malaria disease too. The preformed surveillance in malaria has adopted surveillance in 1, 3, 7 modalities for every case of malaria detected. All 34 cases of malaria cases detected in the Karnali Province in F/Y 2079/80 have been reported in the real time Malaria Disease Information System (MDIS), thoroughly investigated during Case Based Investigation (CBI) with in specified time.
2. **Malaria outbreak response:**

Support has been provided to transport and conduct IRS in Pachal Jharana in Kalikot and Birendragar Surkhet. Community based testing (CBT) volunteers has been mobilized into nine points of Kahatyad-8 and 10 of Mugu, Aadanchuli-5 and Tanjakot-2 of Humla, and Chaukune-4, Panchapuri-9, Birendranagar-11, Lekhbesi-7 and Gurbhakot-8 of Surkhet districts in support of EDCD and Save the Children/Global Fund jointly.

3. **LLIN distribution for mass protection and for ANC women:**

   Coordinating with EDCD, HSD, districts and municipalities, a total of 13500 LLINs were distributed to the people residing in high and moderate risk wards of Birendranagar7, Surkhet district. Also, an additional total 2588 LLIN has been provided to the pregnant women of these areas during ANC visit from the HFs.

4. **ACD in Upper River Valley:**

   Malaria is considered as a local and focal disease. It's prominent that malaria is also prevalent in the places of upper river valley but there is a gap in diagnosis due to various reasons. To address this gap, dedicated VMWs were being appointed in Kahatyad-8 and 10 of Mugu, Aadanchuli-5 and Tanjakot-2 of Humla, and Chaukune-4, Panchapuri-9, Birendranagar-11, Lekhbesi-7 and Gurbhakot-8 of total 9 VMWs in the province.

5. **System Strengthening for malaria elimination:**

   Continuous technical support has been provided to Health Service Divisions (HSD) and district programs as needed. Additionally, support has been extended for transporting essential logistics such as antimalarial drugs, Rapid Diagnostic Tests (RDTs), insecticides, and Long-Lasting Insecticidal Nets (LLINs) to districts and municipalities, with a particular emphasis on Humla and Mugu districts. Training sessions, orientations, and on-site coaching have been conducted for Health Workers (HWs) in various districts and their municipalities including Jumla, Dailekh, Jajarkot, West Rukum, and Surkhet. World Malaria Day was commemorated with a media interaction program. Furthermore, monitoring and on-site coaching were undertaken in districts like Surkhet, Dailekh, Kalikot, Humla, and Jumla. An annual review meeting for Neglected Tropical Diseases (NTD)/Vector-Borne Diseases (VBD) was also convened at the provincial level.

6. **Active Foci Investigation of Malaria Cases:**

   Altogether 6 active foci were identified in the province as of FY 2079/80. Based on the same information, all sites were investigated with the support of Save the Children/Global Fund. Details of the active foci investigation are as follows:

   - Tanjakot-4, Sirupate-tapla and Adanchuli-2, Thulamakai of Humla district.
   - Birendranagar-2, Thapatole and Gurbhakot-8, Khatang simtali tole of Surkhet district.
   - Khatyad-8, Thamlek and Soru-4, Rawaibada of Mugu district.

Analysis of Service Statistics

Table 4. 1. 1. Malaria Positive cases

SN	District	PF			PV			PV Relapse			Total		
		2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80
1	Dolpa	0	0	0	0	0	0	0	0	0	0	0	0
2	Mugu	0	0	0	3	7	1	0	0	0	3	7	1
3	Humla	1	0	0	6	8	7	0	0	0	7	8	7
4	Jumla	0	0	0	0	0	0	0	0	0	0	0	0
5	Kalikot	1	0	1	5	4	1	0	0	0	6	4	2
6	Dailekh	0	0	1	0	3	1	0	0	0	0	3	2
7	Jajarkot	0	0	0	0	0	0	0	0	0	0	0	0
8	Rukum West	0	0	1	2	2	0	0	0	1	2	2	2
9	Salyan	0	1	0	0	1	0	0	0	0	0	2	0
10	Surkhet	0	0	1	16	22	19	0	0	0	16	22	20
	Karnali	2	1	4	32	47	29	0	0	1	34	48	34

The three-year trend highlights the occurrence of malaria cases in Karnali Province, with total cases identified as 34, 48, and 34 in the fiscal years 2077/78, 2078/78, and 2079/80, respectively. Surkhet district reported the highest number of total confirmed cases (20), followed by Humla district. Significantly, in recent years, malaria cases have been detected in the mountainous districts. This shift in the pattern of malaria from the Terai to the mountainous regions poses an additional challenge to the malaria elimination program in Karnali Province.

Figure 4.1.2 Total Malaria Positive case

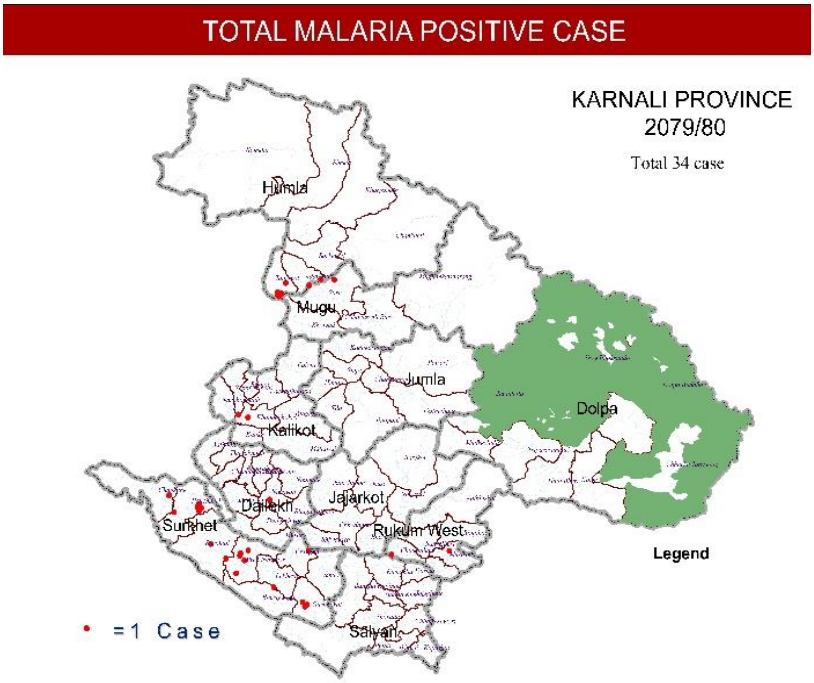
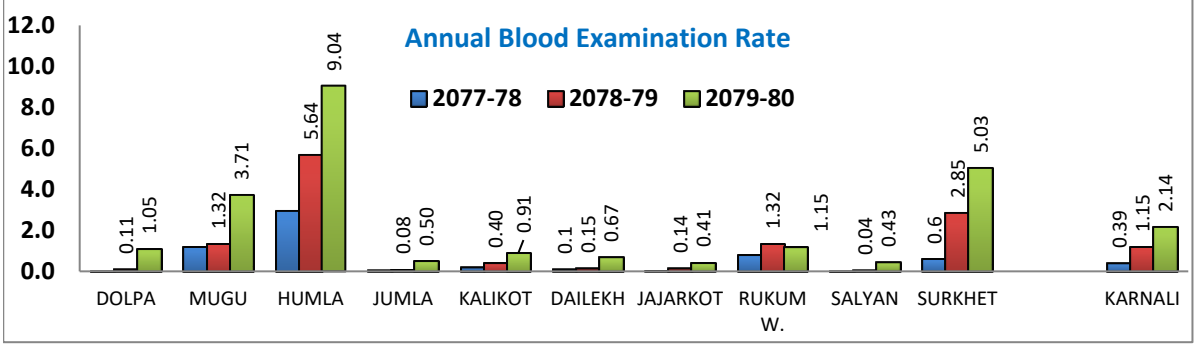


Table 4.1.2. District wise Malariometric Indicators

S. N.	District	Annual Blood Examination Rate			Malaria Parasite incidence Rate/1000			% of Plasmodium falciparum case			% of Imported Case			Malaria Slide Positivity rate		
		2077/78	2078/79	2079/89	2077/78	2078/79	2079/89	2077/78	2078/79	2079/89	2077/78	2078/79	2079/89	2077/78	2078/79	2079/89
1	Dolpa	0.0	0.1	1.1	0.00	0	0.00	0	0	0	0	0	0	0.00	0.00	0.00
2	Mugu	1.2	1.3	3.7	0.05	0.10	0.01	0	0	0	33.33	0	0	0.40	0.79	0.04
3	Humla	2.9	5.6	9.0	0.12	0.14	0.12	14.28	0	0	0	0	14.29	0.40	0.25	0.13
4	Jumla	0.1	0.1	0.5	0.00	0.00	0.00	0	0	0	0	0	0	0.00	0.00	0.00
5	Kalikot	0.2	0.4	0.9	0.04	0.03	0.01	16.66	0	50	33.33	100	100	1.89	0.69	0.15
6	Dailekh	0.1	0.1	0.7	0.00	0.01	0.01	0	0	50	0	66.7	100	0.00	0.81	0.12
7	Jajarkot	0.0	0.1	0.4	0.00	0.00	0.00	0	0	0	0	0	0	0.00	0.00	0.00
8	Rukum	0.8	1.3	1.1	0.01	0.01	0.01	0	0	50	100	100	100	0.15	0.09	0.10
9	Salyan	0.0	0.0	0.4	0.00	0.01	0.00		50	0		100		0.00	1.98	0.00
10	Surkhet	0.6	2.8	5.0	0.04	0.05	0.05	0	0	5	75	90.9	85	0.64	0.18	0.09
	Karnali	0.4	1.2	2.1	0.02	0.03	0.02	5.88	2.08	11.76	50	62.5	70.59	0.47	0.25	0.09

Table 4.1.3 presents data on various health indicators for the fiscal year 2079/80 in Karnali Province, including an annual blood examination rate of 2.1%, a malaria parasite incidence of 0.02 per 1000 population (total population), a percentage of Plasmodium falciparum (PF) cases at 11.7%, a percentage of imported cases at 70%, and a Slide Positivity Rate (SPR) of 0.09%.

Figure 4.1.3. Malaria Annual Blood Examination Rate



Three years trend of Annual Blood Examination Rate of malaria is shown in figure 4.1.1 which indicates slight increase from 1.15(fiscal year 2078/79) to 2.14 (fiscal year 2079/80). In this financial year, Annual Blood Examination Rate has increased compared to last fiscal year in all districts except Rukum West.

In fiscal year 2079/80 Humla district achieved the highest ABER 9.04 percent followed by Surkhet 5.03 percent and Mugu 3.73 percent respectively and Jajarkot has the lowest 0.41 percent.

Figure 4.1. 4. Malaria Slide Positivity Rate

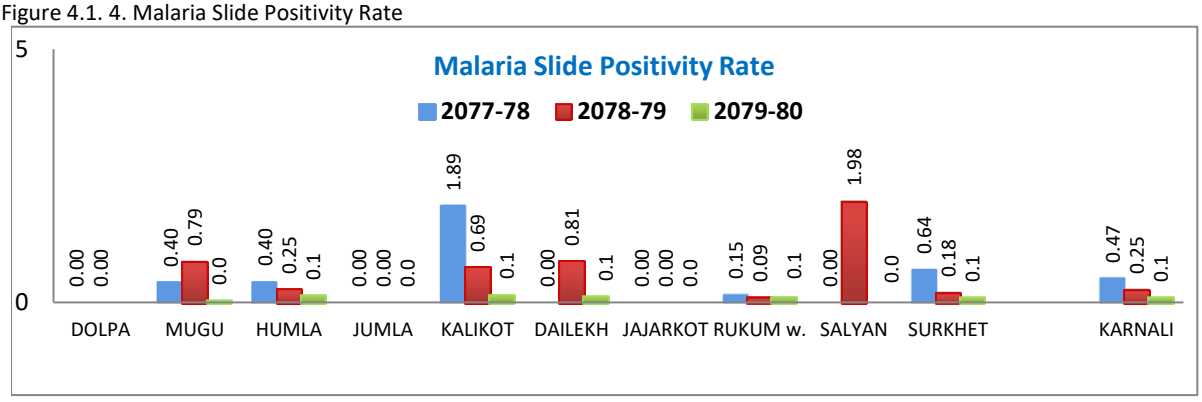


Figure 4.1.4. shows the three years trend of slide positivity rate of Karnali disaggregated by districts. SPR of province was at 0.47 (FY 2077/78), 0.25 (FY 2078/79) and 0.1 (FY 2079/80). It indicates that there is decreasing trend of malaria slide positivity rate in the province but there is no malaria positivity rate in Jajarkot and Dolpa and Jumla since last three years.

Table 4.1.4 Malariometric indicator

Item/Indicator	2077/78	2078/79	2079/80
Total population	1824131	1699212	1725340
Total slide examination	7169	19591	36962
Total positive cases	34	48	34
Total indigenous cases	17	18	10
Total imported cases	17	30	24
Total PF cases	2	1	4
Total PV cases	32	47	29
Total PV Relapse cases	0	0	1
Total indigenous PF cases	0	0	0
% of PF among Total cases	2.94	2.08	11.76
% of indigenous cases	50.0	37.5	29.4
% of imported cases	50.0	62.5	70.6
% of PF indigenous cases	0	0	0
Annual blood examination rate	0.39	1.15	2.14
Annual parasite incidence	0.02	0.03	0.02
Slide positivity rate	4.7	2.5	0.9

4.2 Kala-azar

Background

Often referred to as the "disease of the poorest of the poor," Kala-azar is a vector-borne illness caused by an intracellular protozoan parasite. There are 20 Leishmania species capable of causing human disease. The transmission of Leishmania parasites occurs through the bites of infected female phlebotomine sandflies, which require blood meals for egg production. The disease manifests in three primary clinical forms: (i) life-threatening visceral leishmaniasis (VL) or kala-azar, along with its dermal sequel - post-kala-azar dermal leishmaniasis (PKDL); (ii) self-healing or chronic cutaneous leishmaniasis (CL); and (iii) mutilating mucosal or mucocutaneous leishmaniasis.

The government 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, with the target of achieving elimination by 2015 however due to increasing risk and identification of cases government has planned to eliminate Kala-azar by 2030. In 2005, the EDCD formulated a National Plan for Eliminating kala-azar across preparatory (2005-2008), attack (2008–2015) and consolidation (2015 onwards) phases. In Karnali Province Kalikot Hospital in Kalikot, Dailekh Hospital in Dailekh, KAHS-Jumla, Province Hospital in Surkhet, Mehelkuna Hospital in Surkhet, and Chaurjahari Hospital in Rukum West are among the dedicated treatment centers for Kala-azar.

Goal

To contribute to mitigation of poverty in kaka-azar endemic districts by reducing the morbidity and mortality of the disease and assisting in the development of equitable health system.

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 unreachable 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 and HIV–TB co-infections.

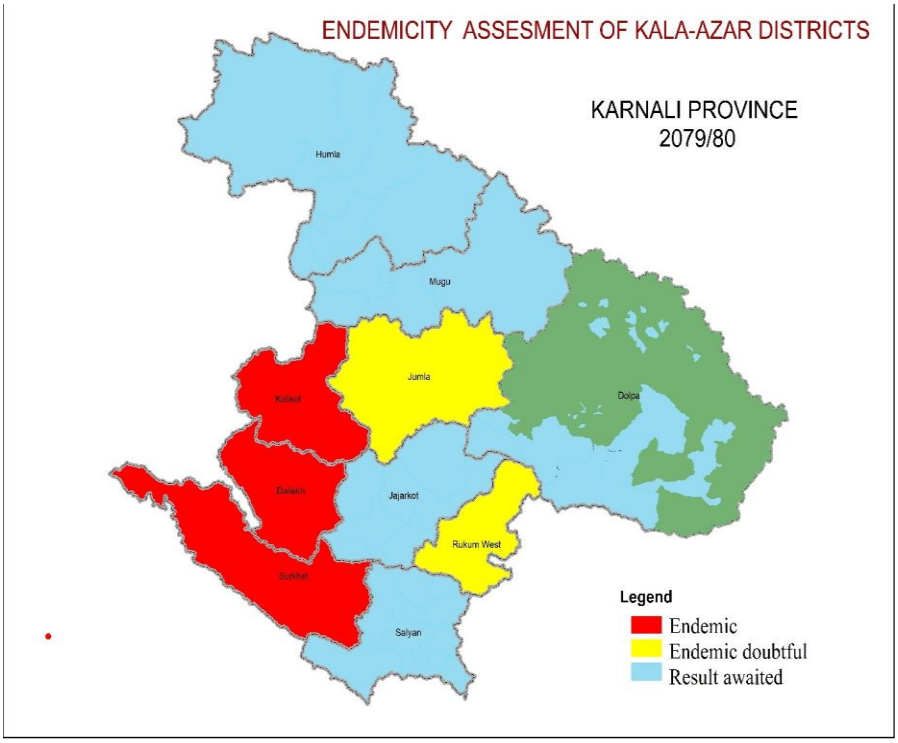
Strategies

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

Major Activities

- IEC/BCC materials have been printed and distributed to all the all the districts of Karnali.
- Five hundred flex printed and distributed to all the districts of Karnali.
- Kala-azar kit supplied in Jumla, Kalikot, Dailekh, Jajarkot, Rukum, Salyan, Surkhet

Figure 4.2.1 Endemicity assessment of Kala-azar district



In Karnali Province, there are three districts categorized as endemic districts and two districts labeled as endemic doubtful. The status of the remaining districts is currently In Karnali Province, there are three districts categorized as endemic districts and two districts labeled as endemic doubtful. The status of the remaining districts is currently result awaited.

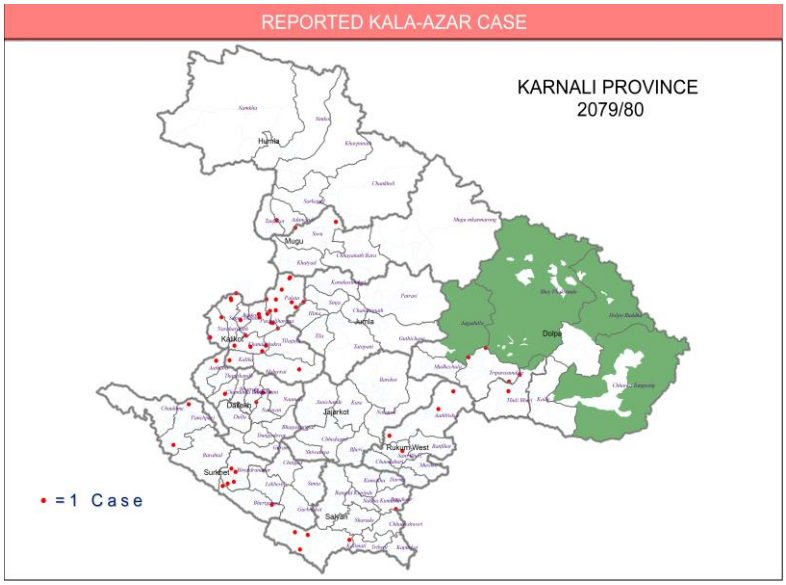
Table 4.2.1. District wise kala-azar case and incidence rate

S.N.	District	Endemicity status	Total population			Number of kala-azar cases			Incidence of kala-azar per 10,000 population		
			2077 /78	2078 /79	2079/80	2077 /78	2078 /79	2079/80	2077 /78	2078 /79	2079/80
1	Dolpa	Endemic doubtful	42767	43163	44431	0	0		0.00	0	0.00
2	Mugu	Endemic doubtful	64651	66972	68941	0	0		0.00	0	0.00
3	Humla	Endemic doubtful	59390	55762	57442	0	0		0.00	0	0.00
4	Jumla	Endemic doubtful	126380	119691	121410	1	0	4	0.01	0	0.33
5	Kalikot	Endemic	161109	145375	148252	43	28	20	0.27	1.9	1.35
6	Dailekh	Endemic	300261	254011	258480	0	2		0.00	0.08	0.00
7	Jajarkot	Endemic doubtful	200510	189875	193155	0	1	1	0.00	0.05	0.05
8	Rukum	Endemic doubtful	171361	166628	168147	0	0	1	0.00	0	0.06
9	Salyan	Endemic doubtful	274565	239030	241375	0	1		0.00	0.04	0.00
10	Surkhet	Endemic	423137	418705	423707	28	80	42	0.07	1.9	0.99
	Karnali		1824131	1699212	1725340	72	112	68	0.04	0.66	0.39

In Karnali Province, the districts of Surkhet, Dailekh, and Kalikot have been identified as endemic for Kala-azar, while the remaining districts are categorized as endemic doubtful.The burden of Visceral Leishmaniasis (VL or Kala-azar) has been reported from both the endemic and endemic doubtful districts . In the fiscal year 2079/80, Karnali Province reported a total of 68 Kala-azar cases. The highest number of cases was recorded in Surkhet (62), followed by Kalikot (20) and Jumla (4). Additionally, one case each was identified in the districts of Jajarkot and Rukum West during the same fiscal year.

There has been observed fluctuation in the incidence of the disease over the last three fiscal years. Notably, there is a significant reduction in the incidence in the current fiscal year compared to the previous one. In FY 2079/80, Kalikot district crossed the elimination threshold with 1.35 cases per 10,000 population, and Surkhet district is on the borderline of the elimination threshold with 0.99 cases per 10,000 population. The overall incidence of Kala-azar cases in Karnali Province is reported as 0.39 cases per 10,000 population. These figures highlight the need for continued surveillance and targeted interventions to achieve sustained progress toward the elimination of Kala-azar in the region.

Figure 4.2.2 Reported kala-azar case



The data presents a comprehensive overview of Kala-azar (visceral leishmaniasis) cases in Karnali Province during the fiscal year 2079/80. A total of 68 cases were reported, primarily concentrated in endemic districts. Surkhet recorded the highest number of cases (42), followed by Kalikot (20). Additionally, five cases were reported in districts categorized as Endemic doubtful, with Jumla accounting for four cases and Rukum West reporting one case. The district-wise breakdown reveals specific instances in various areas. Notable occurrences include Dolpa's cases documented in Tripurasundari Palika (3) and Thulibheri Palika (2), Mugu's cases in Soru Palika (2), and Kalikot district showcased multiple instances across different local level, with Pachal Jharana, Khandachakra, Palata, Naraharinath, Kalika, Sanni Tribeni, and Mahawai reporting 7, 4, 10, 1, 2, 3, and 1 cases, respectively. Dailekh, Rukum West, Salyan, and Surkhet districts also reported cases in specific municipalities. This detailed information is invaluable for targeted public health planning, enabling authorities to implement strategic interventions and allocate resources effectively to combat Kala-azar in Karnali Province.

4.3 Lymphatic Filariasis

Background

Well recognized as one of the Neglected Tropical Diseases, Lymphatic filariasis is a public health problem in Nepal. 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. In Nepal 61 districts were identified as endemic for the disease and recent TAS survey suggests LF is eliminated from Karnali since Karnali completed 6 rounds of campaigns and prevalence rate is under the elimination level.

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 (diethyl carbamazine 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 (Micro-filaraemia rate) in endemic districts after six years of MDA by 2018.

Achievement

- Screening for hydrocele cases for surgery been done in 2 districts (Dailekh and Surkhet) of Karnali
- Patients have been operated for hydrocele in hospitals of Karnali
- Transmission assessment survey (TAS-II) been conducted in Surkhet and Dailekh, following the MDA intervention has been stopped.

4.4 Dengue

Background

Dengue is a mosquito-borne disease that occurs in Nepal as dengue fever, dengue hemorrhagic fever (DHF) and dengue shock syndrome (DSS). The earliest cases were detected in 2005. Sporadic cases and outbreaks occurred in 2006 and 2010. Initially most cases had travelled to the neighboring country (India), although lately indigenous cases are also being reported. *Aedes aegipti* (the mosquito-vector) was identified in five peri-urban areas of the Terai suggesting the local transmission of dengue.

Goal

- To reduce the morbidity and mortality due to dengue fever, dengue hemorrhagic 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, DHF and DSS.
- Regular monitoring of dengue fever, DHF and DSS cases and surveillance via EWARS.
- Mosquito vector surveillance in municipalities.
- The integrated vector control approach where a combination of several approaches is directed towards containment and source reduction.

Activities

- Search and destroy operation have been conducted in Surkhet
- Activities on outbreak investigation and response was conducted in Surkhet

Table 4.4.1 Trend of dengue in last 3 years

Period	2077/78		2078/79		2079/80	
District	Immunology test	Positive	Immunology test	Positive	Immunology test	Positive
DOLPA	0	0	0	0	211	13
MUGU	2	0	5	0	43	0
HUMLA	0	0	0	0	7	0
JUMLA	1	0	44	9	234	0
KALIKOT	5	0	63	1	83	0
DAILEKH	32	0	117	0	143	0
JAJARKOT	5	0	116	0	159	0
RUKUM WEST	44	6	397	10	2542	130
SALYAN	35	0	31	0	181	1
SURKHET	2543	580	1530	53	8416	1484

Karnali Province	2667	586	2303	73	12019	1628

Source : Lab Report Immunology test HMIS

4.5 Leprosy

Background

Leprosy, caused by Mycobacterium leprae and commonly referred to as 'Hansen's disease,' is a relatively non-infectious yet potentially disabling condition. Timely and comprehensive treatment plays a crucial role in reducing the chances of physical disability associated with this disease. In Nepal, leprosy has historically been a significant public health concern, persisting for ages. The government has consistently prioritized the elimination and treatment of leprosy in its plans and policies.

Efforts to effectively control leprosy began in 1960, gaining momentum over the years. The introduction of Multidrug Therapy (MDT) in 1982/83, initially implemented in selected areas and hospitals, successfully reduced leprosy cases to 21,537, with a registered prevalence rate of 21 cases per 10,000 population. Recognizing the severity of the disease, the vertical leprosy program was integrated into general health services in 1987. The gradual expansion of MDT services saw coverage extending to all 75 districts by 1996, marking a significant step in making treatment accessible nationwide. The integration of leprosy control into general health services reflects a comprehensive approach to address the comprehensive health needs of the population. Ongoing efforts in leprosy control in Nepal continue to contribute to the overall goal of reducing the burden of this disease and improving the well-being of affected individuals.

Following the sustained and collaborative efforts of the government, Ministry of Health and Population, Leprosy Control Division, WHO, district health/public health service offices, and other concerned agencies, leprosy was successfully eliminated at the national level in 2009. This achievement was officially declared in January 19, 2010, with a national registered prevalence rate of 0.79 cases per 10,000 population. Notably, this rate is well below the cutoff point of below 1 case per 10,000 population set by the World Health Organization, signifying the successful elimination of leprosy as a public health problem in Nepal. The accomplishment reflects the effectiveness of the collaborative approach and the commitment to addressing leprosy comprehensively, ultimately improving the health outcomes of the population.

Vision

To make leprosy free society where there is no new leprosy case and all the needs of existing leprosy affected persons having been fully met.

Mission

To provide accessible and acceptable cost-effective quality leprosy services including rehabilitation and continue to provide such services as long as and wherever needed.

Goal

Reduce further burden of leprosy and to break channel of transmission of leprosy from person to person by providing quality service to all affected community.

Objectives

1. To eliminate leprosy transmission at the subnational level (province, district, local level).
2. To strengthen clinical case management at district and municipal levels and improve referral system.
3. To enhance capacity building through training of health staff particularly at the peripheral health facilities.
4. To enhance prevention of leprosy.
5. Reduction of stigma and discrimination.
6. To strengthen leprosy surveillance system and regular monitoring, supervision, and periodic evaluation at all level.
7. To strengthen partnerships among different stakeholders.
8. To strengthen management of leprosy complications like reactions and disability prevention and rehabilitation.
9. To coordinate with neighboring states of India in management, reporting and referral of cases from border areas.
10. To promote research and innovations.

Strategies

- Early case detection and prompt treatment of cases.
- Enable all general health facilities to diagnose and treat leprosy.
- Ensure high MDT treatment completion rate.
- Prevent and limit disability by early diagnosis and correct treatment.
- Reducing stigma through information, education, and advocacy by achieving community empowerment through partnership with media and community.
- Sustain quality of leprosy service in the integrated set up.

Major Activities

- IEC /BCC activities were undertaken for community awareness which increase passive case detection and reduced stigma
- Infection control: active detection and treatment of patients, testing of family and neighbors who are in contact with the patient.
- Celebration of World Leprosy Day
- Supervision, monitoring, and onsite coaching
- Continuous logistics supply from province level to all Districts
- Transportation cost provided for complication management
- Purchase of materials for disability management
- Disability management: Treatment, Complication, Management, Referral Services, Self-Care, Counseling Services
- Rehabilitation: income generation, self-care groups formation, distribution of supportive materials, skill training, support for corrective surgery, etc.

Analysis of Service Statistics

Table 4.5.1 : Status of Leprosy program monitoring indicators by province (FY 2079/80)

SN	District	Population	New Case Detection Rate/100,000 population	Prevalence Rate/ 10,000 population	MB proportion among new	Child proportion among new	Proportion G2D among new	Female Proportion among new
1	Dolpa	44431	2.3	0.45	100	100	0	100
2	Mugu	68941	4.4	0.58	100	0	33.3	66.7
3	Humla	57442	3.5	0.35	100	0	0	0
4	Jumla	121410	3.3	0.49	100	25	25	75
5	Kalikot	148252	4	0.40	100	0	16.7	16.7
6	Dailekh	258480	3.5	0.50	77.8	0	0	44.4
7	Jajarkot	193155	5.2	0.62	80	10	0	20
8	Rukum West	168147	6.5	0.95	100	0	9.1	18.2
9	Salyan	241375	3.7	0.58	88.9	0	0	33.3
10	Surkhet	423707	4.2	0.40	72.2	0	5.6	33.3
	Karnali	1725340	4.2	0.53	86.3	4.1	6.8	32.9

In the Karnali Province, the New Case Detection Rate (NCDR) per 100,000 population was 4.2, and the Prevalence Rate (PR) per 10,000 population stood at 0.53. Rukum West exhibited the highest NCDR and PR, followed by Mugu. Additionally, 86.7% of the new cases within the total were categorized as MB cases. The proportion of children among the new cases was 4.1%. Furthermore, 6.8% were identified with grade 2 disability (G2D), and the proportion of females among new cases was 32.9% in FY 2079/80.

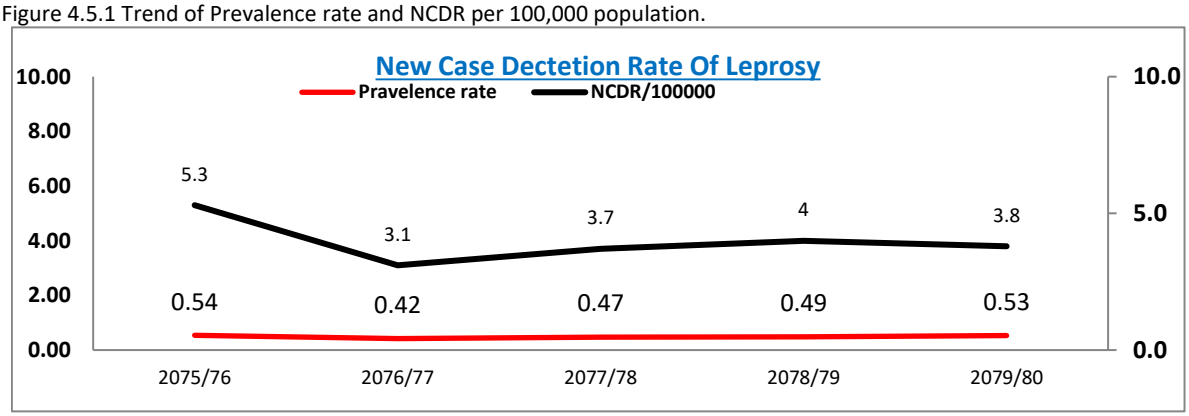
Table 4.5.2 District wise NCDR per 100,000 population.

SN	District	Total Leprosy New cases			New case detection Rate		
		2077/78	2078/79	2079/80	2077/78	2078/79	2079/80
1	Dolpa	0	2	1	0	4.5	2.3
2	Mugu	3	4	1	4.6	5.8	4.4
3	Humla	0	1	1	0	1.8	3.5
4	Jumla	6	2	5	4.9	1.7	3.3
5	Kalikot	6	3	6	4	2	4
6	Dailekh	6	9	5	2.1	3.5	3.5
7	Jajarkot	12	4	16	6.2	2.1	5.2
8	Rukum West	10	7	8	5.9	4.2	6.5
9	Salyan	8	10	8	3.2	4.2	3.7
10	Surkhet	27	13	15	6.4	3.1	4.2
	Karnali	78	55	66	4.5	3.2	4.2

Table 4.5.2 illustrates district-wise data for new leprosy cases and New Case Detection Rates (NCDR). In fiscal year 2079/80, the provincial New Case Detection Rate of Leprosy was 4.2, providing an overall assessment of the disease incidence throughout the entire province. The new case detection was reported as 3.2 per 100,000, reflecting an increase compared to the rate of 1 per 100,000 in fiscal year 2078/79. Among the districts, Rukum West reported the

highest rate at 6.6 per 100,000, while the highest number of cases was found in Jajarkot (16) and Surkhet (15). With the exceptions of Rukum West and Jajarkot, all other districts reported

Figure 4.5.1 Trend of Prevalence rate and NCDR per 100,000 population.



new case detection rates below 5 per 100,000 population.

The trend of new case detection rate and prevalence rate of leprosy over the preceding five years is illustrated in Figure 4.5.1. In Karnali Province, the new case detection rate reached its peak in the fiscal year 2057/76 and has since been gradually decreasing. Throughout the entire five-year period, the prevalence rate has consistently remained below 1 per 10,000, indicating a low prevalence of leprosy in the region during this period.

Table 4.5. 3 District wise Prevalence rate per 10,000 Population

S.N.	District	Patient at the End of this Month			Prevalence rate		
		2077/78	2078/79	2079/80	2077/78	2078/79	2079/80
1	Dolpa	0	2	2	0	0.46	0.45
2	Mugu	0	2	4	0	0.30	0.58
3	Humla	3	2	2	0.51	0.36	0.35
4	Jumla	8	10	6	0.63	0.84	0.49
5	Kalikot	13	8	6	0.81	0.55	0.40
6	Dailekh	11	11	13	0.37	0.43	0.50
7	Jajarkot	14	12	12	0.70	0.63	0.62
8	Rukum West	9	11	16	0.53	0.66	0.95
9	Salyan	15	11	14	0.55	0.46	0.58
10	Surkhet	13	15	17	0.31	0.36	0.40
	Karnali Province	86	84	92	0.47	0.49	0.53

Table 4.5.3 provides an overview of leprosy cases receiving Multidrug Therapy (MDT) at the end of the fiscal year and the prevalence rate in Karnali Province. As of the conclusion of Fiscal year 2079/80, there were 92 leprosy cases receiving MDT in Karnali Province, resulting in a registered prevalence rate of 0.53 cases per 10,000 populations at the provincial level. This rate remains below the cutoff point of 1 case per 10,000 population set by the World Health Organization (WHO), indicating sustained progress toward the elimination of leprosy as a public health problem since 2010.

While the prevalence rate has slightly increased compared to the previous year, the province continues to maintain its elimination status. Notably, there has been a rise in the proportion of new leprosy patients among children under 14 years. Out of the 73 new leprosy patients, 5 have been identified with Grade 2 disability. The Grade 2 disability rate at the provincial level is reported as 6.84 in fiscal year 2079/80. This information emphasizes the importance of ongoing monitoring and targeted interventions to prevent disabilities and maintain progress in leprosy control efforts in Karnali Province.

Issues

- Stigma and discrimination
- Onsite coaching to health workers
- Problem in reducing Zero Stigma
- Sustainability of quality services
- Reducing burden of disease and making the leprosy free society
- Medical and community-based rehabilitation to leprosy affected people
- Limited HR capacity on leprosy
- Trained HR (focal person) been adjusted in local level

4.6 DISABILITY INCLUSIVE HEALTH, REHABILITATION, ASSISTIVE TECHNOLOGY

Background

In the Constitution of Nepal, health care services and rehabilitation services for the citizens have been established as a fundamental right for those in need. It is imperative to fulfill the obligation to provide quality health care for all and ensure the universality of rehabilitation and health. According to the data of the National Census 2078, the percentage of disabled individuals in Nepal is 2.2, while in Karnali Province, it is 3.1. However, providing health services and access to health-related information to people with disabilities remains challenging.

The disability rights movement aims to secure equal opportunities and rights for all individuals with disabilities. Nepal, having ratified the United Nations Conventions on the Rights of Persons with Disabilities (UNCRPD), recognizes the significance of articles 20 (Personal Mobility), 25 (Health), and 26 (Habilitation and Rehabilitation) in shaping its activities. In line with the principles of the UNCRPD, the National Disability Rights Act of 2017 was established, highlighting access to health, rehabilitation, and assistive products as mandatory provisions to affirm the rights and dignified living of persons with disabilities.

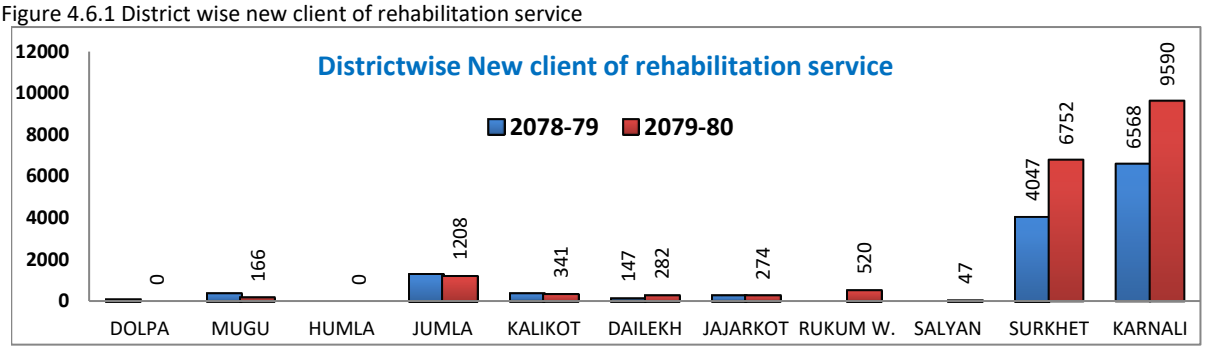
The National Public Health Act of 2018 recognizes rehabilitation as a health service for all, and efforts are underway to lay the groundwork for rehabilitation and assistive technology (AT) services. This aligns with the approach outlined in the World Health Organization's Rehabilitation 2030 Call for Action and the Global Cooperation on Assistive Technology (GATE) Initiatives. In recent years, the Ministry of Health and Population (MoHP) has demonstrated strong leadership in rehabilitation, actively supporting national planning for rehabilitation in government healthcare. This support includes the integration of rehabilitation into the Disability Management Strategy and Action Plan, as well as the National Health Sector Strategy - Implementation Plan (NHSS-IP). In Karnali Province, the Preliminary Draft of the Provincial Rehabilitation Strategic Plan has been formulated and implemented. Physiotherapy units, are established in the Provincial Hospital, Surkhet (previously), and Karnali Academy of Health Sciences (KAHS), Jumla (formerly), have been expanded. New physiotherapy units have been introduced in Mugu, Humla, Dolpa, Jajarkot, Dailekh, Salyan, Rukum West, and Kalikot, totaling eight hospitals. This strategic initiative aims to promote the development of rehabilitation services across the Karnali Province, contributing to comprehensive healthcare accessibility.

Major Activities

- Established physiotherapy units from MoSD/HSD in Provincial Hospital, Surkhet (Previously), Karnali Academy of Health Sciences (KAHS), Jumla (formerly), Newly established: Mugu, Humla, Dolpa, Jajarkot, Dailekh, Salyan, Rukum West and Kalikot (8 hospitals)
- Orientation for HW on early identification and referral of children with disabilities:
- Disability Management Orientation conducted in 8 districts. total of 734 (Male: 345, Female: 389)
- Identification and referral of 34 client from healthcare workers
- Regional Rehabilitation Strategic Plan: Preliminary Draft Prepared

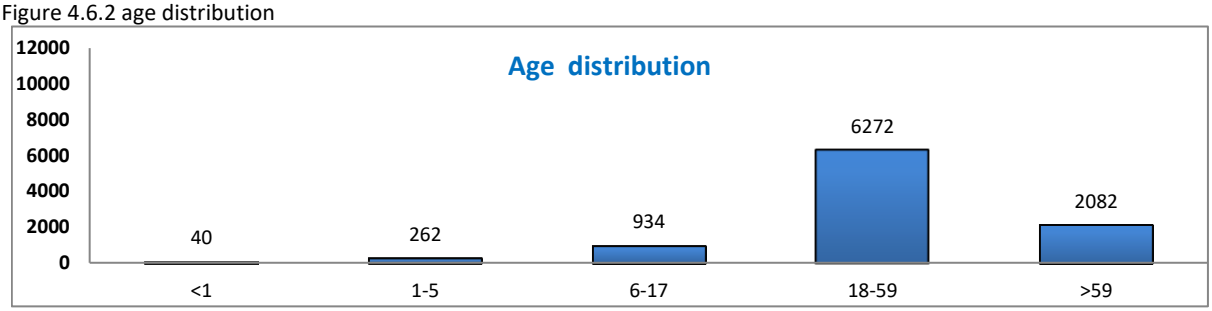
- The annual action plan and implementation guidelines of the rehabilitation program are prepared annually
- Orientation on Continuous professional development for Physiotherapists.
- Conducted training for medical recorders and physiotherapists regarding HMIS-DHIS-2 Rehabilitation module.
- Conducted orientation related to Post-Covid-19 rehabilitative.
- Management clinical protocol to the multidisciplinary team: Oriented to 26 people (M.A. Nurse and Physiotherapist) and Joint monitoring and supervision .

Figure 4.6.1 District wise new client of rehabilitation service



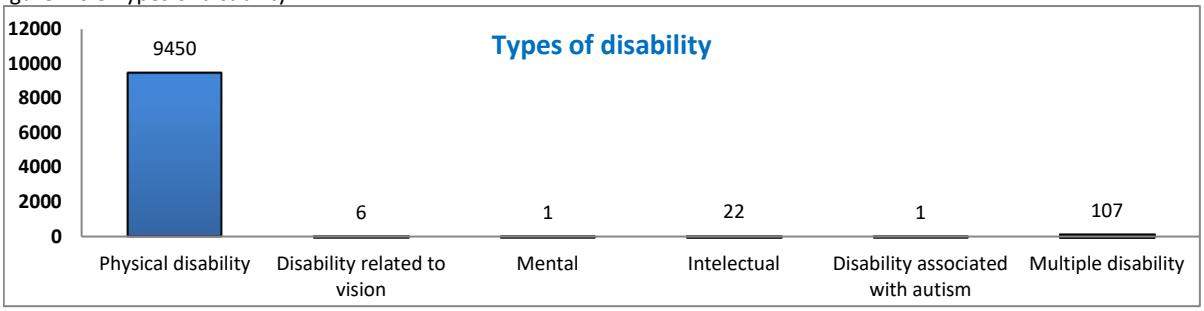
In Figure 4.6.1, the description for the fiscal year 2079/80 reveals that a total of 9550 new clients were served during this period. Among them, the highest number of individuals receiving rehabilitation services occurred in Surkhet (6752), followed by Jumla (1208). Conversely, the least number of individuals receiving services was in Salyan (47). Notably, despite the presence of established services, no individuals from Dolpa and Humla appear to have availed rehabilitation services during this period. When comparing the two years, there is a notable increase of 3022 people in the financial year 2079/80.

Figure 4.6.2 age distribution



In Figure 4.6.2, which illustrates the age distribution among the total reported cases, the majority are within the age range of 18-59 years, accounting for 6272 cases. Additionally, there are 2082 reported cases in the age group above 59. In contrast, a smaller number of cases, specifically 40, are reported for individuals under the age of one in Karnali Province.

Figure 4.6.3 Types of disability



In Figure 4.6.3, it is observed that among the total reported cases, the majority are related to physical disability (9450), followed by intellectual disability (22), and disabilities associated with vision (6). Only one case each was reported for mental disability and disability associated with autism. Additionally, there were 107 individuals in Karnali Province with multiple disabilities.

Table 4.6.1: Distribution of new rehabilitation cases by the health conditions Diagnosis

SN	Diagnosis	Total	Proportion
1	Certain infectious or parasitic diseases (1A00-1H0Z)	6	0.06
2	Diseases of the blood or blood-forming organs (3A00-3C0Z)	1	0.01
3	Endocrine, nutritional or metabolic diseases (5A00-5D46)	4	0.04
4	Mental, behavioural or neurodevelopmental disorders (6A00-6E8Z)	53	0.55
5	Sleep-wake disorders (7A00-7B2Z)	3	0.03
6	Diseases of the nervous system (8A00-8E7Z)	833	8.71
7	Diseases of the ear or mastoid process (AA00-AC0Z	25	0.26
8	Diseases of the circulatory system (BA00-BE2Z)	39	0.41
9	Diseases of the respiratory system (CA00-CB7Z)	325	3.40
10	Diseases of the digestive system (DA00-DE2Z)	1	0.01
11	Diseases of the skin (EA00-EM0Z)	32	0.33
12	Diseases of the musculoskeletal system or connective tissue (FA00-FC0Z)	6631	69.34
13	Diseases of the genitourinary system (GA00-GC8Z)	28	0.29
14	Pregnancy, childbirth or the puerperium (JA00-JB6Z)	2	0.02
15	Certain conditions originating in the perinatal period (KA00-KD5Z)	75	0.78
16	Developmental anomalies (LA00-LD9Z)	17	0.18
17	Symptoms, signs or clinical findings, not elsewhere classified (MA00-MH2Y)	252	2.64
18	Injury, poisoning or certain other consequences of external causes (NA00-NF2Z)	1015	10.61
19	External causes of morbidity or mortality (PA00-PL2Z)	190	1.99
20	Factors influencing health status or contact with health services (QA00-QF4Z)	17	0.18
21	Codes for special purposes (RA00-RA26)	2	0.02
22	Supplementary Chapter Traditional Medicine Conditions - Module I (SA00-SJ3Z)	12	0.13
		9563	100.00

Table 4.6.1 provides a comprehensive overview of the distribution of reported cases across various diagnostic categories, with each category's total and proportion outlined. Most of case reported Diseases of the musculoskeletal system or connective tissue (6631) followed by Injury, poisoning or certain other consequences of external causes (1015) and Diseases of the nervous system(833).

4.7 Tuberculosis

Background:

Tuberculosis (TB) is a public health problem in Nepal, as it is responsible for ill health among thousands of people each year. TB is the seventh leading cause of death in the country. TB mortality is unacceptably high given that most deaths are preventable if people can access tuberculosis care for diagnosis and the correct treatment is provided. Short-course regimens of first-line drugs that can cure around 90% of all cases (Treatment success rate reported in 2015/16) have been recorded for a decade.

According to the latest WHO Global TB Report 2023, there was estimated 7.5 million TB cases were newly diagnosed in 2022 and the total number of deaths caused by TB (including those among people with HIV) was 1.30 million. According to the TB Prevalence Survey conducted in 2018/19, the estimated incidence of TB is 245 per 100,000 population. Based on this data, it is projected that approximately 69,000 individuals with TB disease reside in Nepal. Among them, around 67 percent are anticipated to be males and 33 percent females. However, notified TB cases in 2079/80 was only 31450 and 3% of death rate among registered TB patients.

In Karnali Province, the implementation of tuberculosis control is evident through the presence of a total of 419 DOTS treatment centers, 2 DR Treatment Centers, 16 DR treatment sub-centers, and 9 GeneXpert Labs providing services. This signifies the widespread reach and availability of facilities dedicated to the Directly Observed Treatment Short Course (DOTS) and other specialized treatment and diagnostic services for tuberculosis. Moreover, the NTP has aligned its strategies with the global End TB Strategy and the achievement of the Sustainable Development Goals (SDGs). This indicates a comprehensive and coordinated approach to tuberculosis control, emphasizing both global strategies and national health objectives in Nepal.

National Strategic Plan to End Tuberculosis (2021/22-2025/26)

Vision: TB Free Nepal

Goal

- Decrease incidence rate from 238 in 2020/21 to 181 per 1000,000 population by 2025/26
- Decrease mortality rate from 58 in 2020/21 to 23 per 100,000 population by 2020/21
- Reduce the catastrophic cost of TB affected family to zero
- End TB epidemic by 2035
- Eliminate TB by 2050

Objectives

1. To build and strengthen political commitment, sustainability and patient-friendly health system to end TB.
2. To ensure the identification of TB, diagnosis, quality treatment and prevention.

Major Activities Carried out in fiscal year 2079/80 (2022/2023)

- Training to new health workers MDR related 3 days training
- Transportation and nutrition allowance to MDR TB patients
- Promoted early diagnosis of people with infectious pulmonary TB by sputum smear examination.
- Provided effective chemotherapy to all patients in accordance with national treatment protocol.
- Provided continuous drug supply to all treatment centers.
- Capacity building of Health Workers.
- Gene-Xpert service expansion and Installation.
- Special TB programs were conducted for marginalized population & hard to reach area (e.g. microscopy camp)
- Planning, monitoring & evaluation workshop conducted.
- Sputum sample courier system in place
- Supervision, monitoring, and onsite coaching
- TB- HMIS Tools printed and distributed

Analysis of Service Statistics

Table 4. 7.1 District wise service delivery points

District	DOTS Center			Microscopic Center			Gene X pert Center			DR Center			DR Sub Center		
	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80
Dolpa	24	24	24	1	1	1	0	0	0	0	0	0	1	1	1
Mugu	27	27	27	2	2	1	1	1	1	0	0	0	1	1	1
Humla	28	28	28	1	1	1	0	0	0	0	0	0	1	1	1
Jumla	31	31	37	3	2	1	1	1	1	1	1	1	0	0	0
Kalikot	30	34	34	3	3	4	1	1	1	0	0	0	1	1	1
Dailekh	60	60	67	5	7	5	1	1	1	0	0	0	4	4	4
Jajarkot	35	35	42	7	7	4	1	1	1	0	0	0	2	2	2
Rukum West	43	39	32	6	6	4	1	1	1	0	0	0	1	1	1
Salyan	48	50	55	5	5	4	1	1	1	0	0	0	2	2	2
Surkhet	62	74	73	14	13	7	1	1	2	1	1	1	3	3	3
Total	388	400	419	47	47	32	8	8	9	2	2	2	16	16	16

Table 4.6.1 provides an overview of the status of DOTS centers, microscopic centers, and DR TB (Drug-Resistant Tuberculosis) centers and sub-centers in Karnali Province. Currently, there are 419 DOTS centers within the province, reflecting a gradual increase due to expansions at some BHSC (Basic Health Service Centers) and basic hospitals. In the domain of Drug-Resistant Tuberculosis (DR TB) management, Karnali Province demonstrates a specialized focus with 2 dedicated DR centers and 16 sub-centers, emphasizing a targeted approach to address cases of drug-resistant tuberculosis. Furthermore, the province boasts 9 GeneXpert centers, strategically located at Province Hospital Surkhet, PPHL Surkhet, KAHS Jumla, Dailekh Hospital, Salyan Hospital, Kalikot Hospital, Mugu Hospital, Rukum West Hospital, and Jajarkot Hospital. These GeneXpert centers play a crucial role in advanced diagnostic processes. Additionally, there are 32 designated microscopic centers distributed across the province, contributing to the essential tasks of testing in the context of tuberculosis management. The community-based DOTS has been implemented only in Surkhet & Rukum west.

Table 4.7.2 Status of TB program monitoring indicators by province (FY 2079/80)

SN	District	Case notification rate (All forms of TB cases - New and Relapse)	Case notification rate (all forms of TB cases)	% of child cases	Loss to follow up rate (%)	TB Case Fatality Rate (%)	Treatment Success Rate	Slide Positivity Rate of TB	TB Cases documented as HIV Status Known (%)	DST status known (%)	Treatment Success Rate of DR TB Cases
1	Dolpa	85.5	85.5	5.3	0	0	100	0	100	0	0
2	Mugu	68.2	68.2	10.6	0	0	100	20	68.1	31.9	0
3	Humla	34.8	34.8	10	0	0	96	0	100	5	0
4	Jumla	86.5	87.3	6.6	0.99	3	96	6.5	49.1	16	0
5	Kalikot	72.2	74.9	9.9	2.2	0	97.8	3.1	92.8	8.1	0
6	Dailekh	59.6	62.3	11.8	2.9	1.2	94.1	3	100	38.5	0
7	Jajarkot	65.2	65.8	11.8	3.5	3.5	92.2	8.6	89	15	0
8	Rukum West	97.5	100.5	8.9	1.7	4	92.6	5.7	100	31.4	0
9	Salyan	101.1	101.9	12.2	1.9	3.4	91.2	6.2	87	27.6	0
10	Surkhet	127	130.3	23.4	3	3	92	8.6	100	28.4	57.1
	Karnali Province	89.4	91.4	14.9	2.4	2.7	93.2	6.6	92.2	25.4	57.1

The table provides a comprehensive overview of key indicators related to the tuberculosis program across various districts and for Karnali Province as a whole. Case notification rates for all forms of TB cases (new and relapse), vary across districts, ranging from 34.8 to 127 per 100,000 population, with the provincial average standing at 89.4. Similarly, the overall case notification rate for all forms of TB cases ranges from 34.8 to 130.3, with Karnali Province reporting a rate of 91.4 per 100,000 population. The percentage of child cases varies from 5.3% to 23.4%, with an average of 14.9% for the province. Loss to follow-up rates, TB case fatality rates, and treatment success rates exhibit district wise variations, highlighting the diverse challenges in tuberculosis management in each region. The data further underscores distinctions in slide positivity rates, HIV status documentation, and drug sensitivity testing status across districts and the provincial level. The treatment success rate for drug-resistant TB cases were 57.1%.

A total of 1,577 cases of tuberculosis were notified and registered with the National Tuberculosis Program (NTP). Notably, 70.13% of the registered cases encompassed both new and relapse cases, indicating the substantial proportion of individuals seeking treatment for the first time or experiencing a recurrence of the disease. Pulmonary cases accounted for 70.19% of all notified TB cases, signifying a significant prevalence of respiratory involvement. Within the notified pulmonary TB cases, 55.2% were confirmed through bacteriological testing, underscoring the importance of precise diagnostic methods. The distribution of TB cases by gender showed that 33.98% were female and 66.1% were male.

Table 4.7.3 TB program indicator

Indicator	2077/78	2078/79	2079/80
TB Case Notification (New and Relapse)	1164	1627	1543
% of New and Relapse case	97.73	98.42	97.84%
% of pulmonary	67.50	66.06	70.19%
% pulmonary bacteriologically confirmed	52.64	48.15	54.2%
% children aged 0-14 years	12.17	20.56	14.9%
% women	35.93	37.93	33.98%
% men	64.23	62.06	66.1%
Total TB cases notified	1191	1653	1577

TB Case Notification

Figure 4.7.1 District wise Notified TB cases all

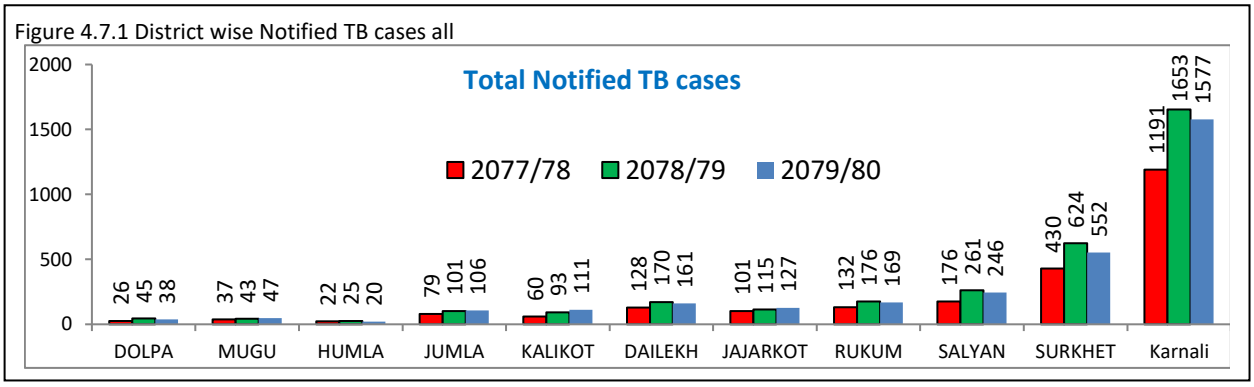
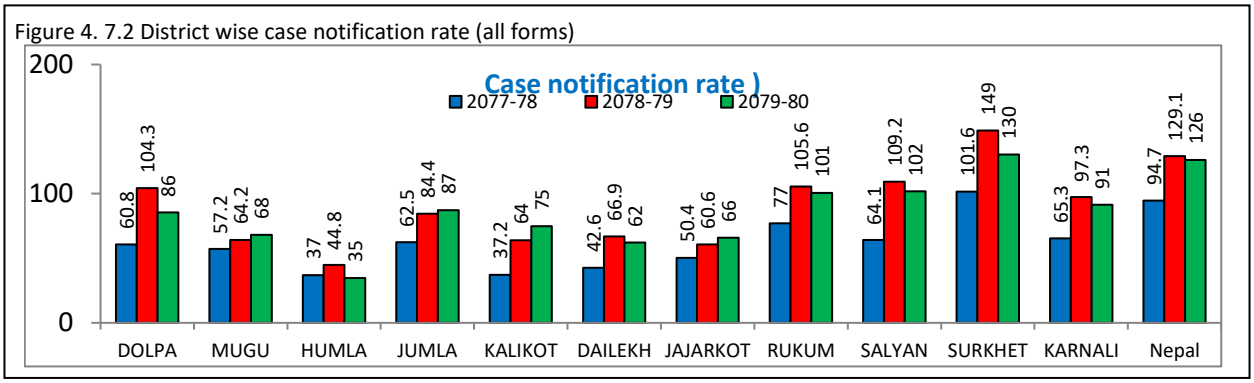


Figure 4.7. 1 shows number of district wise total tuberculosis case registration in Karnali Province. Highest cases were reported by Surkhet district (552) and the lowest by Humla District (20), Dolpa (47) and Mugu (47).

Figure 4. 7.2 District wise case notification rate (all forms)



According to the figure 4.7.2 case notification rate is 91.4 per 100,000 population in Karnali Province in fiscal year 2079/80. Case Notification Rate was lowest in Humla (35) & highest in Surkhet (130). Although case notification increased in fiscal year 2078/79 as compared to the fiscal year 2077/78, it decreased by 5.7 per 100,000 population in fiscal year 2079/80 with comparison in fiscal year 2078/79. As compared to the previous fiscal year, the notification rate has decreased in Dolpa, Humla, Daliekh, Rukum west, Salyan and Surkhet district, while in Mugu, Jumla, Kalikot and Jajarkot districts, showed increasing Trend.

Figure 4.7.3 Case Notification rate /100000 Local Level

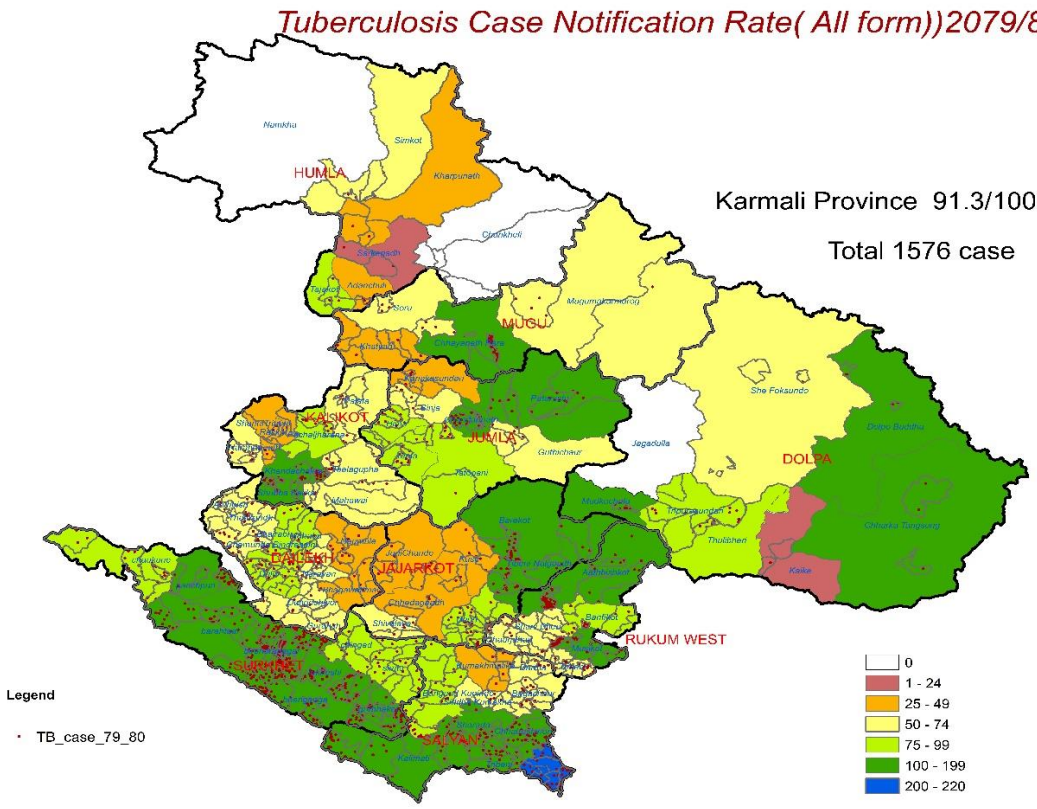
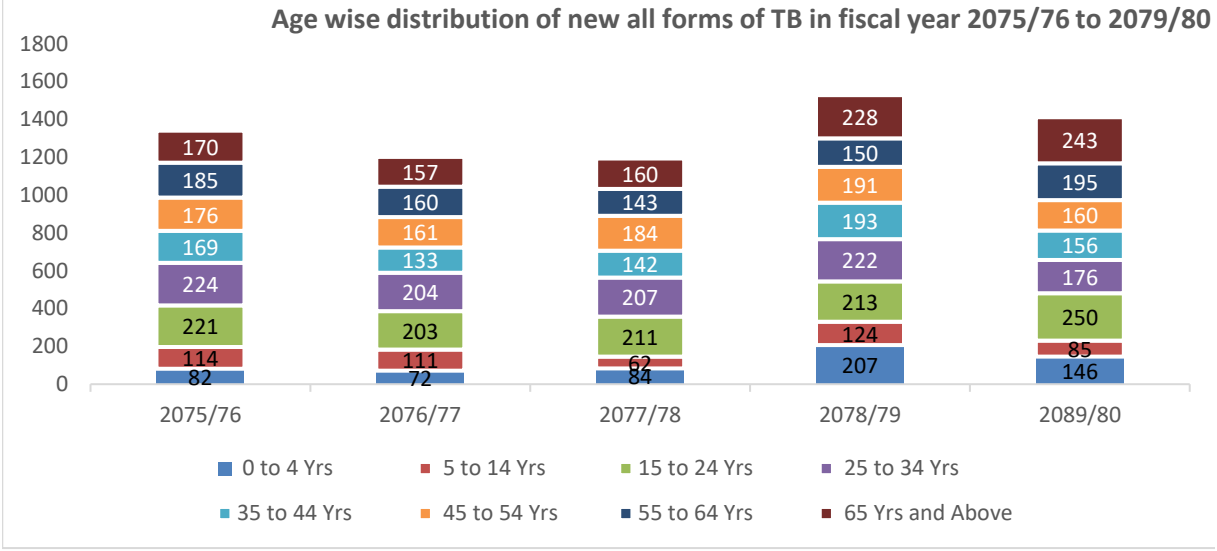


Figure shows the local level wise case registration and case notification rate for fiscal year 2079/80. Based on Case Notification rate, 3 local level (Jagdulla, Chankheli and Namkha RM) has not detected TB cases, among them 16 local levels that reported <50 case notification rate, 22 has 50-74 CNR, 15 locals have 75-99 CNR , 22 local levels have 100-199 CNR. The highest CNR reported fron kapurkot RM is 214 /100000 population).

Age wise distribution of all forms of TB

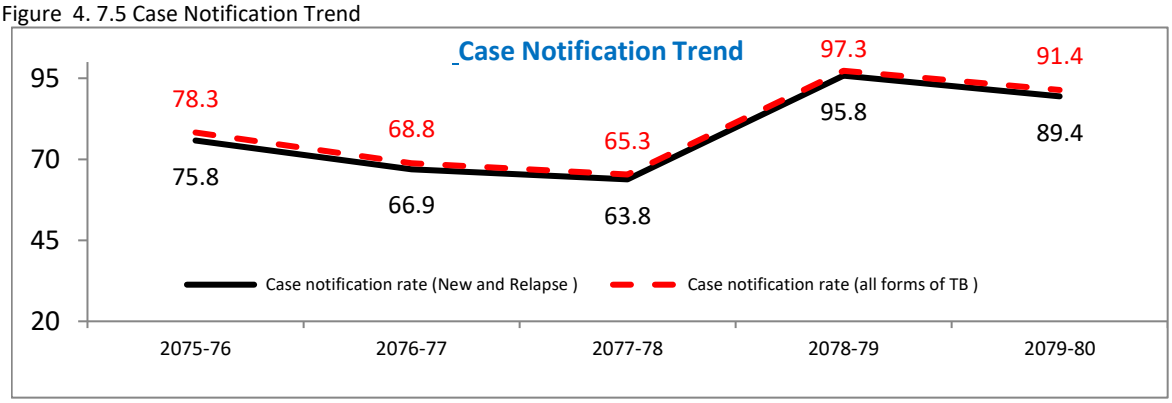
Figure 4. 7.4 Age wise distribution of all forms of TB in fiscal year 2075/76 to 2079/80



The Figure 4.7.4 shows the age wise distribution of all form of TB cases in the last five fiscal year 2075/76 to 2079/80. Looking at the statistics of tuberculosis patients, most of the patients are of productive age (15-49 years) in preceding all five-consequence year and it is seen that the number of tuberculosis patients of children under 14 years is also significant.

Case Notification trend

Figure 4. 7.5 Case Notification Trend

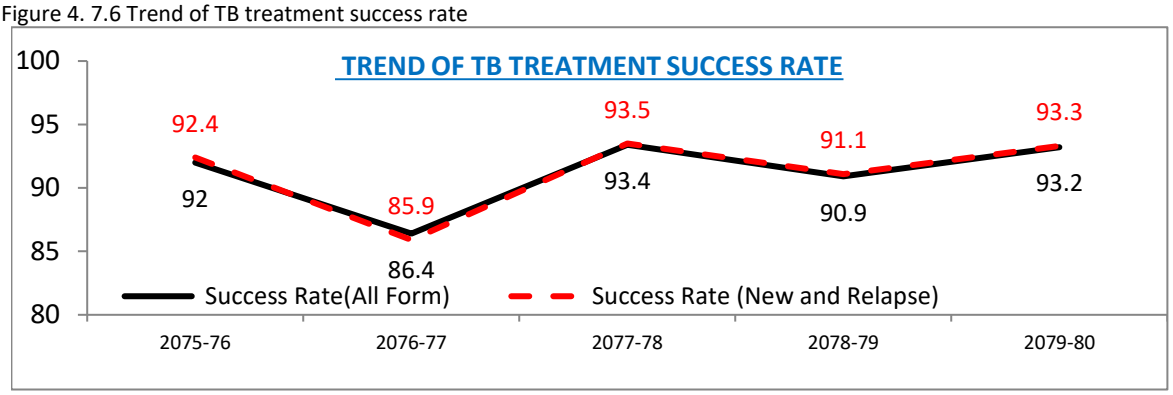


The data illustrates the case notification rates for tuberculosis (TB) over a five-year period, distinguishing between new and relapse cases as well as all forms of TB. In the fiscal year 2075/76, the case notification rate for new and relapse cases stood at 75.8, which declined to 66.9 in 2076/77 and further to 63.8 in 2077/78. However, there was a notable increase in the subsequent years, reaching 95.8 in 2078-79 and slightly decreasing to 89.4 in 2079-80. Similarly, the case notification rate for all forms of TB exhibited a parallel trend, with rates of 78.3, 68.8,

and 65.3 in the first three years, followed by an upward trend to 97.3 in 2078/79 and a subsequent decrease to 91.4 in 2079/80.

Treatment Outcome

Figure 4. 7.6 Trend of TB treatment success rate



According to Figure 4.7.6, which depicts the trend of Tuberculosis (TB) treatment success rates, the data provides insights into the treatment outcomes over a span of five years. The analysis distinguishes between all forms of TB cases and new/relapse cases. The success rate for all forms of TB shows noticeable variations, ranging from 86.4% to 93.4%. In the fiscal year 2075-76, the success rate stood at 92%, followed by a decline to 86.4% in 2076-77. Subsequently, there was an increase to 93.4% in 2077-78, a slight decrease to 90.9% in 2078-79, and a subsequent rise to 93.2% in 2079-80. Similarly, the success rate for new and relapse cases fluctuates between 85.9% and 93.5%

Table 4.7.4. treatment outcomes of TB patient

S.N.	District	Treatment Success Rate	Case Fatality Rate (%)	Failure rate	Loss to follow up rate (%)	Not evaluated rate
1	Dolpa	100	0	0	0	0
2	Mugu	100	0	0	0	0
3	Humla	96	0	0	0	4
4	Jumla	96	3	0	0.99	0
5	Kalikot	97.8	0	0	2.2	0
6	Dailekh	94.1	1.2	0.59	2.9	1.2
7	Jajarkot	92.2	3.5	0	3.5	0.87
8	Rukum West	92.6	4	0	1.7	1.7
9	Salyan	91.2	3.4	1.5	1.9	1.9
10	Surkhet	92	3	0.8	3	1.1
	Karnali Province	93.2	2.7	0.61	2.4	1.2

Table 4.7.4 provides an overview of the treatment outcomes for tuberculosis patients across different districts within Karnali Province. Notably, all districts have achieved a commendable treatment success rate of 90.0% and above, reflecting the effectiveness of TB management efforts. The province's average treatment failure rate is nominal, standing at 0.61%.

However, the data reveals challenges in terms of mortality rates during TB treatment, with around 2.7% of registered TB patients experiencing death. Particularly, Rukum West, Jajarkot, and Salyan districts exhibit higher case fatality rates at 4%, 3.5%, and 3.4%, respectively, indicating the need for targeted interventions in these areas. The reported loss to follow-up rates at 2.1%, along with 1.2% of cases not evaluated. Notably, Jajarkot and Surkhet districts experience a higher loss to follow-up rate, exceeding 3%, compared to other districts.

Drug Resistant TB Management

The initiation of Multi-Drug Resistant (MDR) TB services in the fiscal year 2062/063 represents a noteworthy achievement in tuberculosis (TB) management. In Karnali Province, Province Hospital in Surkhet and Karnali Academy of Health Sciences (KAHS) in Jumla have been designated as the primary Drug-Resistant Tuberculosis (DR-TB) Treatment Centers. Recognizing the importance of accessibility, the province has taken proactive steps to enhance the reach of DR-TB treatment by expanding DR-TB sub-centers to a total of 16 service sites.

Figure 4.7.7 Trend of DR TB Cases registration for recent fiscal years

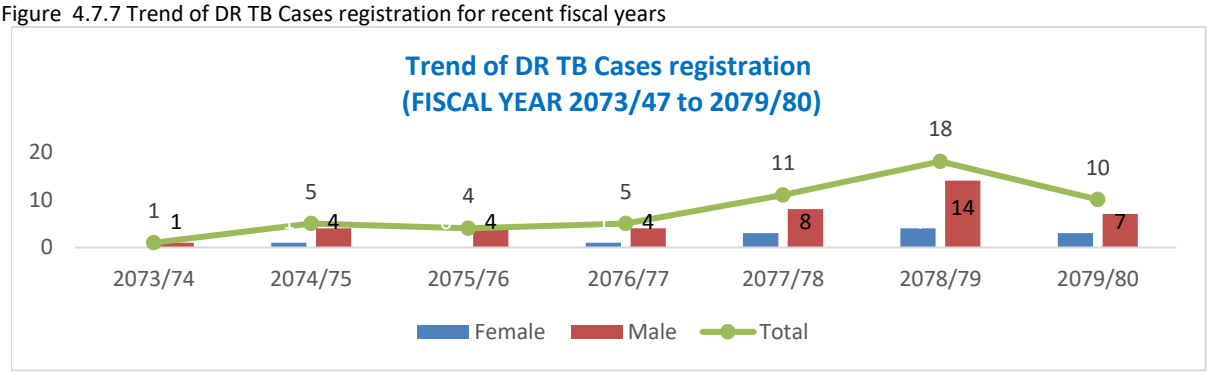


Figure 4.7.7 illustrates the registration pattern of Drug-Resistant Tuberculosis (DR TB) cases in Karnali Province. In the fiscal year 2073/74, a singular case was reported, witnessing a substantial increase to five cases in 2074/75. However, the following year, 2075/76, saw a decrease in the count to four. A slight uptick occurred in 2076/77, totaling five cases. Notably, a significant rise was observed in 2077/78, reaching a total count of 11 cases. The dataset's peak was recorded in the fiscal year 2078/79, with a total of 18 cases. Subsequently, in 2079/80, the total number of cases decreased to 10. Analyzing gender distribution, the data consistently shows that males contribute more cases than females in most years.

Figure 4.7.8 Regimen wise DR patient enrollment 2079/80

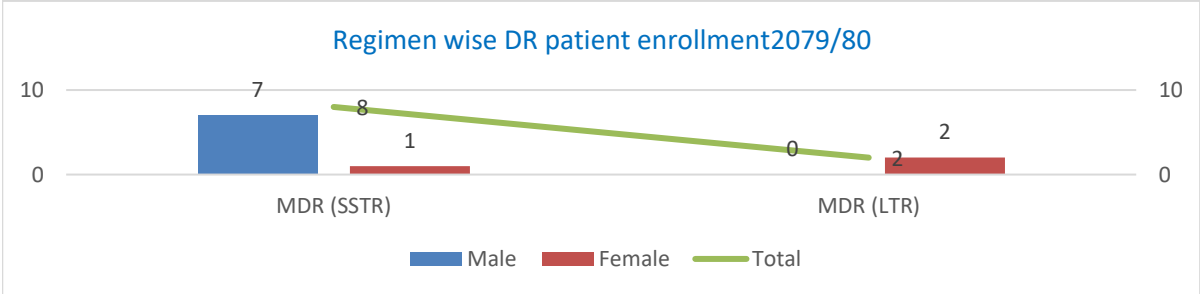


Figure 4.7.8 shows the trend of Drug resistant TB cases in the Karnali Province enrolled in DR centers. In fiscal year 2079/80, Karnali Province registered a total of 10 drug-resistant TB cases in DR centers. Among them, 8 patients were enrolled in the MDR(SSTR) regimen, while 2 patients chose the MDR(LTR) regimen.

MDR Treatment Outcome

Table 4.7.5 MDR Treatment Outcome (case registered in fiscal year 2073/74 to 2077/78)

Fiscal Year	**2075/ 76**	**2076/ 77**	**2077/78**	**2078/79**	**2079/80**
MDR case Registered in	**2073/ 74**	**2074/ 75**	**2075/76**	**2076/77**	**2077/78**
No. of MDR Case Registered	1	5	4	5	7
Cured	0	0	0	0	3
Completed	5	5	4	5	1
Failure	0	0	0	0	0
Died	0	0	0	0	2
Lost to Follow up	0	0	0	0	1
Transfer out	0	0	0	0	0
No Result	0	0	0	0	0
Treatment success Rate %	100%	100%	100%	100%	57.14

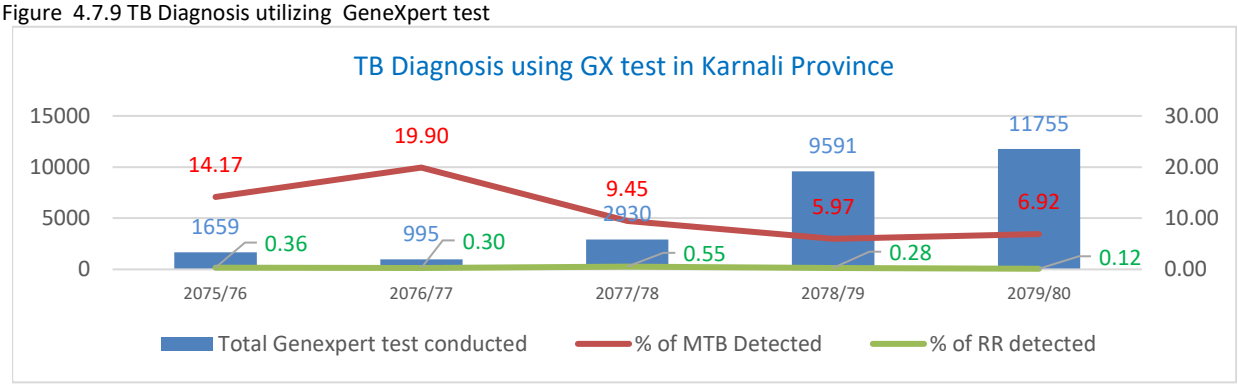
Table 4.7.5 shows the trend of MDR treatment outcome which shows treatment success was 57.14%. All registerd MDR cases completed their treatment.

TB DiagnosisGeneXpert

GeneXpert testing is pivotal for tuberculosis diagnosis, offering rapid and precise detection of TB bacteria, thereby facilitating prompt treatment initiation for affected individuals. In Karnali Province, GeneXpert testing sites are strategically located at KASH Jamla, Provincial Hospital Surkhet, PPHL Surkhet, and District Hospitals in Jajarkot, Rukum West, Salyan, Dailekh, Kalikot, and Mugu. These sites play a crucial role as central hubs for tuberculosis diagnosis, employing GeneXpert technology to conduct rapid and accurate testing for TB bacteria.

Figure 4.7.9 illustrates the utilization patterns of GeneXpert testing over five fiscal years. In the inaugural year, 2075/76, a total of 1659 GeneXpert tests were conducted, revealing a 14.17% detection rate for Mycobacterium tuberculosis (MTB) and a 0.36% rate for Rifampicin Resistance (RR). The subsequent fiscal year, 2076/77, witnessed a reduction in the number of tests to 995, accompanied by a significant uptick in the MTB detection rate to 19.90%, although with a slight decline in RR detection to 0.30%. As GeneXpert usage surged in 2077/78 with 2930 tests, the MTB detection rate decreased to 9.45%, while RR detection rose to 0.55%. In the following fiscal year, 2078/79, the number of GeneXpert tests markedly increased to 9591, but both MTB and RR detection rates decreased to 5.97% and 0.28%, respectively. For the fiscal year 2079/80, GeneXpert utilization peaked with 11,755 tests, resulting in an RR detection rate of 0.12%, while the MTB detection rate stood at 6.92%.

Figure 4.7.9 TB Diagnosis utilizing GeneXpert test



Microscopic Test

In Karnali Province, 32 designated microscopic centers have been established within hospitals, primary health centers, and health posts to streamline tuberculosis diagnosis. These centers operate regularly, providing examinations for individuals suspected of having tuberculosis.

Figure 4.7.10 District wise microscopic test

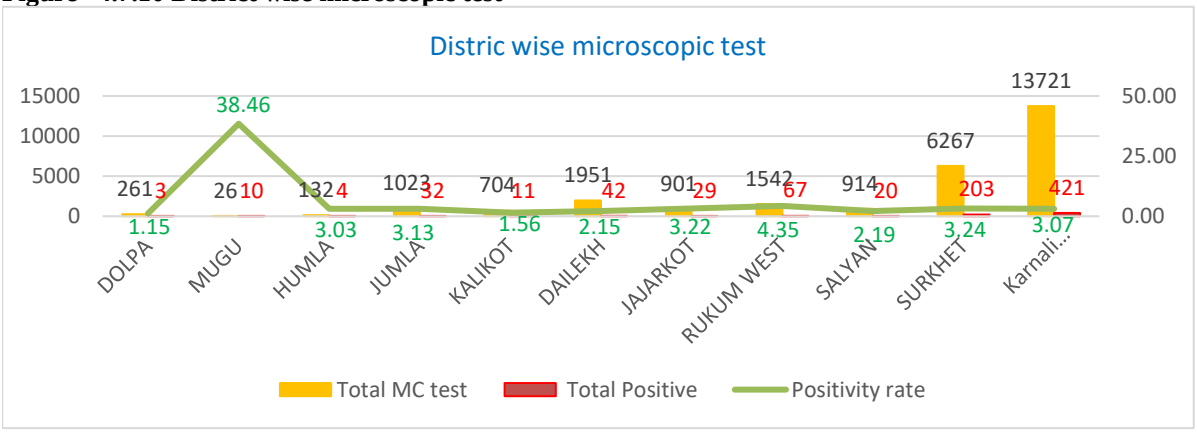


Figure 4.7.10 presents tuberculosis (TB) sputum test results from various districts within Karnali Province. Across the region, TB testing varied significantly, with Dolpa conducting 261 tests, revealing a low positivity rate of 1.15%, whereas Mugu had a much smaller sample size of 26 tests but exhibited a significantly higher positivity rate of 38.46%. Other districts like Humla, Jumla, and Surkhet also demonstrated varying positivity rates ranging from 3.03% to 3.24%. Rukum West stood out with a relatively higher positivity rate of 4.35% despite conducting 1542 tests. Conversely, Kalikot reported a lower positivity rate of 1.56%. Dailekh, Jajarkot, and Salyan had positivity rates ranging from 2.15% to 3.22%.

Table 4.7.6 Districtwise TB-Sputum Microscopy test

District	2077/78			2078/79			2079/80		
	Positive	Negative	Total	Positive	Negative	Total	Positive	Negative	Total
Dolpa	5	80	85	5	70	75	3	258	261
Mugu	3	13	16	9	19	28	10	16	26
Humla	4	141	145	3	143	146	4	128	132
Jumla	8	139	147	8	8	16	32	991	1023
Kalikot	17	587	604	19	311	330	11	693	704
Dailekh	60	862	922	123	880	1003	42	1909	1951
Jajarkot	18	424	442	15	674	689	29	872	901
Rukum West	56	554	610	35	671	706	67	1475	1542
Salyan	25	572	597	33	479	512	20	894	914
Surkhet	113	2111	2224	385	3901	4286	203	6064	6267
Karnali Province	**309**	**5483**	**5792**	**635**	**7156**	**7791**	**421**	**13300**	**13721**

The table provides tuberculosis (TB) case data spanning three consecutive years (2077/78, 2078/79, and 2079/80) across various districts of Karnali Province. Throughout the province, TB cases showed annual fluctuations, indicative of dynamic trends in disease prevalence and detection efforts. Mugu consistently reported a relatively low number of cases, with minimal fluctuations observed over the years. In contrast, districts like Surkhet experienced notable increases across all three years. Overall, Karnali Province witnessed an aggregate rise in TB-sputum microscopic test from 5792 in 2077/78 to 7791 in 2078/79, followed by a slight increase to 13721 in 2079/80.

4.8 HIV, AIDS & STI

Background

The first case of HIV identification in Nepal dates back to 1988, prompting the country to respond to the epidemic by introducing its first National Policy on Acquired Immune Deficiency Syndrome (AIDS) and Sexually Transmitted Diseases (STDs) Control in 1995 (2052 BS). Recognizing the dynamic nature of the HIV epidemic, Nepal revisited and updated its initial national policy in 1995, eventually endorsing the latest version known as the "National Policy on HIV and Sexually Transmitted Infections (STIs), 2011." A new National HIV Strategic Plan 2021-2026 has been launched to achieve global goals of 95-95-95 by 2030, 90% of all people living with HIV (PLHIV) will know their HIV status by 2020, 95% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy, and by 2020, 95% of all people receiving antiretroviral therapy will have viral suppression. 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), migrants' workers (MW) and Transgender (TG) People in Nepal. Nepal started its Prevention of Mother to Child Transmission (PMTCT) program in 2005. Pursuant to national strategy to eliminate new HIV infection community based PMTCT services has been expanded in all district of Nepal Where HIV screening and counselling is done among every ANC Visitors.

Karnali Province in Nepal is classified as a low HIV prevalence zone. The province hosts 16 HIV Testing and Counseling (HTC) sites. Notably, migrants who relocate to high-risk areas, particularly Indian cities with elevated HIV prevalence, constitute a key population in Karnali Province. Despite the potential risk associated with migration, there are only six Antiretroviral Therapy (ART) sites within the province. To address and mitigate HIV transmission risks, comprehensive services are available across Karnali Province. Community-Based Prevention of Mother-to-Child Transmission (CB-PMTCT) services are accessible in all districts of the province, and a prevention treatment program is actively implemented in one district.
Furthermore, Community and Home-Based Care (CHBC) services are offered in Surkhet, Kalikot, Dailekh, Salyan, and Rukum West districts. Additionally, Community Care Center (CCC) services are available in Dailekh, Rukum West, and Surkhet districts. A Harm Reduction Program is specifically implemented in Surkhet district. To support HIV management and monitoring, three CD4 testing centers are established in Province Hospital, KAHS (Karnali Academy of Health Sciences), and Dailekh Hospital. Moreover, Viral Load testing is conducted at the Province Hospital in Surkhet.

Major Activities Carried Out in fiscal year 2079/80 (2021/2022)

- Conducted HIV Counseling and Testing through HTC centers
- Provided intact care to PLHIV through Community care centers
- Provided Anti-Retroviral Therapy (ART) Services through ART centers
- Community Based Prevention of Mother to Child Transmission (PMTCT) of HIV
- Various day celebration programs like as world AIDS Day, National Condom Day and awareness activities through different program were done

- Opportunistic Infection (OI) management
- Sexually transmitted infection (STI) management
- HIV test kit supply
- Condom supply to all health facilities including HTC sites, ART sites
- Medicine supply to manage sexually transmitted infection (STI)
- Transport HIV Viral Load sample to NPHL for Viral Load testing of ART Clients
- Migrant and PWID program in Surkhet
- Care and support program in Surkhet, Salyan, Dailekh, Kalikot and Rukum West
- Migrant program by Kapilvastu Integrated Development Services (KIDS) – HIV Reach, BCC, Condom distribution, HIV self testing etc.
- PWID Program by Nepal National Social Welfare Association (NNSWA)- HIV Reach, BCC, Condom distribution, safe needle syringe services etc.
- Care and Support program by NAP+N (National Association of People living with HIV in Nepal)
- Nutrition support to TB/HIV- CABA
- Supervision and monitoring

HIV testing and Counselling Services in Karnali Province

HIV Testing and Counseling (HTC) services were introduced in Nepal in 1995, establishing a crucial entry point for comprehensive HIV care services. These services, provided free of cost, extend their reach to both key populations at higher risk and the general population nationwide. In the fiscal year 2079/80, Karnali Province operated 15 HTC sites, offering HIV testing services to a total of 17,249 individuals. Within this testing, 56 new cases were identified as HIV positive.

Table 4.8. 1. HIV testing and counselling Services in Karnali Province

Indicators	2075/76	2076/77	2077/78	2078/79	2079/80
Total tested for HIV	3512	2245	1497	12090	17249
Total HIV Positive reported	42	30	30	70	56
Hiv Positivity Rate	1.20	1.34	2.00	0.58	0.32

Table 4.8.1 presents data on HIV testing and counseling services in Karnali Province across five fiscal years from 2075/76 to 2079/80, revealing pattern in testing and positivity rates. The total number of individuals tested for HIV exhibited fluctuations, starting at 3,512 in 2075/76, decreasing to 2,245 in 2076/77, and further declining to 1,497 in 2077/78. However, a significant surge occurred in 2078/79, with 12,090 individuals tested, followed by a continued rise in 2079/80, reaching 17,249 individuals.

Reported cases of HIV-positive individuals demonstrated variability, with 42 cases in 2075/76, 30 cases in both 2076/77 and 2077/78, experiencing a notable increase to 70 cases in 2078/79, and subsequently decreasing to 56 cases in 2079/80. The HIV positivity rate, indicating the proportion of positive cases among those tested, ranged from 1.20% in 2075/76, increased to 1.34% in 2076/77, reached a peak at 2.00% in 2077/78, and then significantly dropped to 0.58% in

2078/79. In the fiscal year 2079/80, the HIV positivity rate among the total tested population in Karnali Province was recorded at 0.32 percent.

Table 4.8.2. Distribution of HIV test by districts for recent fiscal years 2077/78 to 2079/80 in Karnali

S.N.	District	2077/78			2078/79			2079/80		
		Test	Positive reported	Positivity Rate%	Test	Positive reported	Positivity Rate%	Test	Positive reported	Positivity Rate%
1	Dolpa	0	0	0	0	0	0	0	0	0
2	Mugu	0	0	0	0	0	0	0	0	0
3	Humla	0	0	0	762	0	0	725	0	0
4	Jumla	15	0	0	0	0	0	0	0	0
5	Kalikot	149	0	0.00	422	6	1.42	224	2	0.89
6	Dailekh	606	3	0.50	1227	5	0.41	773	6	0.78
7	Jajarkot	0	0	0	4	0	0	0	0	0
8	Rukum West	20	1	5	155	4	2.58	2527	3	0.12
9	Salyan	0	0	0	56	0	0	44	1	2.27
10	Surkhet	707	26	3.68	9464	55	0.58	12956	44	0.34
	Karnali Province	1497	30	2.00	12090	70	0.58	17249	56	0.32

Table 4.8.2 provides a district-wise overview of the trend in HIV testing and positive results reported in Karnali Province for the last three fiscal years. The comparative analysis indicates a gradual increase in HIV testing over each of these years. In the current fiscal year, 2079/80, the district-wise distribution of HIV testing reveals that Surkhet has the highest number, with 12,956 tests conducted, followed by Rukum West with 2,527 tests and Dailekh with 773 tests. Conversely, no HIV tests were conducted in Dolpa, Mugu, Humla, Jumla, and Jajarkot districts during this period. Examining the positive results reported for the same fiscal year, Surkhet recorded the highest number of positive cases (44), followed by Dailekh with 6 cases and Rukum West with 3 cases.

ART Services in Karnali Province

In 2004, the government took a significant step towards reducing mortality among HIV-infected individuals by initiating the provision of free Antiretroviral (ARV) drugs in public hospitals. This milestone was followed by the development of the first-ever national guidelines on ARV treatment, marking a crucial effort in addressing the HIV epidemic. Subsequently, a comprehensive range of activities has been implemented with the primary goal of delivering Treatment, Care, and Support services to People Living with HIV (PLHIV).

Aligned with the National HIV Testing and Treatment Guidelines of 2017, Karnali Province has adopted the 'test and treat' strategy for treating PLHIV. This approach emphasizes early initiation of Antiretroviral Therapy (ART) upon diagnosis. Importantly, ART is provided free of cost to all PLHIV in Karnali Province, ensuring accessibility to essential medications.

Within the province, there are six ART sites, namely Province Hospital, Dailekh Hospital, Kalikot Hospital, Salyan Hospital, Rukum West Hospital, and Rakam Karnali Health Post in Dailekh.

Additionally, three CD4 testing sites are available at Province Hospital, Karnali Academy of Health Science in Jumla, and Dailekh Hospital. These facilities collectively contribute to the provision of critical medical services, supporting the health and well-being of individuals living with HIV in Karnali Province.

Table 4.8.3 Total clients on ART fiscal year 2075/76-2079/80

Fiscal Year	Kalikot	Dailekh	Rukum-West	Salyan	Surkhet	Total
2075/76	33	178	43	19	317	590
2076/77	37	192	48	19	305	601
2077/78	43	193	56	26	333	651
2078/79	40	203	59	26	362	690
2079/80	40	215	65	31	362	713

Table 4.8.3 shows the number of clients those ever enrolled in ART sites at the beginning and end of fiscal year. The data illustrates the cumulative enrollment of individuals diagnosed with HIV on Antiretroviral Therapy (ART) in various districts of Karnali Province over a five-year period, spanning from 2075/76 to 2079/80. Notably, the figures represent an ongoing total, reflecting the accumulation of HIV cases enrolled in ART programs. In Kalikot, cumulative enrollments range from 33 to 40 individuals, with Dailekh consistently reporting higher cumulative numbers, varying between 178 and 215. Rukum-West demonstrates a fluctuating cumulative pattern, with enrollments ranging from 43 to 65. Salyan and Surkhet districts show similar cumulative trends, with counts ranging from 19 to 31 and 305 to 362, respectively. The overall trend indicates a progressive increase in the cumulative number of HIV-positive individuals enrolled in ART across Karnali Province, reaching 713 by the end of the fiscal year 2079/80.

Table 4.8. 4 Outcome of ART Program in Karnali Province

Fiscal Year	Clients ever enrolled in ART at the end of last month of the year	New client started ART	Transfer in	Transfer out	Death (Cumulative	Lost to follow up	Missing	Total number of clients currently on ART (End of Asar)
2075/76	807	60	104	76	96	20	24	590
2076/77	590	35	25	26	109	18	15	601
2077/78	601	41	19	19	129	20	24	651
2078/79	651	80	26	70	147	23	35	691
2079/80	691	57	33	50	160	2	54	713

Table 4.8.3 presents an overview of Antiretroviral Therapy (ART) outcomes in Karnali Province over a five-year period. Specifically focusing on the fiscal year 2079/80, the data indicates that 691 clients were already enrolled in ART at the end of the previous year. During this fiscal year, 57 new clients-initiated ART, 33 clients transferred into ART sites, and 50 clients transferred

out. The recorded cumulative deaths reached 160, with 2 clients lost to follow up and 54 reported as missing. Consequently, the total number of clients actively receiving ART by the end of the fiscal year was 713.

PMTCT Services in Karnali Province

Community based PMTCT services has been expanded to all district in Karnali province. Among those a total of 35,966 women were tested for HIV during pregnancy, delivery and post-natal period and 3 were found to be positive in fiscal year 2079/80, Most of them have been tested in Surkhet (13800), Dailekh (5621) and Rukum west (5198), while positive has been found in Salyan (1) and Surkhet (2). Comparing the 5 years of HIV testing, it can be seen that the number of people getting tested is gradually increasing every year.

Table 4.8. 5. Service Statistics on PMTCT

District	2075/76	2076/77	2077/78	2078/79	2079/80
Tested for HIV (ANC, Labor, and PNC)	30338	25094	31246	33040	35966
HIV Positive (ANC, Labor, and PNC)	2	2	3	1	3

Table 4.8.5 provides a detailed analysis of HIV testing and positivity rates over five fiscal years within the framework of Antenatal Care (ANC), Labor, and Postnatal Care (PNC). In the initial fiscal year of 2075/76, 30,338 individuals underwent HIV testing across specified districts, yielding two positive cases. This trend persisted in subsequent fiscal years (2076/77 and 2077/78), with 25,094 and 31,246 individuals tested, resulting in two and three positive cases, respectively. In fiscal year 2078/79, testing increased to 33,040 individuals, yielding a single positive case. Notably, in the most recent fiscal year, 2079/80, testing expanded to 35,966 individuals, with three individuals testing positive for HIV.

Table 4.8. 6. Districtwide Service Statistics on PMTCT 2079/80

District	Women tested for HIV ((ANC, Delivery, and PNC)	Positive Women HIV ((ANC, Delivery, and PNC) identified	Positivity %
Dolpa	524	0	0
Mugu	1288	0	0
Humla	708	0	0
Jumla	2045	0	0
Kalikot	2563	0	0
Dailekh	5621	0	0
Jajarkot	1715	0	0
Rukum West	5198	0	0
Salyan	2504	1	0.04
Surkhet	13800	2	0.01
Karnali Province	35966	3	0.01

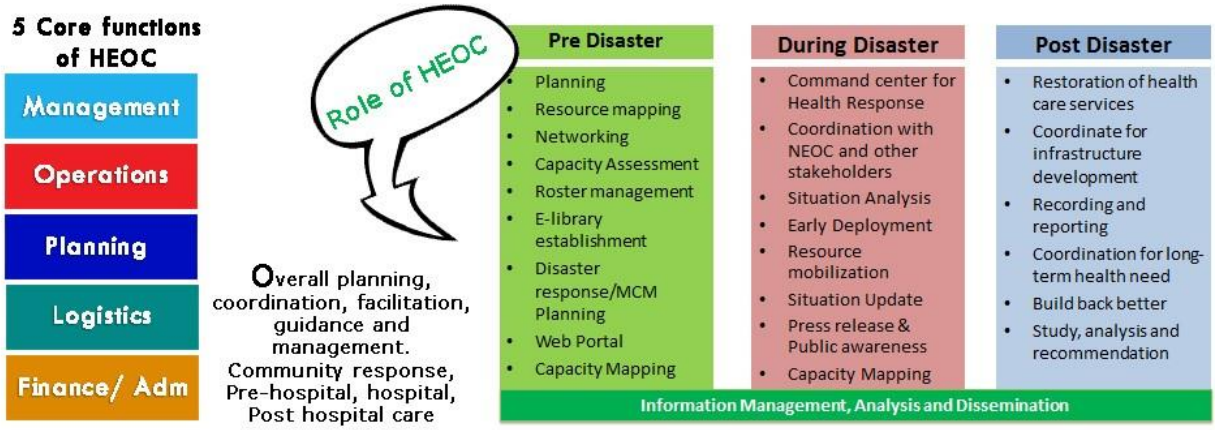
Table 4.8.6 presents data detailing HIV testing and positivity rates in various districts of Karnali Province, with a specific focus on the number of women tested during Antenatal Care (ANC), Delivery, and Postnatal Care (PNC) services for the fiscal year 2079/80. During this period, a total of 35,966 women underwent HIV testing, leading to the identification of three positive cases. This resulted in an overall positivity rate of 0.01%. Noteworthy is the observation that the majority of districts reported no positive cases. However, Salyan recorded one positive case, contributing to a positivity rate of 0.04%, while Surkhet had two positive cases, resulting in a positivity rate of 0.01%.

Issues

- Data gap and inconsistency in reporting
- Low access for CD4 count and Viral load testing
- Timely supply of three-layer testing kits
- Coverage areas of targeted investigation
- Capacity enhancement of health workers on national guidelines
- Shortage of HIV test kits and medicine (YNART)
- Insufficient activities on capacity building of health workers
- Inadequate Monitoring and Supervision to the ART Program
- Low Financial support to Client
- Irregular supply of HIV test kit specially for CB-PMTCT program
- Tracking HIV positive mother and Exposed Child for EID
- Stigma among clients for HIV testing

4.9 Provincial Health Emergency Operation Center and Epidemic, Outbreak Management Response

When emergencies occur, coordination is necessary. Good coordination means less gaps and overlaps in the assistance delivered by humanitarian organizations. Provincial Health Emergency Operation Center PHEOC Surkhet has been established in the premises of Health Directorate office Kalagaun Surkhet in fiscal year 2074/75 with Incident Command System. The Provincial Health Emergency Operation Centers PHEOC has major core functions of coordination, planning, facilitation, and community response during disaster, prior to disaster and pre disaster. Along with this, preparedness, and response readiness such as hub and satellite hospitals network, prepositioning and replenishment of emergency medical logistics, risk assessment, human resources management are the role and functions of provincial health emergency operation center.



The regular activities of PHEOC for outbreak preparedness and management in fiscal year 2079/80 were as follows:

Preparedness planning for outbreaks, epidemics, and unwanted health events

- Incidence Command System established with the leadership of health directorate.
- Monitoring and supervision of disease epidemics, outbreak preparedness, prevention, and control activities.
- Daily update and reporting of epidemic prone disease including global pandemic COVID-19
- Weekly video conferencing with MoHP and other provinces
- Hub and Satellite hospitals identified, and connection been established between these two types of hospitals
- Emergency medical deployment team formulated at provincial hospital.

- Health facility rapid assessment conducted for COVID response and preparedness in KAHS and provincial hospital.
- Virtual meetings and training conducted with health coordinator, district COVID focal person for Case Investigation, Contact tracing and data management.

Rapid Response Teams for Investigating and Responding to Outbreaks and Epidemics

- Ensuring the formation of rapid response teams at provincial, district and community levels and their mobilization during outbreaks and epidemics.
- Responding to outbreaks through awareness activities and IEC activities, risk communication, media monitoring and case management.
- One FMO, one IMA, two CSA from WHO on duty station for technical support.

Table 4.9.1: Suicidal death data in Karnali province of last two fiscal year 2076/77 and 2077/78

SN	District	2077/78	2078/79	2079/80
1	Dolpa	0	2	0
2	Mugu	5	8	4
3	Humla	3	1	6
4	Jumla	18	7	6
5	Kalikot	15	17	12
6	Dailekh	57	56	44
7	Jajarkot	30	17	19
8	Rukm west	35	26	28
9	Salyan	71	53	45
10	Surkhet	128	102	109
Total		362	289	273

Table 4.9.1 illustrates a three-year trend from fiscal years 2077/78 to 2079/80, depicting a notable decline in the total number of suicidal deaths. In the initial fiscal year, 2077/78, the reported deaths totaled 362, showing a decrease to 289 in 2078/79, and a further decline to 273 in 2079/80.

Delving into the district-wise data for the fiscal year 2079/80, Surkhet reported the highest number of suicides, recording 109 cases. Other districts, including Dailekh, Salyan, and Rukum West, also reported substantial figures with 44, 45, and 28 deaths, respectively.

Table 4.9.2. : Number of road traffic accidents in the fiscal year 2077/078-2079/80

SN	District	2077/78			2078/79			2079/80		
		Number of Accident	Death	Injured	Number of Accident	Death	Injured	Number of Accident	Death	Injured
1.	Dolpa	8	4	9	3	3	6	6	2	1
2.	Mugu	39	16	48	8	35	24	4	2	4
3.	Humla	3	5	19	3	0	4	5	2	1
4.	Jumla	21	6	48	20	10	49	24	11	15
5.	Kalikot	19	6	15	19	8	33	18	16	17
6.	Dailekh	25	11	34	40	18	122	39	15	29
7.	Jajarkot	18	12	20	19	24	69	31	17	21
8.	Rukum west	23	6	23	23	9	86	50	13	49
9.	Salyan	31	10	82	54	34	139	51	23	59
10.	Surkhet	104	22	145	1170	28	342	320	30	135
	Total	291	98	443	359	169	874	548	131	331

Table 4.9.2 presents three fiscal years—2077/78, 2078/79, and 2079/80—of accident data across various districts, encompassing, deaths, and injuries. In 2077/78, Dolpa reported 4 deaths and 9 injuries. The subsequent fiscal years saw variations, with a total of 98 deaths, and 443 injuries in the overall period. District-wise, Surkhet reported the highest number of accidents in 2079/80, leading to 30 deaths and 135 injuries. Dailekh also witnessed a significant increase in 2077/78 to 39 in 2079/80, resulting in 15 deaths and 29 injuries. Salyan reported consistent high numbers, with 51 accidents in 2079/80, causing 23 deaths and 59 injuries.

Table 4.9.3. Number of flood and landslide related accidents including number of death and injured fiscal year 2077/78 and fiscal year 2079/80

SN	District	2077/78					2078/79					2079/80				
		events	Male	Female	Male	Female	events	Male	Female	Male	Female	events	Male	Female	Male	Female
1	Dolpa	10	1	0	0	1	10	2	2	0	10	6	1	0	0	0
2	Mugu	42	2	0	2	1	46	2	0	2	46	22	5	4	6	0
3	Humla	57	0	0	1	0	365	5	1	1	365	1	4	3	3	3
4	Jumla	23	0	0	4	0	75	9	7	4	75	14	6	5	3	2
5	Kalikot	30	25	26	15	13	203	5	5	5	203	50	7	1	5	5
6	Dailekh	40	3	1	7	8	112	3	1	4	112	9	1	1	1	0
7	Jajarkot	33	5	1	10	1	112	7	1	6	112	15	1	1	0	1
8	Rukum	12	2	2	0	0	61	3	2	3	61	13	1	2	0	3
9	Salyan	54	2	1	2	5	136	5	3	7	136	234	1	0	0	0
10	Surkhet	76	2	3	5	8	95	1	4	0	95	23	0	0	2	0
	Total	377	42	34	46	37	1215	42	26	33	1215	387	27	17	20	14

Karnali Provincial Dispatch Center

The Karnali Provincial Dispatch Center has been established under the Health and Social Development Ministry (HSD) with the primary objective of overseeing ambulance services in the Karnali province. Its purpose is to efficiently coordinate the transportation of patients to the closest dispatch point, ensuring timely and effective medical assistance.

Established in the fiscal year 2079/80, the Karnali Provincial Dispatch Center has upgraded its ambulance services by incorporating GPS technology across its array of emergency vehicles. With 102 designated as the customer contact number, a toll-free telephone service has been arranged. In case of an ambulance request through the telephone service, the center promptly dispatches the nearest available emergency vehicle based on the caller's location, ensuring a swift and effective emergency response. This service operates around the clock, providing assistance 24 hours a day.

4.10 Non-Communicable Disease (NCD)

Non-communicable disease (NCD) is emerging as the leading cause the morbidity and mortality due to changes of unhealthy lifestyles, urbanization, demographic and economic transition. These conditions are often associated with older age groups, but evidence shows that People of all age groups are affected by NCDs. According to the Noncommunicable Diseases Progress Monitor 2022(WHO), total 66 percent of deaths in Nepal are caused by non-communicable diseases, while 22 percent of those who die probability of premature mortality from NCDs,Thus, Nepal has adopted PEN package for primary care in resource setting developed by WHO.

Key strategies for the prevention and control of NCDs include:
- Reducing exposure to risk factors through health promotion and primary prevention,
- Early diagnosis and management of people with NCDs, and
- Surveillance to monitor trends in risk factors and diseases.

Nepal PEN package has been introduced to screen, diagnosis, treat and refer of cardiovascular disease, COPD, cancer and diabetes at health post and primary health care center for early detection and management within community. This package has 4 protocols as follows:

1. Prevention of heart attack, stroke, and kidney disease through integrated management of diabetes and hypertension
2. Health Education and counseling of healthy behavior
3. Management of chronic obstructive pulmonary diseases
4. Assessment and referral of women with suspected cancer (breast, cervical)

Key Activities Carried out in FY 2079/80

- 5 days provincial ToT for Package of Essential Non-Communicable Diseases (PEN)
- One batch ToT for 10 disticts to medical officers
- Four days PEN package training (one batch) in Dailekh, Salyan and Surkhet Health workers,
- Procurement and supply of drugs and equipment's in program districts

Key Statistics

Table 4.10.1. District-wise distribution of major non-communicable diseases (New case) 2079/80

SN	District	Hypertension	Diabetes	COPD	Asthma
1.	Dolpa	127	8	94	17
2.	Mugu	13	3	127	93
3.	Humla	267	5	625	381
4.	Jumla	37	12	182	121
5.	Kalikot	131	27	398	304
6.	Dailekh	663	68	748	1141

7.	Jajarkot	103	36	152	93
8.	Rukum West	1798	456	2161	315
9.	Salyan	1133	167	480	924
10.	Surkhet	2686	1293	782	803
	KARNALI PROVINCE	6958	2075	5749	4192

Source: NCD DHIS2

Table 4.10.1 provides a comprehensive overview of health data for districts in the Karnali Province, highlighting substantial variations in the prevalence of key non-communicable diseases (NCDs) such as hypertension, diabetes, chronic obstructive pulmonary disease (COPD), and asthma. Notably, Dailekh emerges as a district with the highest reported cases of hypertension (663), diabetes (68), and asthma (1141). Rukum West closely follows with significant figures for hypertension (1798), diabetes (456), and COPD (2161).

Surkhet exhibits elevated numbers across all health conditions, recording the highest cases of diabetes (1293) and substantial figures for hypertension (2686), COPD (782), and asthma (803). This could be indicative of various factors such as population density, lifestyle, or access to healthcare facilities.

In terms of overall the Karnali Province faces a concerning health burden, particularly in the cases of hypertension and COPD. The cumulative reported cases for hypertension, diabetes, COPD, and asthma are alarming, with totals of 6958, 2075, 5749, and 4192 cases, respectively. However, it is noteworthy that a significant portion of the hospital's NCD data could not be incorporated into the NCD program dataset.

Table 4.10.2. District-wise distribution of major non-communicable diseases (in OPD morbidity) 2079/80

Data	Hypertension			Diabetes Mellitus (DM) Cases			Ischemic Heart Disease			COPD			Bronchial Asthma		
District	2077/78	2078/ 79	2079/80	2077/78	2078/ 79	2079/80	2077/78	2078/ 79	2079/80	2077/78	2078/ 79	2079/80	2077/78	2078/ 79	2079/80
Dolpa	748	706	603	0	0	4	0	0	0	464	438	398	582	452	582
Mugu	174	90	222	6	19	5	0	0	1	1398	1062	1077	944	719	544
Humla	1116	1031	999	29	46	7	7	6	0	2124	2133	1533	1918	1769	1297
Jumla	345	117	645	179	123	391	10	3	33	1872	1152	2474	1455	948	1640
Kalikot	575	560	962	31	59	67	0	0	0	2674	2405	2841	3216	2815	2777
Dailekh	1575	1817	3166	247	320	337	10	13	19	2002	2007	2453	5471	4937	5154
Jajarkot	667	792	590	74	138	150	0	3	0	10111	2156	1962	3063	2403	1979
Rukum West	2892	2802	3962	1434	742	488	18	17	7	4357	4304	4445	3884	3358	1772
Salyan	5029	3460	3976	366	431	500	15	0	0	2291	2063	2046	6569	4853	4146
Surkhet	7584	8395	14737	4232	4726	10838	12	20	113	3692	2888	6278	5575	4972	5372
KARNALI PROVINCE	20705	19770	29862	6598	6604	12787	72	62	173	30985	20608	25507	32677	27226	25263

Source: OPD morbidity DHIS2

Table 4.10.1 presents a comprehensive overview of Outpatient Department (OPD) visit data for various districts in the Karnali Province, spanning the past three years (2077/78, 2078/79, and 2079/80). The data encompasses cases related to hypertension, diabetes mellitus (DM), ischemic heart disease, chronic obstructive pulmonary disease (COPD), and bronchial asthma.

Dailekh consistently stands out with a high number of OPD visits across all health conditions, demonstrating noteworthy increases over the three years. Specifically, cases of hypertension surged from 1575 to 3166, DM from 247 to 337, and COPD from 10 to 19. Similarly, Rukum West exhibits significant figures, particularly in ischemic heart disease (1434 to 488) and COPD (18 to 7).

Surkhet emerges as a district with substantial OPD visits, recording the highest figures in various health conditions. The trend over the three years indicates a consistent increase in the number of visits for hypertension, diabetes, ischemic heart disease, COPD, and bronchial asthma.

The cumulative figures for the entire Karnali Province reveal a considerable burden of health conditions, underscoring the importance of addressing these issues at a regional level. The total OPD visits for hypertension, diabetes, ischemic heart disease, COPD, and bronchial asthma stand at 30,985, 20,608, 25,507, 32,677, and 27,226, respectively.

Table 4.10.3. District-wise distribution of major Injuries cases (New case)2079/80

SN	District	RTI	Fall	Burn	Occupational Injury	Voilence
1.	Dolpa	22	86	32	25	
2.	Mugu	12	283	40	49	1
3.	Humla	6	197	131	6	2
4.	Jumla	26	181	70	52	
5.	Kalikot	45	778	105	208	19
6.	Dailekh	49	500	162	168	12
7.	Jajarkot	40	206	32	4	
8.	Rukum West	151	694	154	348	
9.	Salyan	64	952	174	494	13
10.	Surkhet	814	1100	211	828	19
	KARNALI PROVINCE	1229	4977	1111	2182	66

4.11 Mental Health

Mental health is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to contribute to her or his community.

World Health Organization (WHO) has estimated that in Nepal, 3.2% of total population are living with depression and 3.6% are with anxiety disorders resulting in 5.4% and 3.4% of total years lived with disability respectively. National Mental Health survey, The recent pilot study conducted by the Nepal Health Research Council in 2020 has shed light on the prevalence of mental health problems in the population. The findings indicate that 10% of adults and 5.2% among adolescents in the surveyed population are grappling with mental health issues. Similarly, suicide, considered a proxy for mental disorders, In the recent pilot study conducted by the NHRC, the findings regarding suicidal thoughts revealed that among adults, 7.2% reported experiencing such thoughts. In contrast, among adolescents, 3.9% indicated having suicidal thoughts.

In Karnali Province, the mental health prevalence indicates significant findings. In terms of lifetime prevalence, 11% of adults and 4.9% of adolescents reported having experienced any mental disorder at some point in their lives. Additionally, 4.6% of adults indicated that they currently have a mental disorder.

Mental health initiatives are actively advancing at both district and local levels through collaborative endeavors involving organizations like CMC, TOP Nepal, and AWAZ, a dedicated partner specializing in mental health programs. These collaborative efforts extend to a diverse range of mental health programs in the region, including initiatives such as school mental health programs, psychosocial counseling, training sessions, and specialized mental health check-ups conducted by psychiatrists with expertise in the field.

Major Activities

- 2 batches of mhGAP training, module 2a and 2b to 42 medical officers and health workers of all districts conducted in Surkhet.
- Drug supply and provided drug to target patients
- Counseling and follow up

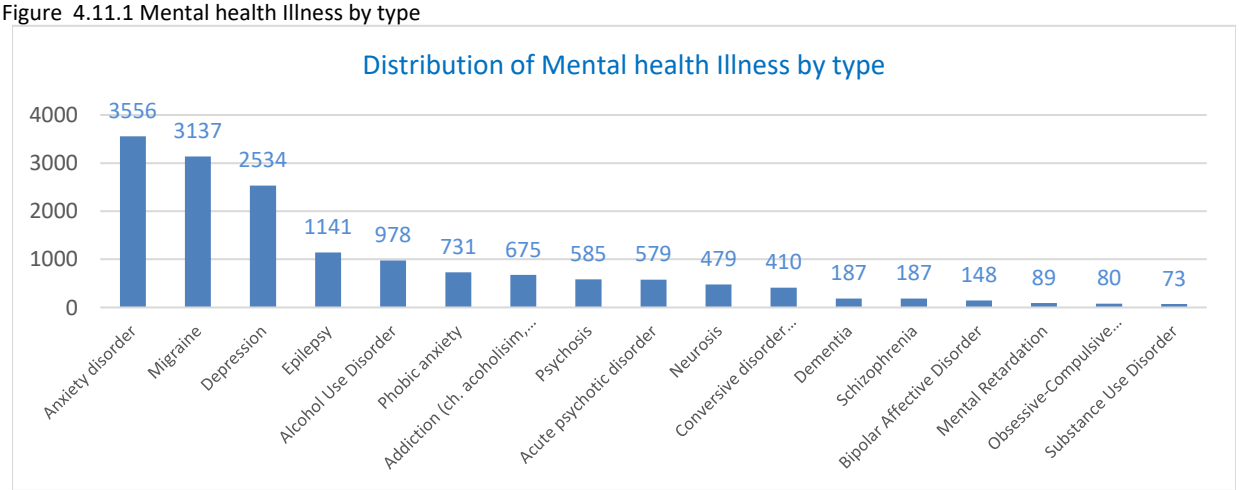
Table 4.11.1 District-wise distribution of mental diseases (New case) 2079/80

SN	District	Anxiety	Depression	Alcochol Use Disorder	Dementia	Epilepsy	Conversion	Psychosis	Suicide Attempt
1.	Dolpa								
2.	Mugu	7				1	2	1	
3.	Humla	34	19	83		7	1	5	
4.	Jumla	2	1						
5.	Kalikot	59	22	1	1	7	8	11	1
6.	Dailekh	50	38	3	1	14	2	9	
7.	Jajarkot	24	12	3		15	16	7	3
8.	Rukum West	930	101	42	1	185	24	19	7
9.	Salyan	258	132	10	1	78	23	33	2
10.	Surkhet	447	310	95	10	104	54	114	13
	KARNALI PROVINCE	1811	635	237	14	411	130	199	26

Data source: HMIS/NCD Report

Table 4.11.1 presents an overview of mental health problems (in NCD program) in Karnali province. The predominant mental health issues recognized in this region include Depression, Phobic anxiety, Psychosis, Schizophrenia, Epilepsy, Chronic Alcoholic Addiction, Hysteria, Dementia, Neurosis, Bipolar Disorder, Mental Retardation, Migraine, and obsessive-compulsive disorder. The reported number of cases is contingent upon the total population of Karnali accessing health facilities. Notably, mountainous districts such as Dolpa, Mugu, and Humla exhibit relatively lower instances of mental health cases. This data is sourced from the recently introduced reporting format for Non-Communicable Diseases (NCD), with registration commencing from the 2079/80 period. It is crucial to acknowledge that not all mental health cases were registered under the NCD program during this period, highlighting the need for a comprehensive understanding of mental health beyond the registered cases.

Figure 4.11.1 Mental health Illness by type



The mental health situation in the Karnali province during the fiscal year 2079/80 is outlined through a comprehensive array of cases, as reported in the data on outpatient department (OPD) visits. Anxiety disorder stands out as the most prevalent, with 3556 cases, closely followed by Migraine at 3137 cases and Depression at 2534 cases. Other notable conditions include Epilepsy with 1141 cases and Alcohol Use Disorder with 978 cases. The data further details occurrences of Phobic Anxiety (731 cases), Addiction (encompassing alcoholism, dipsomania, and drug-related cases, totaling 675), Psychosis (585), Acute Psychotic Disorder (579), and Neurosis (479). Conversion Disorder, identified as Hysteria, is reported in 410 cases. Additionally, Dementia and Schizophrenia each register 187 cases, while Bipolar Affective Disorder is noted in 148 cases. Mental Retardation is documented in 89 cases, and obsessive-compulsive disorder and substance use disorder round out the list with 80 and 73 cases, respectively.

Table 4.11.2 Trend of Mental Health Illness case in OPD Visit

Data / Period	2077/78	2078/79	2079 /80
Bipolar Affective Disorder	115	155	148
Conversive disorder (Hysteria)	291	152	410
Dementia	56	116	187
Depression	2069	1875	2534
Epilepsy	650	649	1141
Mental Illness (Mental disorder)	783	713	878
Mental Retardation	344	218	89
Migraine	1660	1944	3137
Neurosis	118	132	479
Obsessive-Compulsive Disorder	137	199	80
Anxiety	3246	4711	4296
Psychosis	198	256	585
Schizophrenia	148	134	187
Acute psychotic disorder			579
Alcohol Use Disorder			978
Substance Use Disorder			73
Addiction (ch. acoholisim, Dipsomania, Drug)	419	394	675

5. CURATIVE SERVICES

5.1 Curative Services

Background

Karnali Province Government is committed to raise the health status of rural and urban people by delivering high quality health services at the province, district and local level throughout the province. Curative services (emergency, outpatient and in-patient) are a highly public demanded component of health services. The policy regarding curative health is aimed at providing appropriate diagnosis, treatment, and referral through the health network from PHC outreach to the specialized hospitals. There are 35 public hospitals (KASH, Provincial, District and local level), 13 PHCC, 330 HPs, and private health facilities have been providing health services. Similarly, academic hospital, non-governmental hospitals, nursing homes, and private hospitals within the province are also providing curative services.

Objectives

- Reduce morbidity
- Reduce mortality
- Provide quality of health service (Early diagnosis, adequate and as well as prompt treatment)
- Utilize of referral system (if needed).

Major Activities Carried Out in fiscal year 2079/80(2022/2023)

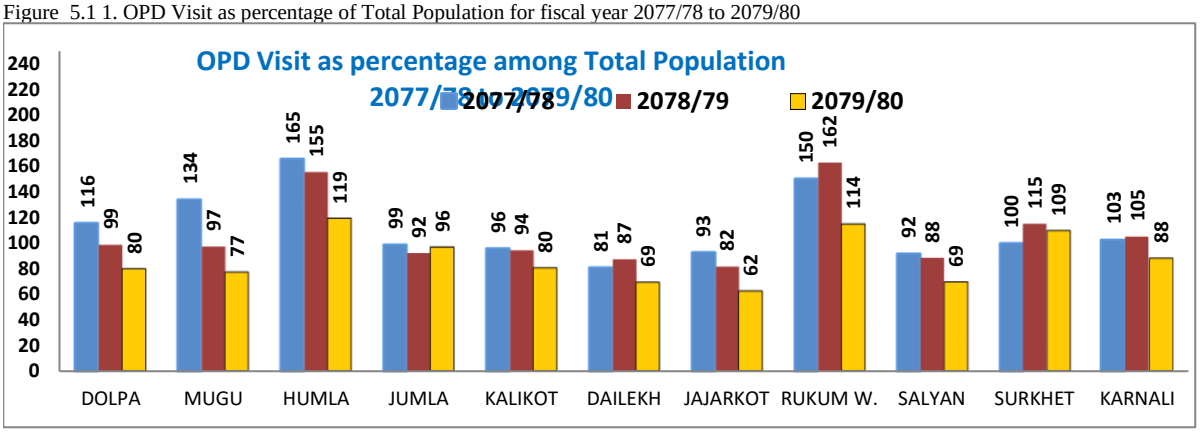
- Curative health services were provided through the existing health facilities through inpatient including emergency services and outpatient services
- Emergency, in-patient and out-patient services were provided by government hospitals, INGOs/NGOs, academy hospitals, nursing homes, poly-clinics and private hospitals as per the report available.
- Essential drugs and other logistic materials were provided to all public health institutions.
- Strengthened capacity of hospitals by providing training, onsite coaching, follow-ups, equipment supply and logistic support.
- Medical camps were organized in different places of different districts.
- Supportive supervision & monitoring of public & non-public hospitals.

Analysis of Service Statistics

Out Patient Department

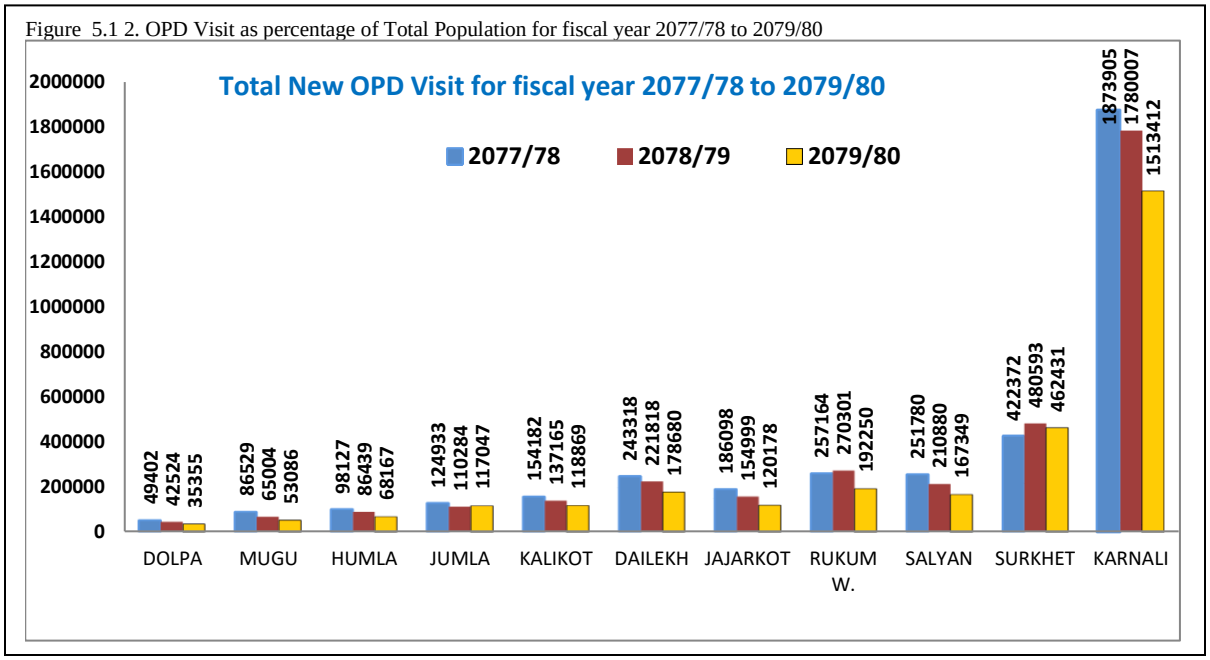
Outpatients' services of a district include services delivered through all service delivery outlets from health posts, PHCs, province, district, general and private hospitals within the province.

Figure 5.1 1. OPD Visit as percentage of Total Population for fiscal year 2077/78 to 2079/80



The district with the highest percentage of OPD visits was Humla (119%), followed by Rukum West (114%) and Surkhet (109%) in fiscal year 2079/80. It is apparent that, in general, there is a decreasing trend in the number of OPD visits for most districts when compared to the preceding fiscal years.

Figure 5.1 2. OPD Visit as percentage of Total Population for fiscal year 2077/78 to 2079/80



The provided data presents the number of new outpatient department (OPD) visits across various districts over three consecutive years: 2077/78, 2078/79, and 2079/80. In Dolpa district, there were 49,402 new OPD visits in 2077/78, which decreased to 42,524 in 2078/79, and further decreased to 35,355 in 2079/80. Similarly, Mugu district recorded 86,529 new OPD visits in 2077/78, declining to 65,004 in 2078/79, and further dropping to 53,086 in 2079/80. Humla district witnessed 98,127 new OPD visits in 2077/78, followed by 86,439 in 2078/79, and 68,167 in 2079/80. Jumla, Kalikot, Dailekh, Jajarkot, Rukum W., Salyan, and Surkhet also displayed variations in new OPD visit numbers over the mentioned years.

Top 10 Morbidity

Figure 5.1.2. Total Number of New OPD visit by hospital for fiscal year 2079/80

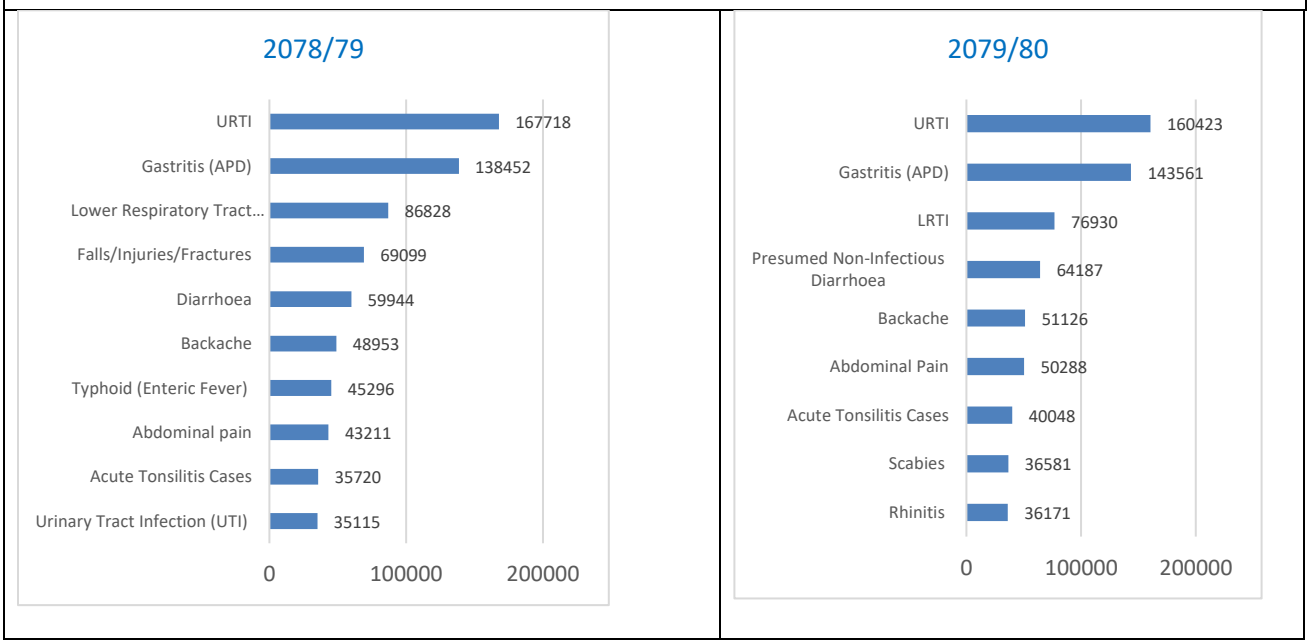
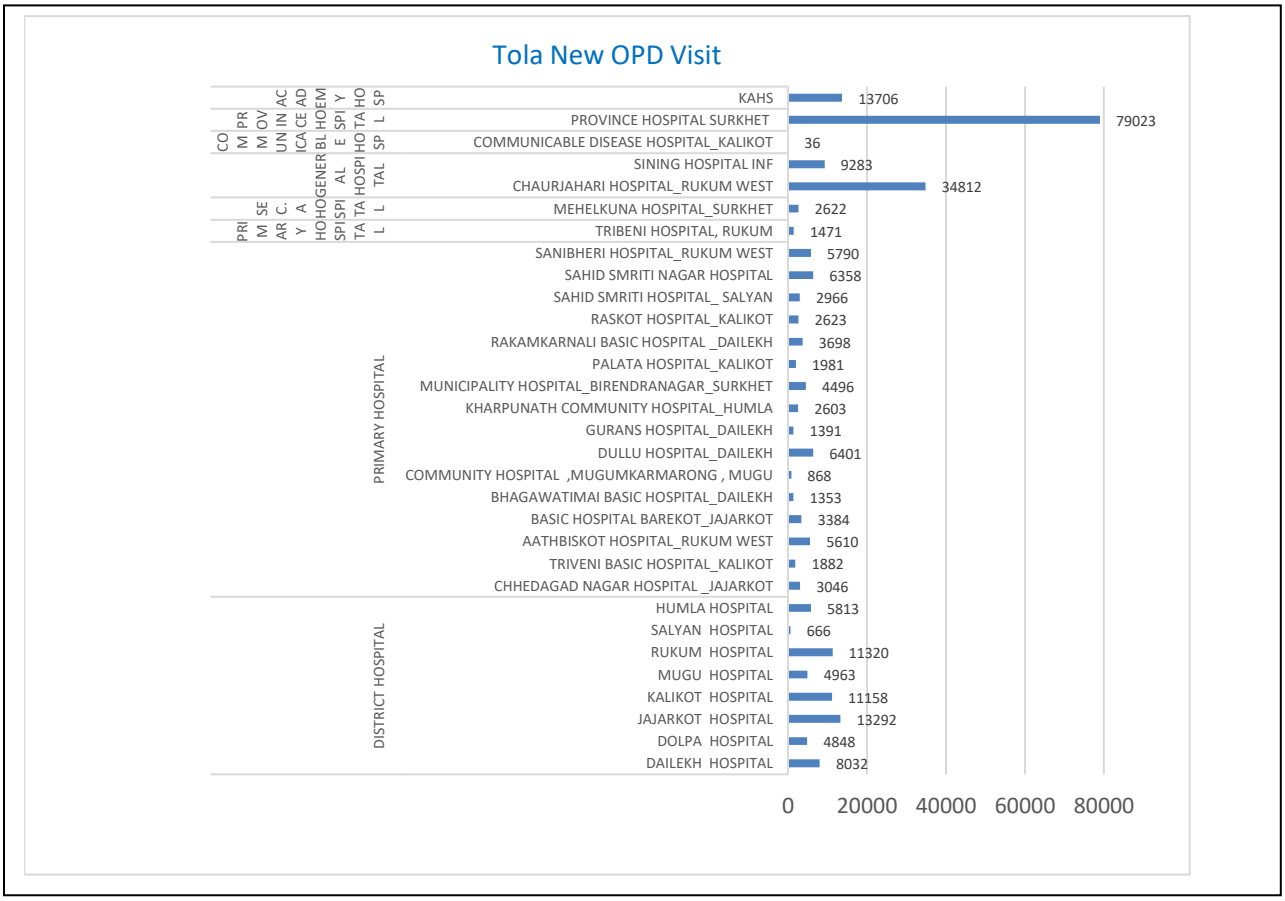


Figure 5.1.3. Total Number of New OPD visit by hospital for fiscal year 2079/80



Out-Patient Department Visit

The data presented in figure 5.1.3 illuminates the landscape of new outpatient department (OPD) visits at major public hospitals during the fiscal year 2079/80. Across the 31 hospitals included in the report, a cumulative total of 255,945 clients sought OPD services. Notably, Provincial Hospital, among hospitals under the Provincial Government, emerged as a major contributor with the highest reported OPD visits, totaling 79,023. In the domain of Local Government-managed hospitals, Dullu Hospital took the lead, serving the highest number of OPD clients at 6,401, followed closely by Saheed Smriti Hospital Sanibheri with 8,658 visits. Furthermore, in the category of community hospitals, Chaurjhari Hospital stood out by reporting the highest number of OPD clients, reaching 34,812 in the fiscal year 2079/80.

Inpatients admission

Table: 5.1.1 Summary of Inpatient admission Outcome

District	Total Patient Admission			Total Discharge			Recovered			Death		
	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80
Dolpa	507	468	488	520	480	554	490	454	360	5	1	3
Mugu	1244	1423	1202	1233	1404	1259	1041	1193	791	10	5	0
Humla	925	984	1174	606	919	1306	513	766	818	1	17	15
Jumla	4464	6262	5918	4729	6435	6123	4386	5893	4370	88	89	83
Kalikot	1283	1530	1787	1220	1823	1551	1162	1744	1175	1	2	0
Dailekh	3257	3023	3274	3030	2756	2118	2689	2372	1319	2	6	5
Jajarkot	337	699	1374	313	639	1499	241	449	1001	1	2	1
Rukum West	7820	9737	11877	7305	9032	10229	6682	8027	7850	27	27	15
Salyan	3186	2413	2538	2576	2046	2226	2470	1951	1891	7	2	4
Surkhet	20113	29533	32974	21445	29356	31592	20425	27688	23593	136	267	307
KARNALI PROVINCE	43136	56072	62606	42977	54890	58238	40099	50537	43162	278	419	433

The data presented in figure 5.1.1 provides a comprehensive insight into patient admissions, discharges, recoveries, and deaths across various districts in Karnali Province for the fiscal years 2077/78, 2078/79, and 2079/80. The overall trend inpatient admissions demonstrated a consistent upward, increasing from 43,136 in 2077/78 to 62,606 in 2079/80. At the same time, patient discharges followed a similar trend, reaching 58,238 in 2079/80.

However, despite these efforts, the number of deaths remained consistently high, with 433 reported in 2079/80, indicating potential challenges in improving patient outcomes. In Dolpa, while total patient admissions increased from 507 in 2077/78 to 488 in 2079/80, there was a

notable decrease in deaths from 5 to 3 during the same period. Mugu witnessed fluctuations inpatient admissions, discharges, and recoveries, with deaths decreasing from 10 to 0.

Humla experienced a significant rise in admissions and recoveries but also saw an increase in deaths from 1 to 15. Jumla demonstrated varying figures over the three years, with a slight decline in deaths from 88 to 83. Kalikot reported a rise in admissions and recoveries, with no deaths reported in 2079/80. Dailekh experienced fluctuations, with a decrease in deaths from 6 to 5. Jajarkot saw a substantial increase in admissions, discharges, and deaths.

In Rukum West, there has been a consistent upward trend in admissions, discharges, and recoveries, coupled with a notable decrease in deaths, dropping from 27 to 15. Salyan, on the other hand, demonstrated variations in admissions, discharges, and recoveries, with a slight uptick in reported deaths. Meanwhile, Surkhet witnessed a continuous increase in admissions and discharges but also recorded a rise in the number of deaths.

Table: 5.1.2 Age and Sex wise distribution by outcome of Discharged patients

Age Group	Recovered/ Cured		Stable		Referred Out		DOPR/LAMA		Absconded		Death < 48 Hours		Death ≥ 48 Hours	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
0-7 Days	2958	3377	27	38	123	70	89	94	0	0	9	14	18	32
8-28 Days	283	329	14	13	18	25	17	41	0	0	1	0	1	5
29 Days-<1 Year	797	1277	17	7	62	76	102	163	4	3	6	3	5	8
01 - 04 Years	1142	1691	14	12	64	103	114	160	5	7	1	0	2	2
05 - 14 Years	1465	2229	33	32	58	98	108	129	9	11	2	2	5	2
15 - 19 Years	2862	1078	32	33	151	65	132	73	9	5	4	3	2	3
20 - 29 Years	9308	1464	47	33	258	101	376	113	27	12	4	3	3	7
30 - 39 Years	4189	1568	51	38	165	84	196	148	12	14	6	7	6	7
40 - 49 Years	2360	1704	55	44	93	58	151	120	6	10	7	8	10	12
50 - 59 Years	1957	1713	43	35	88	90	137	120	5	9	4	7	30	26
60-69 Years	2172	1839	46	25	90	95	166	186	4	3	3	6	19	37
≥ 70 Years	1822	1638	29	30	100	82	288	232	6	2	9	13	30	39
	31315	19907	408	340	1270	947	1876	1579	87	76	56	66	131	180

Out of Total 58238 patients admitted to different hospital of Karnali province in fiscal year 2079/80. Among them 51222 recovered, 748 stables, 2217 were referred, 3455 were discharge on patient request/ lAMA and 163 were absconded. Additionally, 122 people died within 48 hours of admission and 311 persons died after 48 hours of admission.

Figure 5.1.3. Bed Occupancy Rate of government owned hospitals in fiscal year

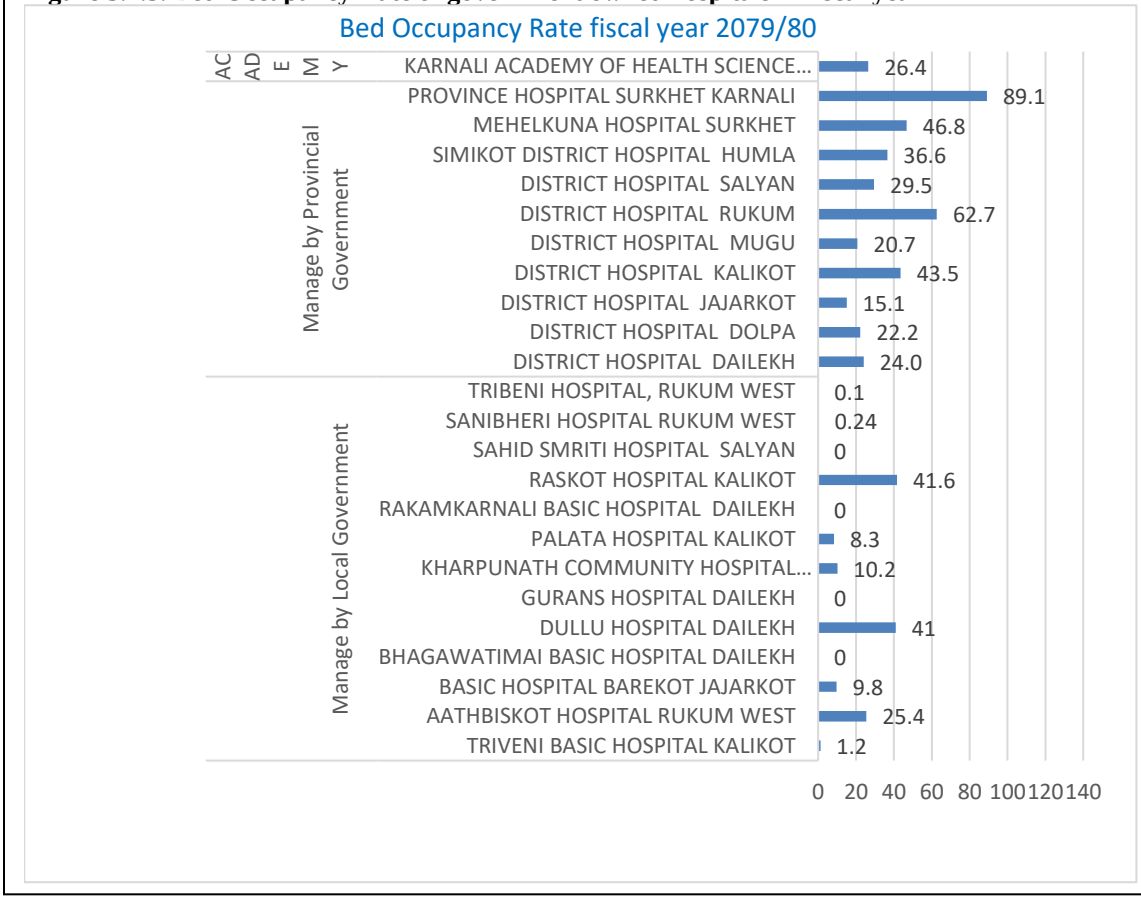
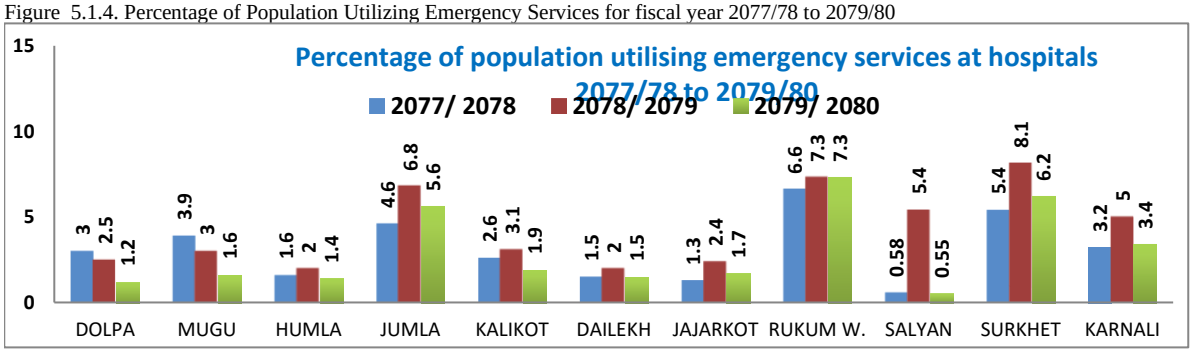


Figure 5.1.3 depicts the average bed occupancy rate of government owned hospitals in the province in FY 2079/80. The highest bed occupancy was observed in Province Hospital Surkhet (89.1) followed by Rukum Hospital (76.7) Hospital. Among the hospitals at the local level, the bed occupancy rate of Raskot Hospital Kalikot, Dullu Hospital Dailekh, and Aathbiskot Hospital Rukum West is comparatively higher than other local level hospitals.

Emergency Department

Figure 5.1.4. Percentage of Population Utilizing Emergency Services for fiscal year 2077/78 to 2079/80



As depicted from Figure 5.1.4, the percent of population utilizing emergency services is 3.4 in fiscal year 2079/80, a slight decrease compared to the previous year. As far as the districts are concerned, Rukum West has the highest percent (7.3%) of emergency visits, followed by Surkhet (6.2%) & Jumla (5.6%) while Mugu (1.6),Dailekh(1.5),Humla(1.4) & Dolpa(1.2) reports lower utilization of hospital emergency services.

5.2 Minimum Service Standards (MSS)

Minimum Service Standards for Hospitals and Health Facilities is the service readiness and availability of tool for optimal requirement 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 and health facilities 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. Initially Ministry of Health and population (MoHP) in collaboration with, Nick Simons Institute (NSI), started Hospital Management Strengthening Program (HMSP) in district and district level hospitals (DH) of Nepal since FY 2071/72 (2014). MSS tools for all level of hospital and health facility has developed. Which include 4 categories of hospitals namely Primary, Secondary A, Secondary B and Tertiary level Hospitals and Health Post as well. MSS cover the three areas Management and governance 20%, Clinical Service 60% and Support Service 20% of the hospitals and health facilities.

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. MSS has been implemented in 11 hospitals including provincial and local level hospitals in Karnali province. It’s obvious that reflects the most important minimum criteria for providing services, but it is not an "ideal" list of maximum standards at hospital. MSS checklists are different than program-specific quality improvement tool which outlines the equipment, supplies, furniture, and human resources need to provide service reflecting the service's standard operating guideline. Basically, MSS emphasizes Three sections as Governance and Management, Clinical Service and Hospital Service respectively. Following separate three elementary achievement illustrates the key progress as mentioned in FY 2079/80.

GOVERNANCE AND MANAGEMENT

The Provincial and Local governments place a high importance on hospital service quality while providing funds for MSS shortages. Hospital Development Committee (HDC) is taking charge of overall service improvement and hospital service expansion. MSS was viewed as a guiding guideline for quality health services by the majority of Hospital Development Committee (HDC) chairpersons and Medical Superintendent. HDC has been formed as per guidelines designed by Ministry of Social Development, Karnali province. Meetings were conducted and discussed as per agreed agenda. Best practices like display of organogram of hospital, hospital service

utilization chart, citizen charter, Information officer details and other important information are done by hospitals.

CLINICAL SERVICE MANAGEMENT

Province government has focused on physical infrastructure, equipment, human resources, and instruments. After federal system in Nepal, 2 hospitals were upgraded to Secondary A level hospital to enhance the specialist services in Karnali province. Prioritized on Operations services from all services as CEONC services has been provided by all province hospital. Some hospitals have begun surgeries using a new operation theatre layout. Supported to establish dental services from all hospital along with Physiotherapy services, MCH clinic providing ANC, PNC, FP, Nutrition, and Immunization services from all hospitals. Diagnostic services were provided.

HOSPITAL SUPPORT SERVICES

Establishment and upgrading of separate laundry, CSSD, housekeeping services, autoclaving of contaminated waste, are the novel achievements of primary, secondary A and Secondary B level hospitals of Karnali province. Besides the routine services advocated by MSS, hospitals are motivated to establish additional services as reported by the managers of hospitals during assessments. Province government has provided mortuary freeze and autoclave to all hospital to strengthen the Postmortem service and waste management respectively.

Table 5.2.1. MMS Score of Hosp

SN	Name of Hospitals	Level of Hospital	Total Score of MSS	MSS Score				
				2077/78	2078/79 I	2078/79 II	2079/80 I	2079/80 II
1	Province Hospital	Secondary B	1356	45%	61%	79%	NA	NA
2	Karnali Academy of Health Science		1356		49%	NA	NA	NA
3	Mehelkuna Hospital	Secondary A	939	58%	62%	67%	71%	74%
4	Jajarkot Hospital	Secondary A	939	55%	59%	58%	58%	59%
5	Dailekh Hospital	Primary	761	83%	71%	79%	82%	86%
6	Kalikot Hospital	Primary	761	57%	65%	-	71%	72%
7	Mugu Hospital	Primary	761	-	56%	-	66%	NA
8	Humla Hospital	Primary	761	-	57%	-	45%	NA
9	Dolpa Hospital	Primary	761	-	47%	-	59%	70%
10	Rukum West Hospital	Primary	761	-	47%	-	75%	83%
11	Salyan Hospital	Primary	761	-	65%	68%	78%	82%
12	Dullu Hospital	Primary	761	52%	57%	48%	61%	70%

Table shows the MSS Score for different hospital of the province. The MSS Score range in between 59% to 86% for this fiscal year 2079/80.

Table 5.2.2. MSS Score of Hosp

S.No.	Name of Hospital	Level	Total Score point of MSS	Average MSS Score		
				Fiscal year 2077/78	Fiscal year 2078/79	Fiscal year 2079/80
1	Jajarkot Hospital	Secondary A	939	58%	58%	59%
2	Mehalkuna Hospital	Secondary A	939	55%	67%	73%
3	Dailekh Hospital	Primary	761	83%	79%	84%
4	Kalikot Hospital	Primary	761	-	65%	72%
5	Mugu Hospital	Primary	761	-	56%	66%
6	Humla Hospital	Primary	761	-	57%	45%
7	Dolpa Hospital	Primary	761	-	47%	65%
8	Rukum West Hospital	Primary	761	65%	47%	79%
9	Salyan Hospital	Primary	761	62%	68%	80%
10	Dullu Hospital	Primary	761	52%	48%	66%
11	Province Hospital Surkhet	Secondary B	1356	45%	79%	NA

Table 5.2.2 shows the MSS score for different hospital of the province. The MSS Score range in between 45% (humla hospital) to 84% (Dailekh hospital) for fiscal year 2079/80.

Table 5.2.3 MSS conducted Health Post

SN	District	No of LLG	2078/79		2079/80	
			No of HP	MSS Conduct HP	No of HP	MSS Conduct HP
1	Dolpa	8	23	21	23	19
2	Mugu	4	22	15	24	31
3	Humla	7	26	21	26	25
4	Jumla	8	29	29	29	15
5	Kalikot	9	27	24	27	27
6	Dailekh	11	55	29	55	45
7	Jajarkot	7	31	24	30	29
8	Rukum West	6	25	25	25	24
9	Salyan	10	45	38	45	39
10	Surkhet	9	47	47	47	45
Total		79	333	273	331	299

The above table 5.2.3 shows the performance of MSS conducted health post in Karnali province. Out of total 331 health posts, 273 (82.47%) have implemented HP MSS to evaluate the primary health service delivery from their facilities. The evaluation program continues for every year.

5.3 Ayurveda and Alternative Medicine

Background

Ayurveda and alternative medicine branch primarily manage the delivery of Ayurveda services and promotes healthy lifestyles through its network facilities across the Karnali province. Karnali province is responsible for programming, management of information, and supervision, monitoring and evaluation of the Ayurveda service program.

Ayurveda is an ancient medical system and indigenous to Nepal with deep roots. The sources of ayurvedic medicine are medicinal herbs, minerals, and animals' products. The system works through simple and therapeutic measures along with promotive, preventive, curative and rehabilitative health of people. Karnali province Ayurveda health services are being delivered One Provincial Ayurved, 9 Ayurveda Health Center 18 at 8 District Ayurveda Health Centers, 18 Ayurveda Dispensaries, 40 Naragik Arogya Center across the Karnali province. The Ayurveda and alternative medicine unit in the ministry of social development is responsible for formulating policies and guidelines for Ayurveda and other traditional medical system.

Objectives:

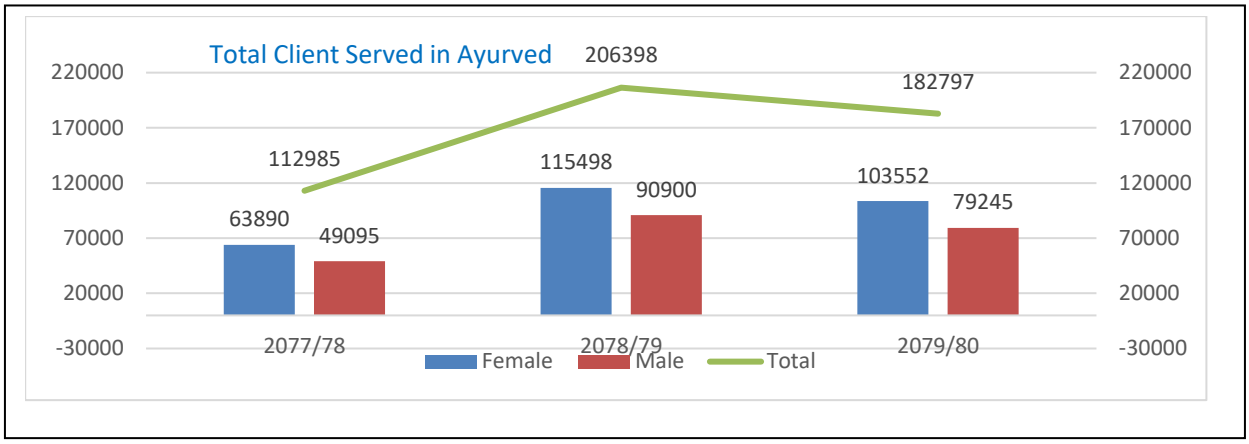
- To expand and develop functional, physical Ayurveda health infrastructure.
- To improve quality control mechanism for Ayurveda health services throughout the province.
- To develop and manage the required human resources.
- To mobilize the adequate resources for medicinal plants.
- To promote community participation in the management of the health facility and utilization of local herbs.
- To procure, store and distribute the Ayurveda medicine and other allied material.
- To promote health status and sustainable development of Ayurveda system using locally available medicinal plant.
- To promote positive attitudes towards health care and awareness of health issues.

Strategies:

- Provide preventive, promotive & curative health services in the rural areas.
- Establishment & development of Ayurveda institution.
- 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 province.
- Establishment of District Ayurveda center & Ayurveda Dispensaries.
- Province level training for the capacity buildup of its human resources.
- Analysis of Achievement;

Major activities carried out in 2079/80

Table 5.3.1. Service Statistics for Fiscal Year 2077/078



Achievement:

The table provides information about clients served by various district Ayurveda hospital and service delivery points at districts.

Table 5.3.1. Services statistics for last three fiscal years from 2076/77 to fiscal year 2078/79

Services	2077/78	2078/89	2079/80
OPD	103046	145917	170708
Panchakarma	9376	21059	26392
Istanpayi	1597	4956	6748
Senior Citizen	8217	29539	45675
Free Health Services	2625	0	
PHC ORC	0	0	18475
Syala	0	1411	1714
yoga,0ther	5198	6518	21643

Ayurveda services in Karnali Province have shown significant growth and diversification over the fiscal years 2077/78 to 2079/80. The Outpatient Department (OPD) visits, Panchakarma treatments, and Istanpayi sessions have all experienced substantial increases, indicating a rising demand for traditional Ayurvedic healthcare. Specialized services for Senior Citizens have expanded notably, alongside the introduction of Free Health Services, enhancing accessibility to Ayurvedic treatments. The inclusion of Public Health Center Outreach Clinics (PHC ORC) reflects efforts to integrate Ayurveda into primary healthcare delivery. Additionally, there has been a significant rise in yoga and supplementary services, suggesting a growing interest in complementary wellness practices

Table 5.3.2. Services statistics from 2078/79 to fiscal year 2078/79 by district (Total service)

District	FY 2077/78	2078/89	2079/80
Dolpa	6046	4351	6305
Mugu	10643	11320	11994
Humla	9035	18374	11619
Jumla	16841	9990	10650
Kalikot	6416	26634	22414

Dailekh	18783	28579	21740
Jajarkot	2084	6794	10233
Rukum West	6774	22073	17385
Salyan	23001	29628	26117
Sukhet	30436	51657	44340
Karnali Province	130059	109400	182797

Table 5.3.3. Top ten morbidity among the OPD cases in Ayurveda 2078/79

2078/79					
Diseases		**Rank**	**Diseases**	**2078/79**	**Rank**
APD	29250	1	APD	33688	1
Udar Roga	7085	2	Rheumatoid Arthritis	9138	2
Rheumatoid arthritis	5861	3	Asthma and COPD	7639	3
Sandhivata	5715	4	Cough	7156	4
Arsha (Hemorrhoids)	5661	5	Abdoninal Disorder	6991	5
kas	5332	6	Gudavikar - Haemorrhoids	6828	6
Ashtma	4544	7	Osteoarthritis	6379	7
Jarajanya Vikar	4391	8	Geriatric Problem	5224	8
Angamarda	4034	9	Paediatric Disorder	5130	9
Balroga	3559	10	Lumbago	4283	10

Issues:

- Appropriate recording & reporting system
- Experts and qualified manpower
- Financial support for district & local level Ayurveda institutions to conduct monitoring supervision & publicity program
- Poor storage & dispensing practices of medicines in curative aspects of Ayurveda institutions.
- Inter sectoral co- ordination
- Lack of adequate human resources and allocation of sanctioned post
- Limited infrastructure
- No upgrading Ayurveda Ausdhalaya into Province Ayurveda hospital
- Allocation of only one office in whole province
- No alignment of Ayurveda into health insurance program

5.4 Health Laboratory Service (Quality Control)

Background

The Provincial Public Health Laboratory (PPHL) plays a pivotal role as a government organization within the province, overseeing both government and non-government laboratories and their diverse activities. Its multifaceted responsibilities encompass critical areas such as quality control, laboratory support with a specific focus on tuberculosis (TB), comprehensive training programs (basic and refresher courses), organizational supply management, and effective supervision.

PPHL extends its laboratory services across various domains, reflecting a commitment to comprehensive healthcare. In the realm of Immunology, the laboratory conducts tests for a range of markers including TFT, Vit D, Vit B12, AFP, T.PSA, Ferritin, CEA, and CA125. The Biochemistry section covers essential parameters like Sugar, RFT, LFT, Lipid Profile, Amylase, Uric Acid, Calcium, Protein, and Albumin. Serology services include tests for RA, CRP, ASO, HIV, HbsAg, HCV, VDRL/TPHA, Dengue, MP, and Rk39. Haematology services encompass CBC, Blood Grouping, PT/INR, MP Microscopy, ESR, and HbA1c.

The Microbiology division conducts a wide array of tests, including Gene X-pert for RR/XDR, Influenza PCR, Covid PCR/RDT, Water testing, HIV Viral Load (Planned), Sputum for AFB, testing of different body fluids, urine analysis, and Pus Culture with drug sensitivity testing. Additionally, Parasitology services cover routine and microscopic examinations of urine and stool, Occult blood, Reducing sugar, Semen analysis, and Urine pregnancy tests.

This comprehensive range of services underscores PPHL's integral role in promoting public health by ensuring the accuracy, quality, and accessibility of a diverse array of laboratory diagnostics. Through its initiatives, PPHL contributes significantly to disease prevention, timely diagnosis, and effective management of health conditions within the province.

Objectives

- Performing the tests of communicable and non-communicable diseases.
- Preparation and distribution of reagents and chemicals to all the government laboratories.
- Trainings to lab personnel enhancing their skill and capacity.
- Supervision, monitoring and onsite coaching to the periphery laboratories of Karnali Province.
- QA/QC of TB, malaria and other general tests.
- Strengthening of district level laboratories.

Major Activities Carried Out in fiscal year 2079/80 (2022/2023)

- Annual Lab workshop conduction
- Re-checked the Sputum slide for AFB according to the LQAS system.

- Chemical (AFB) preparation and distribution throughout the province.
- TB microscopy basic training for BHS lab staff
- Malaria microscopy (Basic and refresher) training for BHS lab staff
- LQAS (Lot Quality Assurance Sampling) trainings
- Basic laboratory training
- HIV and STI Diagnosis Training
- Supervision and onsite coaching

Table 5. 4. 1. Service site

S.N	District	TB microscopy center(DMC)	Gene xpert sites	Malaria microscopy	HTC Sites
1.	Dolpa	1	0	1	1
2	Mugu	1	1	2	1
3	Humla	1	0	1	1
4	Jumla	1	1	2	2
5	Kalikot	3	1	1	2
6	Dailekh	5	1	5	5
7	Jajarkot	4	1	3	3
8	Rukum West	4	1	3	3
9	Salyan	4	1	2	2
10	Surkhet	8	2	8	5
	Total	32	9	28	25

Table 5. 4. 2. Screening & Quality Control Summary of Fiscal year 2079/80

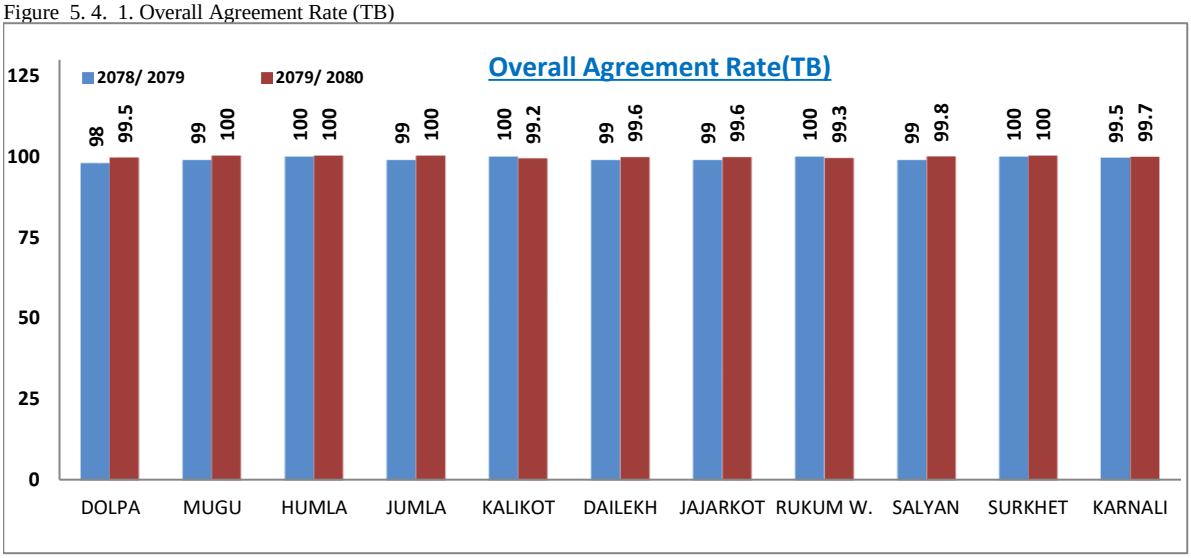
	Microscopy Centers	Total Screened Slides for AFB (Sputum)	MC report			Cross checked						
			Negative Slides	Positive Slides	Positivity Rate	QC Total	MC(-)	MC(+)	False (-)	False (+)	Number of Agreement	Rate of Agreement (%)
2078/79	47	17551	16843	708	4.0	5407	5233	174	16	7	5382	99.5
2079/80	32	22698	21986	712	4	7149	6951	198	20	2	7127	100

Source: QC Lab report of fiscal year 2078/79, 2079/80 review presentation

The table presents data from Microscopy Centers regarding the screening of Acid-Fast Bacilli (AFB) in sputum samples over two periods, indicated as 2078/79 and 2079/80. For the period 2078/79, a total of 17,551 slides were screened, with a positivity rate of 4.0%. Following quality control checks, 5,407 slides were reported negative and 5,233 positive by the microscopy center. However, there were 174 false negatives and 16 false positives identified upon cross-

checking. The number of agreements between the microscopy center and the cross-checked results amounted to 5,382, reflecting a rate of agreement of 99.5%. In the subsequent period, 22,698 slides were examined, yielding a similar positivity rate of 4.0%. After quality control, 7,149 slides were classified as negative and 6,951 as positive by the microscopy center. Yet, there were 198 false negatives and 20 false positives detected during cross-checking. Remarkably, the number of agreements between the microscopy center's report and the cross-checked results totaled 7,127, corresponding to a perfect rate of agreement was 100%.

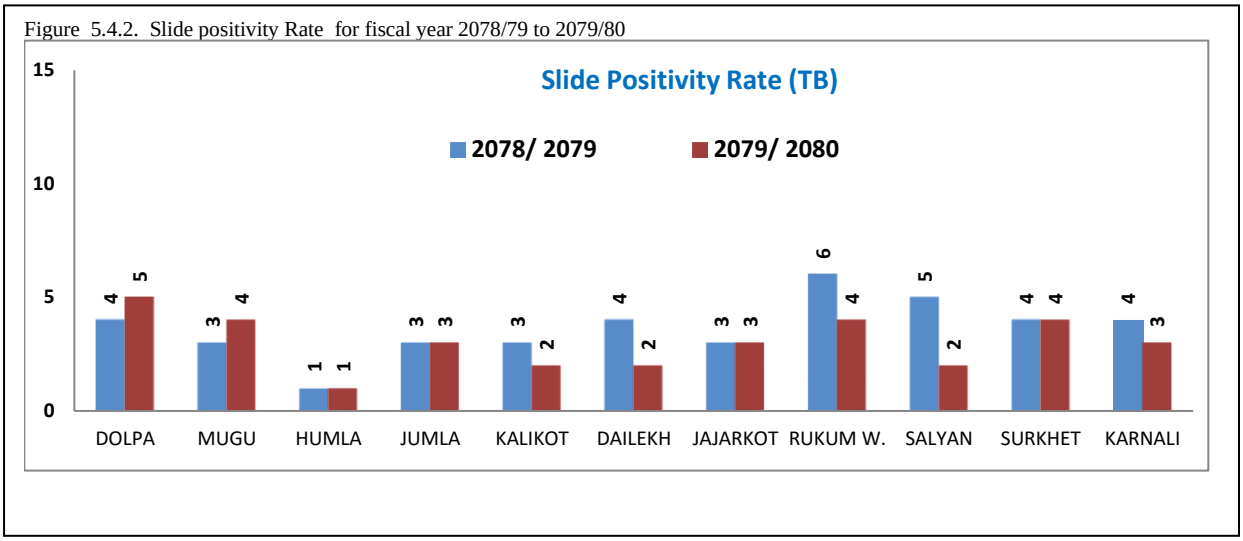
Figure 5. 4. 1. Overall Agreement Rate (TB)



Source: QC Lab report of fiscal year 2078/79 , 2079/80

Figure 5.4.1 illustrates the slide agreement rates for various districts across two periods, 2078/79 and 2079/80. In 2078/79, Dolpa district displayed a slide agreement rate of 98%, which improved to 99.5% in 2079/80. Similarly, Mugu district's rate increased from 99% to 100% between the same periods. Humla consistently maintained 100% agreement rate throughout both periods. Jumla witnessed an increase from 99% to 100%, while Kalikot's perfection rate marginally decreased to 99.2% in 2079/80. Dailekh and Jajarkot experienced slight improvements, achieving 99.6% agreement in 2079/80 from 99% in the previous period. Rukum West's agreement rate declined to 99.3% in 2079/80. Salyan's agreement rate elevated from 99% to 99.8%, whereas Surkhet retained a consistent 100% agreement rate. In Karnali province, there was a slight improvement from 99.5% to 99.7% across the two periods.

Figure 5.4.2. Slide positivity Rate for fiscal year 2078/79 to 2079/80



Source: QC Lab report of fiscal year 2078/79,2079/80

Figure 5.4.2 outlines the slide positivity rates for various districts during the periods 2078/79 and 2079/80. In 2078/79, Dolpa exhibited a positivity rate of 4%, which increased to 5% in 2079/80. Similarly, Mugu showed a rise from 3% to 4% over the same periods. Humla maintained a consistent positivity rate of 1% throughout both periods, as did Jumla, which remained at 3%. Conversely, Kalikot and Dailekh witnessed declines in positivity rates, with Kalikot decreasing from 3% to 2% and Dailekh from 4% to 2%. Jajarkot maintained a stable rate of 3% across both periods. Rukum W. experienced a decrease from 6% to 4% in 2079/80. Salyan reported a decrease from 5% to 2%, while Surkhet maintained a steady rate of 4% in both periods. Karnali exhibited a rate of 4.0% (likely rounded) in 2078/79, which decreased to 3% in 2079/80.

6. SUPPORTING PROGRAMS

6.1 Personnel Administration

Background

The administration section of the Provincial Health Service Directorate takes the responsibility to organize day-to-day internal administrative and personnel management. This section is the focal point for the general administration and human resource management. Major tasks carried out by the section are attendance management, correspondence, contract recruitment and performance appraisal management etc.

Major activities carried out in fiscal year 2079/80

The following were the major activities carried out in province during fiscal year 2079/80.

- Collected human resource information from health facilities & districts as per need
- Managed annual performance appraisal for different post personnel & health workers
- Regular technical support to the districts of Karnali for implementation of program
- Supervision and monitoring to districts to solve the issues of human resources management

Table 6.1. 1. Human Resource Situation

Institutions	Sanctioned Post	Filled Posts	Vacant Posts	Contract	Filled (permanent)%
Health Service Directorate	30	18	12	5	60.00
PHLMC	19	8	11	8	42.11
Province Hospital	325	161	164	341	49.54
PPHL	11	6	5	8	54.55
Communicable Hospital Kalikot	21	0	21	0	0.00
Mehelkuna Hospital	53	30	23	28	56.60
Province Ayurveda Aushadhayala (9)	26	9	17	12	34.62
Public/Health Service Offices (10)	380	240	140	342	63.16
Ayurveda Health Center	62	26	36	57	41.94
Total	**927**	**498**	**429**	**801**	53.72

According to table 6.1.1 the sanctioned post is 927 and filled post is 498 (53.72%). The vacant position is 429 which is fulfilled by 801 staffs under contract position.

Table 6.1. 2. Povincial level HR situation

S.N	OFFICE	Sanctioned	Filled	Vacant	Contract (Darbandi)	Contract (Other)
1	Health Service Directorate Surkhet	30	18	12	2	3
2	Provincial Hospital Surkhet	325	161	164	85	256
3	Provincial Health Logistic Management Centre	19	8	11	5	3
4	Infecious Disease Hospital Kalikot	21	0	21	0	0
5	Mehelkuna Hospital Surkhet	53	30	23	14	14
6	Health Service Office Rukum West	44	26	18	5	38
7	Health Service Office, Salyan	44	28	16	5	23
8	Health Service Office, Dolpa	44	25	19	9	14
9	Public Health Service Office, Jumla	13	9	4	2	0
10	Health Service Office Mugu	44	26	18	10	32
11	Health Service Office, Humla	44	24	20	4	38
12	Health Service Office Kalikot	44	28	16	12	46
13	Health Service Office, Jajarkot	44	30	14	20	31
14	Health Service Office, Dailekh	44	31	13	14	37
15	Public Health Service Office Surkhet	15	13	2	0	2
16	Provincial Ayurveda Surkhet	26	9	17	0	12
17	Provincial Public Health laboratory	11	6	5	4	4
18	Ayurved Health Center, Dolpa	7	2	5	1	3
19	Ayurved Health Center, Humla	7	2	5	4	2
20	Ayurved Health Center, Jumla	6	4	2	2	2
21	Ayurved Health Center, Mugu	7	4	3	2	0
22	Ayurved Health Center, Kalikot	7	2	5	2	12
23	Ayurved Health Center, Salyan	7	3	4	3	0
24	Ayurved Health Center, Rukum West	7	3	4	1	3
25	Ayurved Health Center, Jajarkot	7	3	4	3	11
26	Ayurved Health Center, Dailekh	7	3	4	3	3
	Total	927	498	429	212	589

Table 6.1.3 Human Resource Situation of Local level

District	Doctor		Paramedics		Nursing	
	Permanent	Contract	Permanent	Contract	Permanent	Contract
Dolpa	0	0	49	18	24	32
Mugu	0	1	60	11	25	21
Humla	0	0	59	24	39	31
Jumla	0	0	92	13	66	24
Kalikot	0	4	84	28	44	45
Dailekh	0	6	156	14	120	54
Jajarkot	1	2	97	16	56	48
Rukum West	0	4	79	21	49	51
Salyan	1	0	123	13	78	44
Surkhet	0	3	138	20	93	45
TOTAL	2	20	937	178	594	395

Table 6.1.4 Human Resource Situation in Total

District	Doctors*				Paramedics				Nursing			
	Federal Level	Province Level	Local Level	Total	Federal Level	Province Level	Local Level	Total	Federal Level	Province Level	Local Level	Total
Dolpa		8	0	8		9	89	89		6	65	71
Mugu		7	1	8		8	102	110		15	77	92
Humla		7	0	7		5	127	132		4	110	114
Jumla	67	1	0	68	12	3	128	143	106	1	114	220
Kalikot		4	8	12		13	172	185		10	145	155
Dailekh		7	8	15		14	220	234		19	226	245
Jajarkot		8	2	10		9	169	178		16	155	171
Rukum		9	4	13		10	150	160		13	140	153
Salyan		7	1	8		6	182	188		7	172	179
Surkhet		68	4	72		45	237	282		160	211	371
Total	67	126	28	221	12	113	1576	1701	106	250	1415	1771

Including Ayurved*

Source: Public/ health office provided on Provincial Annual Review 2079/80

6.2 Financial Administration

Background

Financial Section of the Health Service Directorate takes the responsibility of obtaining timely disbursement of funds; keeping books of account, preparing & submitting financial report, and facilitating internal & external auditing that are necessary to support the effective implementation of health programs.

Major Activities carried out in fiscal year 2079/80

The following were the major activities carried out in province during fiscal year 2079/80

- Prepared monthly & trimester reports and submitted to treasury offices & province.
- Prepared yearly report and submitted to treasury offices & province
- Facilitation for Internal and external audit
- Assisted for carrying out different programs and activities e. g. trainings, seminars, reviews, monitoring-supervisions, assessments, procurements etc. in financial perspective.
- Facilitated for clearing irregularities in significant amount.
- Supervision and monitoring of financial activities carried out by different health related public offices within the province
- eBiding for procument of logistics

Table 6.2.1. Releases and Expenditure by Program Activities- PHSD (2079/80)

Budget code	Program	Recurrent						Capital						Total					
		Physical Achievement			Financial Achievement			Physical Achievement			Financial Achievement			Physical Achievement			Financial Achievement		
		Target	Achievement	%	Allocated	Expenditure	%	Target	Achievement	%	Allocated	Expenditure	%	Target	Achievement	%	Allocated	Expenditure	%
35091124	National Tuberculosis Program	5	4	80.00	38.03	22.12	58.17							5	4	80	38.03	22.12	58.17
35091120	HIV/AIDS and STI control program	11	3	27.27	78.55	9.56	12.17							11	3	27	78.55	9.56	12.17
35091129	Family Welfare division	28	14	50.00	187.01	70.79	37.86	1	1	100.00	4	3.997	99.93	29	15	52	191.01	74.80	39.16
35091127	Epidemic and disease control program	30	13	43.33	251.96	143.51	56.96							30	13	43	251.96	143.51	56.96
35091131	Health management	8	7	87.50	245.55	176.13	71.73							8	7	88	245.55	176.13	71.73
35091123	National Health Education, information and communication center	2	2	100.00	7.00	6.045	86.36							2	2	100	7.00	6.05	86.36
35091135	Curative service program	5	4	80.00	37.00	28.81	77.87							5	4	80	37.00	28.81	77.87
35091135	Disability management and Leprosy control	8	6	75.00	38.30	30.21	78.90							8	6	75	38.30	30.22	78.90
35091131	Aayurved	1	1	100.00	30.00	29.18	97.27							1	1	100	30.00	29.18	97.27
	Total	98	54	55.10	913.40	516.38	56.53	1	1	100.00	4	4	99.93	99	55	56	917.40	520.38	56.72
35002011	Non conditional provincial budget	383	290	75.72	383									388	295	76	609.35	388.66	63.78
	Total	481	344	71.52	481	481.58	65.04	9	8	88.89	99.75	53.86	53.99	487	350	71.87	1527	909	59.54

Target Vs Achievement for fiscal year 2079/80

Out of Rs. 1527000000 budgets allocated for PHSD to execute different health program, a sum of Rs. 909000000 (59.54%) was absorbed during fiscal year 2079/80. Since the establishment of Health Service Directorate till now, there has been no Irregularity during Audit by Office of the Auditor General.

6.3 Planning, Monitoring, and Information Management System

Background

The Health Service Directorate (HSD) plays a crucial role in strengthening the healthcare system. It facilitates seamless coordination with Public/Health Service Offices and hospitals, ensuring prompt reporting and effective feedback mechanisms. The MIS Section is pivotal in providing technical support to districts and local levels for the optimal utilization of the Health Management Information System (HMIS). This involves developing and implementing integrated supervision and monitoring plans to enhance overall healthcare operational efficiency.

An integral aspect of the MIS Section's contributions is its active participation in Annual Performance Review workshops at both district and local levels. Additionally, it conducts half-yearly and annual provincial performance review workshops, promoting a comprehensive and well-informed approach to healthcare evaluation.

To optimize the functionality of HMIS tools, the MIS Section implemented an orientation program for local-level health facilities, ensuring the seamless adoption of updated tools. Comprehensive training sessions on DHIS-2, LMIS, AHMIS, and EHIRRS were conducted at the provincial, district, and local levels, engaging personnel from PHCC, Health Service Offices, hospitals, and local health facilities.

In a collaborative endeavor aimed at ensuring the quality of the health information system, Electronic Health Records (EHR) have been successfully implemented across all hospitals under the Health Service Office, with the sole exception of Jajarkot Hospital. Furthermore, the Electronic Health Information Recording and Reporting (EHIRR) system has been effectively introduced in eight health posts under the Directorate. Additionally, through collaboration with local authorities, the Electronic Health Information Recording and Reporting System (EHIRRS) has been implemented in a total of 58 health institutions, making a significant contribution to the overall enhancement of healthcare services.

Major Activities carried out in fiscal year 2079/80

- Collect information to support planning, monitoring, and evaluation (PME) of all health programs;
- Strengthen existing monitoring / supervision system at each level;
- Conduct performance review meetings and operationalize the outcomes;
- Information dissemination improvement using advance and contemporary technology.
- Human resource development for health information management, use of information technology, monitoring, and evaluation.
- Develop and implement integrated supervision and monitoring plan.
- Annual performance reports preparation & publication in district and provincial level.
- District level training on HMIS tools.
- Provincial level training on HMIS /LMIS software i.e.
- Provincial/District review and planning meetings.

- Annual & monthly work plan preparation.
- HMIS tools supply and distribution.
- Routine data quality assessments.
- Supervision & monitoring of private health facilities.
- Integrated supervision & onsite coaching.
- Data verification and review meetings.

Analysis of Service Statistics

Table. 6.3.1 Health Facilities reporting on DHIS2 in fiscal year 2079/80

Organization	Academy	Secondary Hospital B	Secondary Hospital A	District Hospital	Basic Health Service Center	Community Health Unit	General Hospital	Health Post	Nursing Home	Primary Health Centre	Primary Hospital	Private Hospital	Urban Health Centre
Dolpa	0	0	0	1	12	6	0	23	0	0			
Mugu	0	0	0	1	22	14	0	24	0	1	1		
Humla	0	0	0	1	8	17	0	26	0	0	1		
Jumla	1	0	0	0	21	4	0	29	0	1			1
Kalikot	0	0	0	1	47	10	0	27	0	1	3		
Dailekh	0	0	0	1	24	16	0	55	0	2	4		5
Jajarkot	0	0	0	1	44	5	0	30	0	1	2		
Rukum West	0	0	0	1	44	2	1	25	0	1	4	2	10
Salyan	0	0	0	1	32	10	0	45	0	2	1		5
Surkhet	0	1	1	0	46	31	2	47	3	3	1	3	9
Karnali Province	1	1	2	8	300	115	3	331	3	12	17	5	30

Table 6. 3.2. Reporting Status by Health Institutions (fiscal year 2079/80)

District	Reporting %								
	Hospital	PHC	HP	BHSC	C H U	UHC	PHCORC	EPIC	FCHV
Dolpa	100		100	100	100	0	61.4	81.5	68.3
Mugu	100	100	100	100	100	0	34	85.4	62.9
Humla	100		100	100	100	0	48.1	83.6	83.2
Jumla	100	100	100	100	100	100	74.6	93.2	92.4
Kalikot	88.9		100	100	100	0	68.8	95.6	93.3
Dailekh	100	100	100	100	100	100	90.3	91.7	97.5
Jajarkot	100	100	100	100	100	0	88.8	95.6	97.1
Rukum West	100	100	100	100	100	100	85.1	91.4	90.4
Salyan	100	100	100	100	100	100	91.4	93.3	99
Surkhet	100	100	100	100	100	100	95.8	97.6	98.6
Karnali	99.6	100	100	100	100	100	81.4	92.2	92.5

All Public Hospitals, & PHCCs, reported to HMIS in fiscal year 2079/80. In average PHCORC, EPIC & FCHV in the province were 81.4 %, 92.2.4%, &92.5%, respectively during fiscal year 2079/80.

Table 6. 3.3. Average Number of People Served

District	EPIC (Per Clinic)			FCHV (Reporting Period)			ORC (Per Clinic)		
	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80	2077/78	2078/79	2079/80
Dolpa	9.4	9.5	9.1	6.1	6.3	5.5	10.7	11.7	10.1
Mugu	12.6	10.6	9.8	8	5.7	7.4	11.9	7.5	11.8
Humla	14.2	11.6	11.8	7	6.1	6.5	16.9	15.2	8.4
Jumla	21.9	20.7	21.3	16.3	14.7	15.6	20.2	20.1	18.9
Kalikot	22.6	19.9	18.4	31.2	29.7	26.5	29.4	25.8	16.6
Dailekh	17.2	15.6	13.7	18.8	17.3	19.7	19.7	19.9	18.2
Jajarkot	25	23.1	19.8	30.9	32.1	28.4	24.5	20.9	21.2
Rukum West	27.2	25.2	26	17.6	17.6	17.2	39.2	24.4	25.2
Salyan	16.3	14.1	13.6	24	24.6	24.7	19.1	18.4	19.8
Surkhet	26.6	26.9	24.8	17.3	19	21.8	23.1	21.5	25.1
Karnali	20	18.5	17.3	19.1	18.8	19.5	21	19.4	19.1

The table 6.3.3 shows district wise average number of people served per clinic & per reporting period EPI clinic, FCHV & ORC. Out -reach clinics & EPI clinics have served on an average of 17 people , PHC/ORC 19 per clinic , while FCHVs have served 19 people in average per reporting period (month).

6.4 **Logistic** Management

Background

The Province Health Logistic Management Center in Surkhet was established in accordance with the decision of the Karnali Province Government dated 2078/10/12. The primary objective of this center is to ensure the effective management of health-related supplies within the province.

The Province Health Logistic Management Center (PHLMC) is responsible for the procurement and distribution of emergency and basic health-related medicines, tools, and equipment within its area. This includes items under the purchasing and distribution authority of the province. The center also plays a crucial role in dispatching medicines, vaccines, and health materials received from relevant associations to all district public/health offices of the province in a regular and demand-driven manner.

An efficient management of logistics is crucial for effective and efficient delivery of health services as well as ensuring rights of citizens having quality health care services. Overall objective of Provincial Health Logistic Management Center logistic management is to plan and carry out the logistics activities for the uninterrupted supply of essential medicines, vaccines, contraceptives, equipment's, HMIS/LMIS forms and allied commodities (including repair and

maintenance of bio-medical equipment's) for the efficient delivery of healthcare services from the Government health institutions.

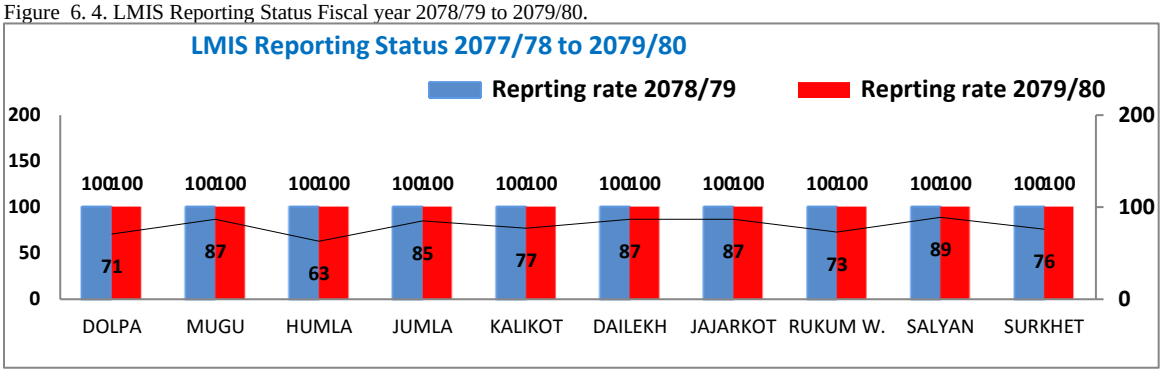
- Forecast annual requirements of commodities for public health programs
- Help to ensure demand and supply of drugs, vaccines, contraceptives, essential medical supplies at all levels;
- Periodically monitor the national pipeline and stock level of key health commodities.

Major Activities Carried Out by PHLMC in fiscal year 2079/80 (2022/2023)

- Province vaccine store capacity increased and renovated
- Timely distribution of vaccines for regular immunization, COVID and MR campaigns
- Temperature monitoring log book printed and distributed
- Provincial supply chain committee formed
- Shifted store from Nepalgunj to Surkhet (cold chain completely and medicine store partially)
- Pre fab building constructed
- Essential medicines procured and distributed

In 1994, the Logistics Management Department (LMD) took a significant step to enhance the organization's logistics management by establishing the Logistics Management Information System (LMIS) unit. The primary function of the LMIS unit is to collect and analyze Logistic reports from all health facilities. Subsequently, the unit compiles comprehensive reports and disseminates them to the relevant agencies, contributing to the systematic management of logistics within the country.

Figure 6. 4. LMIS Reporting Status Fiscal year 2078/79 to 2079/80.



Note: This report is only of HP, PHC and Hospital

The LMIS reporting status across all districts indicates a commendable achievement with 100% reporting. However, it's noteworthy that there are persisting challenges in ensuring timely reporting. Despite achieving full coverage, efforts may need to be directed towards addressing the issue of delays in reporting to further enhance the efficiency of the Logistics Management Information System.

6.5 Health Education Information and Communication

Background

The Health Education, Information and Communication program is one of the most important supporting health programs which is as old as the modern health services in Nepal. The general objective of the program is to raise the health awareness of the people to promote health status and to prevent disease through full utilization of available resources. With the behavior change communication efforts, people will adopt and sustain healthy lifestyles, use judiciously and wisely the health services available to them and make decisions both individually and collectively to improve their health status.

The specific objectives of the program are

- To increase awareness and knowledge of the people on health issues.
- To increase positive attitudes towards health care;
- To promote healthy behavior.
- To increase participation of the people in health intervention programs at all levels of health services through the mobilization of local leaders, FCHVs, religious people and community people itself.
- To increase access to new information and technology on health and health programs for the people.

Strategies

- Promotion of SBCC through IEC activities at all levels.
- Use of individual, group and mass media in health education, information, and communication along with social mobilization for disseminating health messages through health institutions involving its volunteers as well.

Major Activities Carried Out in fiscal year 2079/80(2022/2023)

- Communication and Socialization Mobilization to strengthen Routine Immunization through:
  -Advocacy to implement HBR card in school enrollment
  -Development of jingle in Local Language and its broadcasting
  -Development and printing of IEC materials and its distribution to the districts
- IEC program on tobacco control and non -communicable diseases like heart attack, stroke, kidney disease and mental health
- Awareness program for environmental health

Issues

- Underutilization of IEC materials
- Unavailability of IEC corner at hospitals
- Contionus support and follow up of implemented activities

6.6 Supportive Supervision, Monitoring and Evaluation

Introduction

Supervision, Monitoring, and Evaluation constitute a core management function within the Health Service Directorate (HSD) and are deemed crucial tasks with profound significance for providing technical support to districts and health units at the local level. Ensuring the continuous implementation of activities according to the established plan is a primary responsibility of both the HSD and public/health offices. Supportive supervision plays a pivotal role in improving skills, expanding knowledge, and fostering positive outcomes to attain specified targets. The Health Service Directorate is committed to conducting focused, integrated, team-based, and holistic monitoring and supervision visits, emphasizing collaboration and improvement rather than fault-finding.

Simultaneously, visits are conducted from the district level down to the local level, empowering them to recognize their strengths, weaknesses, opportunities, challenges, and additional support requirements. On-site coaching discussions play a crucial role in fostering further commitment and improvement, with tasks including providing written feedback and documenting meeting minutes during supervision. Following supervision, the findings are shared and presented in the monthly meeting at the Health Service Directorate, ensuring transparency and accountability. Feedback is then provided to the respective districts and health institutions. Any issues that require attention from the central authority are communicated formally to facilitate prompt resolution and continuous improvement.

Tools and Techniques for Monitoring, Supervision and Program Implementation

- Staff meeting, Meeting minutes
- Interview- Questionnaire
- Observation /Onsite coaching - Checklist
- Programmatic presentation- slide
- Experience sharing and discussion
- Record Review- registers
- Result based planning
- Supportive supervision
- Commitment gathering and periodic review on achievements

Priority Areas for technical support during monitoring and supervision

- Citizen Charter, Help desk, complaint box
- Social audit, Public Hearing
- Irregularities settlements
- Financial reporting and improved budget absorption and utilization
- Cost effective program implementation
- PLMBIS Implementation

Ensuring Delivery of Quality Health Service

- Availability of Essential Medicines
- Equity and Access on Health services
- Health care waste management
- Clients' satisfaction
- Regulation of private health facilities
- Planned versus implemented Redbook reflected activities
- Monitoring and Supervision.

Hospital Management strengthening

- Hospital Pharmacy operation and availability of medicine throughout the year
- Implementation of MSS
- Emergency preparedness at hospital

Information management and use

- Data quality Assessment and Improvement
- Accuracy, Completeness and timeliness of HMIS through DHIS-2

Outbreak preparedness and management

- Updating contingency plan and Implementation plan
- Buffer stock at strategic location
- Media management
- Facilitating the response

Full Immunization Declaration

- Cooperation, coordination with local levels
- Facilitating health coordinators
- Advocacy for sustainable immunization coverage at local level

Major Issues and Way Forward

Annual provincial health review was held from 22-24 Ashwin, 2080. Each district shared issues and challenges which compilation of municipal level challenges were together with challenges faced at district level. The findings of the discussion are presented in Table 6.7.1. Based on the problems and issues identified, an appropriate recommendation has been suggested.

Table 6.6.1. Major issues, recommendations and efforts to solve the problems in health systems of Karnali

Health Service Delivery

Issues	Recommendation	Responsibility
There is no designated focal person allocated to oversee each program at the district and local levels.	- Assign a designated focal person for overseeing each program at both the district and local levels. - Co-ordinate from province level on periodic manner to monitor if the program has designated focal person or not.	Local level/HSO
Despite the availability of budget and infrastructure, the telemedicine service is not being effectively implemented.	- Organize a focused group discussion involving the chiefs of health service offices as participants, thoroughly investigate the issues and challenges, and utilize the findings to enhance the program.	MoSD/HSD
Challenge in sustainability of effective microplanning and full immunization	- Implement robust monitoring and evaluation systems to track progress and address barriers in microplanning and immunization coverage.	HSO/Local level
Shortage of skilled healthcare providers for permanent or long-term family planning services.	- Invest in specialized training programs to equip healthcare providers with the skills needed for effective delivery of long-term family planning services.	MoSD/HSD
The treatment protocols and guidelines have not been implemented in all health institutions in the treatment process.	- Implement regular orientation sessions for healthcare providers on the importance of adhering to treatment protocols and guidelines, ensuring they understand the rationale behind each protocol and how it contributes to patient care.	HSD and HSO
Challenge in identification of malaria and dengue affected areas, its surveillance and management.	- Enhance the capacity of local health authorities to conduct regular and systematic surveillance of malaria and dengue cases by providing training to healthcare workers in case identification, data collection, and reporting methods. - Engage local communities in active surveillance activities, such as reporting suspected cases and	HSD/HSO/EDCD

	breeding sites of mosquitoes through community health education programs. - Utilize GIS technology to map and analyze the distribution of malaria and dengue cases which can help identify high-risk areas and prioritize interventions accordingly.	
Slow or decline in the progress of key indicators for fundamental healthcare services.	- Conduct a comprehensive assessment of current healthcare delivery systems to identify bottlenecks and areas of improvement. This can include evaluating the efficiency of service delivery, availability of essential medicines and supplies, and healthcare infrastructure. - Strengthen health information systems to improve data collection, analysis, and reporting so that it can help track progress towards key healthcare indicators and identify areas requiring intervention. - Engage local communities in healthcare planning and decision-making processes. This can include establishing community health committees, conducting health education and awareness campaigns, and soliciting feedback from community members on healthcare services.	HSD/HSO/Local level

Health Infrastructures and Resources

Issues	Recommendation	Responsibility
Hospitals, health institutions, birthing centers, and vaccination centers lack buildings and equipment in accordance with national standards.	- Allocate sufficient funds for the construction, renovation, and maintenance of healthcare facilities to ensure they meet national standards. This includes providing adequate space for patient care, administrative offices, and storage of medical supplies.	MoSD
Unable to manage human resources according to approved sanctioned posts.	- Implement effective recruitment and retention strategies to attract and retain qualified staff members. This may include offering competitive salaries and benefits, providing opportunities for professional development and career advancement, and creating a positive work environment. - Establish performance management systems to monitor employee performance and productivity against established targets and objectives. Provide regular feedback and support to staff members to	MoSD

	help them meet performance expectations and address any performance issues.	
Unable to create sanctioned posts for recruited manpower in the newly established basic health centers at the local level.	- Conduct a thorough needs assessment to determine the staffing requirements for each basic health center based on factors such as population served, services offered, and workload. - Work closely with provincial health authorities to advocate for the creation of sanctioned posts for the required manpower in newly established basic health centers. Provide data and evidence from the needs assessment to support the request.	MoSD
Shortage of skilled manpower (consultant physicians, physiotherapists, anesthesiologists, mental health service providers, etc.)	- Prioritize recruitment efforts to fill vacant positions in these critical areas. Offer competitive salaries and benefits to attract skilled professionals. Additionally, invest in training programs to develop local talent and bridge skill gaps. - Leverage technology such as telemedicine and telehealth to extend the reach of skilled professionals to underserved areas.	MoSD
Unsystematic transfer and improper distribution of human resources on need basis.	- Establish transparent transfer policies that clearly outline the criteria and process for transferring healthcare workers based on need. Ensure that transfers are based on objective criteria such as skills, qualifications, and workload, rather than personal preferences or political considerations. - Conduct regular needs assessments to identify staffing gaps and determine the areas where additional human resources are needed. Use this information to guide recruitment, deployment, and transfer decisions.	HSD/MoSD
The capacity development of health workers is challenging due to unavailability of dedicated training center for health.	- Advocate for the establishment of dedicated training centers for health workers at provincial levels. These centers can provide comprehensive training programs tailored to the needs of healthcare professionals, covering a wide range of topics including clinical skills, public health, leadership, and management.	MoSD

No culture of transferring knowledge or trained individuals do not actively engage in sharing their learning with other colleagues.	- Recognize and reward healthcare professionals who actively participate in knowledge-sharing activities, such as mentoring, teaching, or leading training sessions. Incentives can include professional development opportunities, career advancement, or monetary rewards. - Include knowledge transfer and mentorship activities as part of the performance evaluation criteria for healthcare professionals. This encourages individuals to actively engage in knowledge-sharing practices as part of their professional responsibilities. - Create formal mentorship programs where experienced healthcare professionals' mentor newly joined or untrained colleagues. This allows for the transfer of knowledge, skills, and best practices in a structured and supportive environment.	HSD/HSO/Local level
There has been an increase in quantitative aspects rather than qualitative aspects of training.	- Design training curriculum that incorporate a balance of quantitative and qualitative components. Include hands-on practical exercises, case studies, role-playing scenarios, and interactive discussions to enhance the quality of training. - Implement feedback mechanisms to gather input from trainees and trainers on the effectiveness and quality of training programs. Use this feedback to identify areas for improvement and make adjustments accordingly. - Establish clear evaluation criteria to assess the quality of training programs. Include measures of effectiveness, participant satisfaction, knowledge retention, and application of skills learned. Use evaluation results to continuously improve training quality.	HSD/HSO

Information and Research

Issues	Recommendation	Responsibility
The updated forms and formats for service recording and reporting are not available in all institutions in a timely manner.	- Establish a schedule for distributing updated forms and formats to all institutions in a timely manner. - Co-ordinate with all relevant stakeholders to deliver on time.	HSD/HSO

Difficulty in implementation of EHR and EHIRRS due to interoperability issue with DHIS-2.	- Conduct a thorough assessment to identify the specific interoperability challenges between the EHR/EHIRRS software and DHIS-2. Determine the technical requirements and compatibility issues that need to be addressed for seamless integration. - Foster collaboration and partnerships between software developers, health authorities, and other stakeholders involved in the implementation of EHR/EHIRRS and DHIS-2 software. Pool resources, share expertise, and work together to overcome interoperability challenges	DoHS/MoSD/HSD
Despite improvements in completeness and timeliness of data its quality remains inconsistent.	- Conduct routine data quality assessment to identify areas of inconsistency and determine root causes. - Establish feedback mechanisms to provide timely feedback to data collectors and data providers on the quality of data submitted. Encourage data review sessions and data reconciliation exercises to identify and address discrepancies or anomalies in data. - Regularly conduct the meeting Data Management Committee, review issue and challenges and prepare action plan and implement accordingly.	HSD/HSO
eLMIS system has not been rolled out in all health institution and where implemented, they are not effectively operable.	- Conduct a comprehensive needs assessment to identify gaps and challenges in the implementation of the eLMIS across health institutions. This assessment should consider logistics requirements, technical capacities, user needs, and workflow integration. - Provide comprehensive training and capacity-building programs for healthcare staff on the use and operation of the eLMIS. Offer training sessions on system functionalities, data entry protocols, reporting requirements, and troubleshooting techniques to enhance staff competencies.	DoHS/HSD/HSO

Unable to include the information of services provided by private healthcare institutions in integrated health information management system.	- Offer recognition to private healthcare institutions that participate in data sharing and integration efforts. - Develop standardized data exchange protocols and interoperability standards that enable seamless integration of data from private healthcare institutions into the integrated health information management system.	HSD
There is a demand for the installation of EHIRRS in health institutions of local levels.	- Conduct a thorough needs assessment to understand the specific requirements and priorities of health institutions at the local level regarding health information management. Identify the existing gaps, challenges, and opportunities for implementing the EHIRRS. - Offer technical assistance and support to health institutions during the installation and implementation process. Provide assistance with system setup, customization, and integration with existing health information systems to ensure seamless operation of EHIRRS.	HSD
No regular monitoring of program wise data in a timely manner.	- Ensure the review of program wise data in data management committee meeting which is held every month.	HSD and HSO
Using data as the basis for planning is still not a widespread practice.	- Incorporate data analysis into current planning procedures. Conduct biannual assessments to examine how data has been integrated into the planning process and in what capacity it has been utilized.	HSD and HSO
The establishment of a local data quality committee to facilitate improvements in data accuracy has not been implemented.	- Co-ordinate with health workers and local representatives of local level to establish data quality committee and offer training and resources to committee members to enhance their understanding of data quality concepts, tools, and techniques.	HSO and Local level
Maximum use of technology is not done to increase public health awareness.	- Use social media platforms to disseminate health-related messages and campaigns to a wider audience. Develop engaging content, such as videos, infographics, and interactive posts, to capture attention and encourage behavior change. - Partner with influencers, community organizations, and healthcare providers to amplify health messages and initiatives. Collaborative efforts can extend reach and credibility, especially within specific target populations.	HSD, HSO and Local level

Medical equipment's and technologies

Issues	Recommendation	Responsibility
In the Himalayan regions, the delay in the delivery of medicinal, vaccine, and other health supplies adversely impacting basic health services.	- Invest in building robust supply chain infrastructure tailored to the challenging terrain and climate conditions of the Himalayan regions. This includes establishing warehouses, distribution centers, and transportation networks equipped to handle medical supplies efficiently. - Develop contingency plans to mitigate potential disruptions to the supply chain, such as inclement weather, natural disasters, or geopolitical instability. This involves pre-positioning emergency stockpiles, diversifying transportation routes, and establishing alternative delivery mechanisms.	MoSD/HSD, PHLMC and HSO
Districts and local authorities have not timely conducted the essential procurement and distribution processes of medications, and duplications have also occurred in procurement.	- Simplify and standardize procurement procedures to minimize bureaucratic delays and inefficiencies. Develop clear guidelines and protocols for procurement, including timelines for each stage of the process, to ensure timely execution. - Improve coordination and communication between districts and local authorities involved in procurement and distribution processes. Establish regular meetings or working groups to facilitate collaboration, share information, and address challenges collectively.	HSO and local level
Available equipment's haven't been used fully and effective repair and maintenance of equipment's not practiced.	- Establish a regular maintenance schedule for all equipment based on manufacturers' recommendations and industry best practices. This includes routine inspections, preventive maintenance tasks, and timely repairs to address any issues promptly. - Conduct regular assessments of equipment utilization rates and performance metrics to identify opportunities for improvement. Use data-driven insights to optimize equipment deployment and inform decision-making regarding repairs or replacements.	HSD and HSO
The high wastage rate of vaccinations is leading to an increasing financial burden.	- Conduct a timely micro-planning at all levels and regularly ensure if it is happening timely and effectively or not.	HSO and local level
Treatment protocols and guidelines are not being delivered to all health	- Implement a structured communication system to ensure timely dissemination of treatment protocols and guidelines to all health institutions. This may	HSD and HSO

institutions in a timely manner.	include regular emails, newsletters, or dedicated communication platforms. - Leverage technology platforms such as intranet portals, mobile applications, or online repositories to centralize access to treatment protocols and guidelines. This allows for easy dissemination and ensures that updates can be distributed promptly.	

Health Financing

Issues	Recommendation	Responsibility
Increasing trend of non-communicable diseases is leading to increasing financial burden.	- Implement comprehensive preventive healthcare initiatives aimed at reducing the incidence of NCDs. This includes promoting healthy lifestyle behaviors such as regular physical activity, healthy eating habits, tobacco cessation, and stress management. - Launch targeted health education and awareness campaigns to increase public knowledge about the risk factors associated with NCDs and the importance of early detection and prevention. These campaigns can be delivered through various channels, including mass media, community outreach programs, and digital platforms.	MoSD/HSD, HSO and Local level
Budget allocated to public health programs are gradually decreasing.	- Utilize evidence-based data and research to demonstrate the return on investment of public health programs. Present compelling evidence of the positive impact of these programs on improving health outcomes, reducing healthcare expenditures, and enhancing overall societal well-being. - Advocate for policy changes at the local, state, and national levels to support increased funding for public health programs. Engage with policymakers to educate them about the importance of investing in prevention-focused initiatives and the long-term benefits of public health investments - Engage communities in advocating for increased funding for public health programs. Mobilize grassroots efforts to demonstrate community support for these programs and their impact on improving health outcomes and quality of life.	MoSD/HSD, HSO and Local level

Even with the implementation of insurance act, the health insurance program has still failed to cover everyone and reduce OOPE.	- Conduct health education and awareness campaigns to inform the public about the importance of health insurance coverage and the benefits of seeking timely healthcare. Empower individuals to make informed decisions about their health and insurance options. - Establish mechanisms for monitoring and evaluating the performance of the health insurance program, including coverage rates, OOPE reduction, and healthcare utilization patterns. Use data-driven insights to identify areas for improvement and inform policy decisions.	MoSD/HSD, HSO and Local level
It is necessary to streamline the allocation in the budget for priority areas in the health sector under the fiscal equalization received by local bodies.	- Conduct a comprehensive needs assessment to identify priority areas and gaps in health service delivery within each local body's jurisdiction. This assessment should consider factors such as population health needs, disease prevalence, infrastructure requirements, and healthcare utilization patterns. - Implement performance-based budgeting mechanisms to link budget allocations to the achievement of health sector goals and outcomes. Establish clear performance metrics and targets for priority areas, and allocate resources based on demonstrated performance and impact.	Local level
The financial irregularities has been increasing.	- Enhance internal controls and financial management processes to prevent and detect irregularities. This includes implementing segregation of duties, regular reconciliation of accounts, and approval processes for financial transactions. - Conduct regular internal audits to review financial transactions, identify irregularities, and ensure compliance with policies and procedures. External audits by independent auditors can provide additional oversight and accountability.	MoSD/HSD, HSO and Local level

Governance

Issues	Recommendation	Responsibility
Although health related laws, regulations, and policies have been formulated at the provincial and local levels, their implementation aspect has been overlooked.	- Implement robust monitoring and evaluation systems to track the progress of policy implementation and assess its impact on health outcomes. Regularly review performance data and feedback from stakeholders to identify challenges and opportunities for improvement.	MoSD/HSD, MoF
Regular social audits and public hearings have not been conducted in all health institutions.	- Develop formal policies and guidelines mandating the conduct of regular social audits and public hearings in all health institutions. Ensure that these activities are integrated into institutional governance structures and are conducted transparently and systematically.	MoSD/HSD, HSO and Local level
Collaboration of three levels for monitoring and supportive supervision, along with joint evaluation, is not happening.	- Create collaborative frameworks involving stakeholders from different levels of the healthcare system, including national, regional, and local authorities, as well as community representatives. - Define clear evaluation criteria and standards for assessing the performance and impact of public health programs. Ensure that these criteria are aligned with program objectives and are agreed upon by all stakeholders.	MoSD/HSD, HSO and Local level
The identified gaps from the evaluation based on minimum service standards have not been addressed in a timely manner in all health institutions.	- Develop action plans to address each identified gap systematically. Action plans should outline specific steps, timelines, responsible parties, and resources needed to rectify the deficiencies identified during the evaluation process. - Prioritize the identified gaps based on their severity, potential impact on patient outcomes, and feasibility of addressing them.	MoSD/HSD, HSO and Local level
No continuous attention in the skill development of health workers.	- Conduct regular assessments to identify the training needs of health workers. - Utilize technology-based training methods to provide flexible and accessible learning opportunities for health workers. This allows them to engage in training activities at their own pace and convenience. - Facilitate peer learning and collaboration among health workers through regular meetings, case discussions, and knowledge-sharing sessions. Encourage the exchange of best practices, experiences, and lessons learned among colleagues.	MoSD/HSD, HSO and Local level

7. MULTISECTORAL COORDINATION

7.1 Provincial Health Co-Ordination Team (PHCT)

Background

The Provincial Health Coordination Team (PHCT) is a diverse coalition for multisectoral coordination in Karnali Province, formed through ministerial-level decisions of the Ministry of Social Development (MoSD). This coalition encompasses a broad spectrum of stakeholders from public, private, and non-governmental sectors, including NGOs, INGOs, donors, and bilateral organizations. Together, they work collaboratively to enhance the health status of Karnali Province by improving access to healthcare and strengthening healthcare delivery systems.

These projects and organizations align their efforts with the Ministry of Social Development's (MoSD) health goals, tailoring their activities to their respective scopes, mandates, priorities, and geographical coverage. Recognizing the need for a coordinated approach to prevent duplication of efforts and resources and to achieve synergies, a coordination mechanism and platform were essential.

This coordination mechanism ensures to harmonize activities across various organizations, facilitating the Ministry of Social Development (MoSD), its divisions, and directorates in prioritization and optimization of expertise and resources. Through fostering systematic collaboration, it enhances partnerships among external supporting partners, private organizations, and government institutions associated with both MoSD and the Provincial Health Service Directorate.

To facilitate collaboration and partnership, a Provincial Health Coordination Team (PHCT) has been established. This team comprises government representatives and representatives from private and external support partners actively working in Karnali Province. The PHCT plays a pivotal role in facilitating coordination between MoSD, its Health Service Directorate, and the various development partners and stakeholders involved.

Rationale for Provincial Health Coordination Team

The PHCT is useful for MoSD, Health Service Directorate and development partners for following reasons:

- Strategic support at provincial level to effectively implement global, national and provincial health policies and strategies (including local priorities) in coordination with federal Ministries and other stakeholders to achieve health sector goals set by Nepal Health Sector Strategy and other policy documents
- Strengthen harmonization and coordination of actors at the provincial level focusing on the health sector to develop synergy
- Facilitate efficient use of health resources and minimize duplication of resources by minimizing ad-hoc, scattered and unaligned implementation of activities

- Promote mutual accountability and promoting health sector governance and stewardship
- Promote joint monitoring and sharing of learning that can be replicate in the province

The key objective of PHCT is to create a forum for developing common understanding of the priority's areas, make plan to implement those priority areas, rational use of resources and avoid duplication of time, effort and financial resources.
This coordination team can be a forum to:

- Share information, knowledge and lessons learned,
- Make collective decisions based on the issues and challenges, and
- Support MoSD to strengthen its health system, to improve access to, utilization of and quality of health services.

A similar platform (Provincial Health Coordination Team) was in place before restructuring of Nepal and lessons learned from that will be utilized. The proposed team is expected to be more comprehensive, participatory and will serve as link and facilitate communication between federal, provincial, and local level.

Objective of setting up of PHCT:
The main objective of the PHCT is to bring all actors together working in the health sector at Karnali Province (public, private, non-government, donor and external development partners) to coordinate programme, project and resources to achieve health sector results through strategic direction, policy and programme development, support in implementation and progress monitoring and evaluation.

Core areas of coordination and collaboration:

1. Health sector leadership and governance - sector planning, multi-sectoral coordination/collaboration and networking, accountability and synergy
2. Essential Health Care Services – equitable access and utilization of health services, universal coverage, and systematic quality improvement of health care,
3. Human resource management and capacity building
4. Health Management Information System – recording, reporting and strengthening management information system and capacity of municipalities
5. Supply chain management to ensure year-round availability of essential drugs and supplies to deliver quality health services
6. Health service promotion and behavior change communication
7. Emergency health, epidemic and disaster preparedness and management functionalization of provincial health emergency operation center and Rapid Response Team
8. Promoting gender equity and social inclusion in health sector,
9. Joint monitoring and periodic review of health services,

Composition of PHCT
The agencies (public, private, non-government, donor and external development partners) working in health sector at Karnali province are the members of PHCT. There is a committee under the chairpersonship of the Health Service Director as below:

Team:

1. Director, Health Service Directorate - Chairperson
2. Chief, Health Division – MoSD, Co-Chair

3. Medical Superintendent, Surkhet Hospital
4. Chief, District Public Health Service Office, Surkhet
5. Member Secretary: Program Officer from Health Service Directorate

Members:

1. Representative, UNICEF
2. Representative, WHO
3. Representative, WFP
4. Representative, USAID/SSBH
5. Representative, Save the Children
6. Representative, AIDS Healthcare Foundation Nepal
7. Representative, Humanity and Inclusion
8. Representative, NSI
9. Representative, Centre for Mental Health Counseling
10. Representative, SUAAHARA II
11. Representative, Swachchhata
12. Representative, Pharmacy Association
13. Representative, INF
14. Representative, Nepal Red Cross Society
15. Representative, FPAN
16. Representative, Handicapped International (HI)
17. Representative, CRS Nepal
18. Representative, Mery Stops

Note: Representatives from other health related organization, groups or networks will be called upon as invitees as and when required. Periodic review of the composition will be done and changes in the membership will be updated on annual basis.

PHCT Membership Process

All the organization (public, private, non-government, donor and external development partners) working in health sector at Karnali province could be the member of PHCT in principle. But to obtain formal membership of the team, interested organization must fill the form with required information including the scope and operation modality, contact persons as requested by the Health Directorate.

Roles and Responsibilities of PHCT

The primary role of the team is to play the coordination and facilitation role to strategically move the health sector in the province forward. Specific roles and responsibilities of the team will be the following:

- Work as key steering body in coordinating programme/activities and resources of all actors of the sector - including control and regulation
- Make strategic alignment of program and resources to achieve the results pursued by Federal MoHP and provincial MoSD
- Jointly working for effective implementation of Provincial health sector policy/strategy and periodic Plan

- Map out working areas (e.g. districts, municipalities) supported/focused by different actors in the health sector and update the provincial health profile and resource map on periodic basis
- Facilitate public sector's health programs' implementation process for its effectiveness in wider coverage and equity.
- Strengthen joint planning, monitoring, supervision and review of the programs and projects (e.g. participate and facilitate the local and provincial level joint Annual Health Performance Review Meeting).
- Develop an Emergency Health and Epidemic Preparedness and Disaster Management Plan and mobilize Rapid Response Team (RRT) as needed
- Take initiatives for learning and innovation in health sector by promoting studies and operational researches, introducing new approach/tool or technology and/or technical update
- Formation of different sub-groups/task group for effective implementation of technical themes (eg. quality improvement group, MNCH/RH group, Governance and accountability group) for further support.
- Facilitate interaction and communication between the provincial government with development partners primarily at provincial level but also with federal and local level as needed and Any other action demand as needed and as jointly agreed by PHCT.

7.2 Development Partners in Karnali

The outcomes discussed in the preceding chapter reflect the collective endeavors of the Ministry of Social Development, Karnali Province, the Health Service Directorate, and their development partners. This chapter delineates the program focuses of these organizations and highlights the achievements attained in the fiscal year 2079/80.

Table 7.2.1 Development Partners Working in Karnali Province

Organization / Project	Theme	Geographic area (District, Local Level)	Working Period
Centre for Mental Health and Counselling-Nepal	Health System Strengthening, NCD and Mental Health	Surkhet, Dailekh, Jajarkot, Rukum West, Salyan, Kalikot and Jumla	Since 2005 till Date
Handicapped International	Physical Rehabilitation	Karnali Province	2019 June-2025 June
FHI360	Supply chain management/ ELMIS strengthen	TA in all 1o districts	Till March 2024
INF NEPAL/ Shining Hospital	Leprosy/ Fistula/ Disability/Community Health Development	Mugu, Jumla, Kalikot, Surkhet	
Marie Stops	Enabling women and girls to access their service of choice in their community.	Surkhet, Mugu	1994

MOMENTUM Private Healthcare Delivery Nepal Project	Family Planning/RH	Surkhet – Birendranagar and Bheriganga municipality Dailekh – Narayan and Dullu municipality and Dungeshwor RM	October 2022 to March 2025
NSI	• Hospital System Strengthening • Curative Service Support Program	All hospitals of Karnali Province 5 Hospitals in Karnali Province	2021 to 2026
One Heart worldwide	• Maternal and newborn Health	Rukum west, Salyan	
Save the Children International	• Maternal, child health and Nutrition, ARH & FP, TB, Malaria and HIV/AIDS		Since 2000
TPO Nepal	• Mental Health	Surkhet – 12 Schools	Jan 2023-Dec 2024
UNICEF	• Nutrition, Maternal Child and Adolescent Health	Karnali Province; (10 districts and 79 local government)	2018-2022 (5 year) New Country Program Cycle 2023-2027
USAID Adolescent Reproductive Health	• ARH	Surkhet (Bheriganga, Lekhbesi, Gurbhakot & Panchapuri, Municipalities) Salyan (Sharda, Bagchaur and Bangad Kupinde Municipalities)	2022-2027
USAID's Strengthening System for Better Health Activity (SSBH)	Health System and Governance, Maternal, Child Health and Family planning, Health Information System, Private Sector Engagement, Health Emergency Response	All 10 Districts/ 79 Municipalities of Karnali Province.	2018- July 2023 Extended One year 2023 July to 2024 July
USAID/ Suaahara II	Integrated Nutrition Program	Surkhet , Dailekha . Salyan , Rukum West and Jajarkot	2016 to 2023
USAID Health and Hygiene Activity (Swachchhata)/ DevWorks International	Water, Sanitation and Hygiene (WASH) in Health Facilities. ✓ WASH Infrastructure; ✓ Infection Prevention (IP), Providers Behavior Change Communication (PBCC); Behavior Change Communication and GESI	Karnali Province: 6 Districts, 48 municipalities, 232 Health Facilities Lumbini province; Rukum East, 3 municipalities, 16 Health Facilities	2016-2024
WaterAid	Hygiene promotion through routine immunization	All districts and palika of Karnali Province	Technical support till March 2024
World Food Program (WFP)	Mother and Child Health and Nutrition Programme	Kalikot, Jumla, Dolpa, Mugu, Humla	Since 2019 till Date

World Health Organization	Health System Strengthening, Health Emergency and Vaccine Preventable Diseases, NCD and Mental Health, NTD, CDS, Malaria	Karnali Province	Since 1999 till date (IPD) Since 2019 –till date (HSS and WHE)

Table 7.2.2 Other Development Partners Working in District/Local level in Karnali Province

Organization / Project	Theme	District, Local Level
AIDS Healthcare Foundation Nepal (AHF)	HIV/AIDS	Surkhet
Bhakari	Disaster	Dailekh
CDS Park	Rehabilitation	Mugu
Dailekh Plus	HIV	Dailekh
Dang Plus	HIV	Rukum West
Everest Club Dailekh	Nutrition	Dailekh
FPAN	Family Planning	Surkhet, Dailekh
Kapilvastu Integrated Development Services (KIDS)	TB/HIV	Surkhet, Dailekh, Kalikot Salyan
Karnali Plus	Hiv	Kalikot
Nava kiran Plus	HIV	Surkhet
Himalayan Education and Development [HEAD] Nepal	Disability	Humla
HILLY REGION DEVELOPMENT CAMPAIGN(HRDC)	Maternal and child Health	JAJARKOT
Human Rights and Environment Development Center (HURENDEC)	Health, Education and Community Promotion	Kalikot, Dailekh, Jumla, Mugu
Kathmandu Institute of Child Health(KIPOCH)	NCD	Dailekh,
KIDARC	WASH	Kalikot
Marie Stopes Nepal	Family Planning, Safe abortion	Surkhet, Dailekh, Mugu
Nepal Netra Jyoti Sangh	Eye Health	Humla, Jumla, Kalikot, Mugu, Dailekh
Nepal Recdross Society	Eye/ ENT	Dailekh, Surkhet
Nepal National Social Welfare Association(NNSWA)	HIV	Surkhet
Manahari Development Institute-Nepal(MDI)	MCHN	Kalikot, Jumla, Dolpa
Repal Redcross Society	emergency relief services for disaster	All District in Karnali
Rukmeli Social Development Center(RSDC)	Nutrition	Rukum West
SAPPROS Nepal	Nutrition	Humla, Mugu
Salyan Plus	HIV	Salyan
WOREC Nepal	Women's Health	Rukum West, Jajarkot

Partner organizations employ a multifaceted approach to their work, focusing on several key strategies.

- Health System Strengthening
- Multi Sector Approach and Partnership
- Tri-party Agreement
- Government to Government Agreement
- Technical Support
- Demand Generation through Social Behavior Change Communication (SBCC)
- Research, Innovation and Replication
- Gender, Disability and Social Inclusion (Reaching to Unreached)
- Humanitarian Support during Health Emergency

Table 7.2.3 Key Interventions conducted by Partner's Organization

Key Interventions	Key Highlights	Partners
Maternal, child health and nutrition		
Capacity Enhancement of health workers Equipment support for quality MNH services Technical support for Full Immunization Deceleration and Outbreak Response Immunization.	• **Technical Support** for Capacity Enhancement of Nursing staff on KMC, onsite clinical mentoring, coach/mentor development, ANC to PNC continuum of Care scale up **Hospital MPDSR** in Rukum district. • Birthing Center equipment support in 4 health facilities(Dullu Hospital, Raskot Community Hospital, Sarkeguard BC and BirendraNagar Hospital) • Supported PHLMC in refurbishment and upgradation of cold chain room • (**Supported for Full Immunization declaration** in 2 Districts(Humla and Dolpa) and Outbreak Response Immunization(ORI) in Surkhet.	UNICEF
Nutrition Specific and Sensitive Interventions under **Multi-Sectoral Nutrition Plan (MSNP)**	• Technical support for activities implementation (federal, provincial and local) • Advocacy for sensitization of nutrition and its importance • MSNP advocacy program to Provincial Assembly Members and all LGs representatives • Advocacy with NPC and PPC for Special Grant to LGs (12 LG has received special grant from federal govt and 8 LG has received special grant from province govt) • SMART survey at Jumla and Mugu	UNICEF
Technical support in Government AWPB activities of Immunization & hygiene promotion program.	• Improved immunization and hygiene promotion data and programs • Enhanced capacity and expertise of health workers in immunization and hygiene promotion programs	WaterAid
• Mother and Child Health and Nutrition Programme (MCHN) • Improving nutritional status contributing to reduction of stunting, wasting and underweight in children, and of anemia in pregnant and breastfeeding women. • Timely food distribution linked with improved system of delivering the	• Karnali focused Nutrition Specific programme since 2014	WFP MDI and SAPPROS

Key Interventions	Key Highlights	Partners
essential health and nutrition services as ANC/PNC and SBCC • Regular counseling and on the spot community-based health education sessions on regular basis. • Supportive Activities for Recording and Reporting Capacity strengthening of the LGs and health facilities		
• BC renovations /construction • MWH construction • Essential equipment support to BCs • Capacity Development (SBA and Clinical Mentor Training, etc) • MNH Helpline • CHSB and SATH tools application	Signed MoU with respective Palika to built the BC in Rukum West and Salyan, • MHW Constriction in Rukum West	One Heart Worldwide and Local NGOs
• Renovation of birthing centers (BCs) & Health Facilities or essential infrastructure of BCs such as placenta pit and WASH facilities. Essential Equipment for BC, MNH, SBA Training, CBIMNCI and SBCC Initiative.	• Total of 20 HFs/BCs received essential equipment support and 4 HFs/BCs received renovation support, CBIMNCI-22, 7 HF- Toilet Support and Counseling to Adolescent, Nutrition Promotion, MNH and SBCC	Save the Children International
Measles Outbreak Investigation and control activities in Surkhet, Kalikot and Salyan districts.	• Acute Case Search; Line listing; Vit- A supplementation; Follow up on Cases; sample collection, transport; SELECTIVE ORI; Orientation and advocacy meetings; Media mobilization	WHO-IPD
Capacity Building Technical Support	• Clinical Trainings, SBA, IUCD, Implant, MNH update, Coaching/Mentoring, CBIMNCI • Regular clinical onsite coaching and mentoring at all HFs • Support to functionalization quality Assurance mechanism	SSBH
• Interpersonal communication • Community mobilization ; • Social behavior changes communication • Strengthen services • Provide technical support • Governance & Advocacy;	• Positive results were observed in the following areas: • Maternal dietary diversity, institutional delivery, complementary feeding of children • feeding sick child more, Knowledge and capacity of health workers and FCHVs • Strengthen OTCs and Nutrition Food Security Streeting Committee	SUAAHARA and 5 Local Partners
• Birthing Center (BC) construction • Medical equipment support. • Enhance local health system	• Construction of 4 BCs in Anapani BHSC and Bhagwati Health Post in Nalgad Municipality and Paink HP and Talegaun HP in Kushe RM. • Support medical equipment to Six **BC.** • Collaboration with the Province hospital to **expand** • Social Accountability tool CHSB	CARE Nepal and Local Partners
• Construct girls-friendly toilets including MHH facilities • Social analysis and action (gender-transformative approach)	• Supported to build girls friendly toilets Establishment of Adolescent Health and Nutrition Corner • Equity & Access program through social analysis and action (SAA) • SBA training	HRDC Jajarkot, CARE Nepal (IAMR Project)

Key Interventions	Key Highlights	Partners
	• immunization micro planning. • MNH clinical coaching and mentoring to the nursing staffs	
FP and Adolescent Health		
ASRH training, Sangini Training, Business Skill Training, Implant Training and Short Method Training	42 HF service providers trained 47 service provider have trained on Sangini training Business skill training provided to 37 HFs • Training in Implant and service regular, etc.	MOMENTUM Private Healthcare Delivery Project
• Support to establish AFS in Health facility. • Training to Health Workers on ASRH and LARC • School and community-based group sessions on SRHR and life skills.	• Supported to establish Adolescents friendly Health Service (AFHS) Centre. • Total of **35 HWs** were trained on ASRH training,	Save the Children International
• Socio-emotional learning (SEL) package implementation • Caregiver workshops with parents, teacher and caregivers.	Piloting SEL package at 12 schools of Surkhet District. • Piloting caregiver and facilitators manual	TPO Nepal
• Formation of groups (Adolescent, Father, Mothers, etc.) • Orientation to social & religious leaders on ARH. • Advocacy, Roll out of FCHV modular package	• 82 groups comprised of adolescents, their fathers, mothers and young mothers • Engagement of youth clubs • FCHV modular package in all working municipalities • Social Accountability tool YLCHSB in 6 HFs	USAID Adolescent Reproductive Health
Teachers training on student psychosocial counselling, child friendly classroom, establishment of school psychosocial support unit, orientation to parent, PTA and SMC	• 78 schools with mental health programmes 200+ teachers trained in Student Psychosocial Counselling Training, 10 school with psychosocial support unit	CMC-Nepal
Diseases Control (TB, Malaria, HIV, NTD, VBD, etc.)		
▪ Conduct Palika orientation for all palikas of Dailekh, Salyan and Kalikot ▪ Conduct sensitization meeting with provincial focal persons ▪ Regular support in Redbook activities ▪ Ensure zero data deviation of all Three program TB, HIV and Malaria ▪ Conducted Case Based Investigation ▪ Conducted Foci investigation and foci F/U ▪ LLIN distribution: Mass and through ANC ▪ Supported in logistics supplies of malaria program related commodities	• Sensitization and commitment from palika level in TB, HIV and Malaria program at Dailekh, Salyan and Kalikot • Regular data cleaning and minimization of data discrepancy • Decrease in initial defaulters • Roll out of ONHIS • Increased community awareness & 7480 suspected case screening of malaria at community level through CBT. • Protected risk population & cut off transmission chain through IRS	Save the Children International, KIDS, NNSWA, NAP+N

Key Interventions	Key Highlights	Partners
▪ Multi Sector Approach and Partnership ▪ Technical Support ▪ Commodity supply ▪ Research, Innovation and Replication	▪ Capacity building ▪ Co-ordination ▪ Regular monitoring ▪ Supply of medicine and other key commodities ▪ Regular technical support	WHO
▪ Continue Primary prevention intervention ▪ Day celebration ▪ Community lead testing ▪ Early ART initiation ▪ Client support ▪ STI case management among PLHIV ▪ Viral load monitoring ▪ Promotion of free health services ▪ Capacity building ▪ Human resource support	▪ Condom distribution-48515, TB screening 2719 ▪ WAD, ICD, TB day celebration ▪ HIV testing CLT-374/5 new ▪ 95.5% ART initiation within 14day of enrollment ▪ Travel support-286, nutrition support-32, medicine support-76 lab-34 ▪ Support in management of syphilis Screening/test/diagnosis(125/125/14) ▪ 75% HIV viral load test within last 12 month. ▪ Total active client enrolled on health insurece-340 ▪ CME, TWG/QI meeting ▪ Client educations sessions -22 ▪ 2 staff for ART clinic in Province Hospital	AIDS Healthcare Foundation (AHF Nepal)
NCD and Mental Health		
Child and Adolescent Mental Health and NCD	▪ Social Emotional Learning Package piloted in 2Municipalities(Birendranagar and Gurbakot, through the TPO Nepal reaching to 6,329 children and adolescent. ▪ Provided support in the construction of telemental health building and handover of completed building to provincial hospital .	**UNICEF/CWIN**
NHTC modular Trainings for integration of MHPSS Municipal Mental Health Policy Development, technical support for Provincial Mental Health Strategic Action Plan development, Suicide prevention, lobby and advocacy	• 67 health facilities with MHPSS services, 9 local government endorsed municipal mental health policies, around 75 lakh allocated by local municipality for mental health, 4 peer group formed for suicide prevention	CMC-Nepal
Individual support counselling SEL package implementation Caregiver workshop Joint monitoring caried out	• 6329 student participated from 12 different schools • 1034 participants participated in 29 workshops. • 3 visit with local government, province government officials.	TPO Nepal
Health System Strengthening		
• Technical Support for Provincial Committee Formation for developing Health Regulation, Health Strategy, Mental Health, and important policies, guidelines and SoPs • Policy Level Interaction on Health Financing • Technical Support for Local Level Health Review and Planning • Technical support for Water Quality Surveillance	• MoSD has endorsed Health Regulation, Provincial Health Strategic Plan, Mental Health Strategy and ready to endorse as rehabilitation strategy, Eye Health Strategy, Supply Chain Guideline, • Formation of Provincial Water Surveillance Committee, • AWPB for FY 2080-81	World Health Organization-HSS

Key Interventions	Key Highlights	Partners
• Technical Support for AWPB 2080-81 Development, Program Implementation Guideline		
Policy and guidelines	• Support in developing the Good/Better Food Awareness Booklet (Provincial Food Based Dietary Guideline). • Support in Monsoon Preparedness and Response Plan 2080. • Finalization of the Provincial Health Strategy and Multi hazard health and nutrition disaster preparedness and response plan. • Provided technical support in developing the karnali province health strategy. • Technical support in finalizing the mental health strategy.	UNICEF
• Technical support for policy gap analysis and support for policy/strategy formulation at province and local level	• Supported to develop Karnali Health Strategy and Implementation Plan • Policy gap analysis workshop in Dailekh, ECD strategy is under progress, Comprehensive Sexuality education Implementation guideline in two municipality of Jajarkot.	Save the Children International
• Health planning and Budgeting workshop • HFOMC training at HFs • HPMSS and Its follow up	• 22 Workshops for Health Planning • 39 HFOMC Training • HPMSS in 39 HFs	One Heart Worldwide
• Capacity Building, Technical Support at Provincial Level, • Technical Support to Municipalities and HFs	• e/LMIS, DHIS2, HMIS, RDQA, HFOMC, GESI • Support in Policy, Strategy and guideline development: Strategic implementation Plan, Health Service Regulation, Health Facility, Annual Program Implementation Guideline and among others. • Health Information Management: Periodic reviews, Health Profile. • Support in strengthening and installing Electronic Health Recording System (EHR) • Supported to develop Health policy, Act, etc.	SSBH
• Training • Curative service support Program (CSSP) • Hospital Support Program (HSP)	• Support to conduct various trainings like SBA, MLP, ASBA, CTS, OTTM, PEC and ECCT in collaboration with HRDC Karnali Province and Province Hospital Surkhet. • HR Support at HRDC • Establishment of Provincial Biomedical Management Unit and HR-BMET support • Support 6 hospitals of Karnali Province. (Dullu Hospital, Humla District Hospital, Kalikot District Hospital, Salyan District Hospital, Mehelkuna Hospital, Jajarkot District Hospital) • Equipment Support, Living Support • Improve quality hospital services through regular assessment using MSS tool. • MSS Program implementation support to the	NSI

Key Interventions	Key Highlights	Partners
	government (All Hospitals)	
• Capacity building • Coordination/collaboration	• ELMIS training for storekeeper/ logistic focal person • evidence based decision making bimonthly meeting • Supply chain management working group meeting • Waste management/expiry management training • Supportive supervision	FHI360
Physical Rehabilitation		
Support Health Service Directorate, Health Service Offices to organize orientation on early detection and referral of children with impairments to government health workers	• A total of 734 (M:345, F:389) health workers from eight districts oriented. • 34 cases identified and referred by HWs.	Handicap International
Support health service offices, province ayurveda hospital, KAHS, and province hospital to establish and upgrade physiotherapy units in hospitals by supporting physiotherapy equipment and providing technical support	• Eight physiotherapy units have been established in eight district hospitals (Mugu, Humla, Kalikot, Dolpa, Jajarkot, Salyan, Rukum West, and Dailekh)	
Support Karnali Academic of Health Science Jumla to establish a Tele-Rehabilitation service through the equipment and technical support.	• Tele-Rehabilitation service established in KAHS. • Hands-on technical orientation, on telerehabilitation service delivery provided to MDT Team of KASH.	
Support MOSD to develop rehabilitation related guiding documents: provincial rehabilitation strategy plan , rehabilitation annual working plan and guidelines	• Rehabilitation strategy plan - Draft finalized and submitted to MOSD	Government counterpart (MOSD, HSD,HSOs), WHO, and National Federation of Disabled Nepal (NFDN)
Support Health Service Offices, KAHS, and province hospitals to provide wheelchair and other assistive device services.	• 5 / 5 wheelchairs provided to all HSOs • 15/ 15 wheelchairs provided to KAHS and province hospital	
Organize orientation on a continuing professional development to government physiotherapist of Karnali province, and post –COVID 19 rehabilitative management clinical protocol to Dr. Nurse and physiotherapist.	• 10 Gov. PTs participated • 26 multidisciplinary team (Dr. Nurse, Physiotherapist) oriented	
Develop and integrate the Rehabilitation module into HMIS- DHIS2 software and deliver its training to government medical recorders and physiotherapists of Karnali province.	• 10 physiotherapists and 10 medical recorders have trained. • All HSOs started to report through the HMIS-rehabilitation module.	
Support MOSD to conduct joint monitoring and supervision visits to PTUs	• Conducted in 5 districts (Jajarkot, Dolpa, Mugu, Kalikot, and Jumla)	Government counterparts (MOSD, HSD, HSOs) and National Federation of Disabled Nepal (NFDN)
Conduct orientation on mental health and psychosocial support (MHPSS) to physiotherapists of Karnali province.	• Two days of orientation on MHPSS	

Key Interventions	Key Highlights	Partners
Support MOSD to conduct joint monitoring and supervision visits to PTUs	• Conducted in 5 districts (Jajarkot, Dolpa, Mugu, Kalikot, and Jumla)	
Support health service directorate to organize provincial annual health review and rehabilitation review meeting	• Technical and financial support provided yearly	
Support health service directorate to organize provincial annual health review and rehabilitation review meeting	• Technical and financial support provided yearly	
Emergency Health and WASH		
Capacity Building In-kind/Logistic Support Technical Support	• Training to Health Workers i.e, IPC, HCWM, Adult and Pediatric Essential critical care trainings, COVID-19 (IMU/DHIS-2, QR code verification, CICT) • and vaccination, onsite coaching on case management • Power backup for waste management unit at Province Hospital, CLIA Machine at KAHS, vaccination logistics i.e, cards, registers, safety box and transportation • Technical support: Muncipal health emergency and DPRP formulation, Data management, human resource support at hospitals and lab	SSBH
• Water, Sanitation and Hygiene (WASH) Infrastructure support • Infection Prevention Control (IPC), Providers Behavior Change Communication (PBCC) and Hygiene Promotion Through Routine Immunization (HPTRI) • WASH Behavior Change Communication (BCC), HPTRI and GESI • Coordination and Collaboration with government and partners	• Construction/rehabilitation of safe drinking water supply with water treatment, gender and disability-friendly toilets, and handwashing stations with public audits in 171 HFs. • Capacity building training on IPC, PBCC, HPTRI in 232 HFs • Capacity building training on WASH BCC, HPTRI and GESI to health workers and FCHV in 170 HFs • Regular HFOMC meetings and onsite coaching to health workers for sustainable WASH services, National WASH Day celebration, Contribution to NWASH MIS system • Coordination and collaboration with the health and WASH sector	USAID Health and Hygiene Activity (Swachchhata)
Verification of outbreaks/health adverse events (Dengue, Seasonal viral fever, COVID-19, Foodborne Diseases, Landslides, Floods, etc.)	Regular Media Monitoring for identification of cases. Daily media briefing on COVID-19 and communication through social media/ dengue case monitoring and updating. Coordination with media partners for information and health message dissemination.	USAID Health and Hygiene Activity (Swachchhata)
Response at the field level (case investigation, sample collection, and transportation, risk communications, and community engagement)	Supported for RRT capacity building training within the province and the local level. Formation Of EMT at the hub hospitals and distribution of EMT backpacks and rollout HDPRP	WHO

Key Interventions	Key Highlights	Partners
Coordination and Communication with partners and stakeholders (Government offices, Hospitals, Health Offices, NGO/INGOs, UN partners, etc.)	Regular coordination with all local level Health Post and support in health emergency response activities Daily real-time updates on Hospital bed occupancy, Human resources, resource mapping of oxygen plants and capacities, Update of Contact information with their details of Health Institution / HSO chief/Focal person/ Health Cluster stakeholders.	
Situation update and regular reporting (Collection of data/information, line lists, collation and dissemination of information through proper channels)	Maintain & Update the Line list of dengue, Scrub Typhus & other diseases as well.	
Risk communication and community engagement (Dengue, covid, seasonal viral fever, etc.)	•	WHO
Facilitation and conduction of emergency meetings	Supported and facilitated for the conduction of Hub and Satellite hospitals coordination meeting Ambulance driver training (completed 2 batches of Ambulance driver training in Karnali Province) Supported for the preparation of the Monsoon preparedness plan/ health and nutrition contingency plan Technical support for telemedicine services implementation in the province	
Collection and dissemination of protocols and guidelines	Telemedicine Guidelines Monsoon Preparedness plan Provincial Health and Nutritional Contingency plan	•

8. HEALTH INSURANCE PROGRAMME

Background

Nepal is committed to access to quality health care for all its citizens. 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 then from using services. Existing social health protection schemes are fragmented and often fail to provide financial protection against catastrophic spending and are not always based on medical needs. Thus, there was a need to develop a health care financing pre-payment system and to pool risks to minimize financial hardships. The Health insurance program (HIP) was funded in the government's budget for 2011/12 (2068/69). The government then adopted the National Health insurance policy in 2014. Under the policy the government established the semi-autonomous Social Health (Health Insurance) Security Development committee (SHSDC) in 2015 to implement the program to promote pre-payment and risk pooling to mobilize financial resources for health. The SHSDC is chaired by the Ministry of Health Secretary with membership form Ministry of Finance, MoHP, DoHS and experts. A total of 33 health institutions in Karnali Province are affiliated with the health insurance program.

Vision, objectives and Strategies

Vision: To improve the overall health situation of the people of Nepal.

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

Strategy:
To implement health insurance program gradually throughout the country by increasing enrolment through awareness activities at the community level and special protection for poor and marginalized people by coordinating with government and private health service providers.

The main features of the Social Health (Health Insurance) Security Program are as follows:

- It is a voluntary program based on family contributions. Families of up to five members must contribute NPR 3,500 per year and NPR 700 per additional member.
- It provides subsidized rates for families whose members have a poverty identity card.
- Enrolment continues throughout the year in implemented districts.
- Insurance enrolled people 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.
- The health insurance program offers a 100% discount on the contribution amount for families belonging to specified target groups, and a 50% discount for families of women health volunteers. The target groups eligible for a 100% discount include senior citizens above 70 years old, families with identity cards indicating extreme poverty, individuals with red cards signifying extreme disability, leprosy patients, and those diagnosed with HIV. Additionally, families affected by diseases such as AIDS, MDRT.B., X.D.R., and other specified diseases are also eligible for the 100% discount.
- Insurance enrolled people have to choose their first service point but can also access services from government PHCCs and hospitals and listed private hospitals.
- Insurance enrolled people 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. Upon presenting their SHSP membership ID card at a health facility, members are able to receive the health services and drugs covered by the benefit package without having to pay at any stage
- Can access services from any service point and any referral specifies hospitals without a referral slip.
- The program is IT-based with enrolment assistants using smart phones.
- SHSDC acts as the service purchaser while government and listed private hospitals provide the services.

Program Implementation

Health insurance program is being implemented in all 10 districts of Karnali province. This list of health facilities implementing Health insurance program across the districts are listed in the table below.

Table 8.1 Health insurance Program Implementation Health Facility

District	Health Facility	District	Health Facility
Jumla(2)	KAHS	Jajarkot(5)	Jajarkot Hospital
	Kalikakhetu PHCC		Nagar Hospital Nalgad
Humla(1)	Humla Hospital		Chhedagad Municipality Hospital
			Limsa PHCC
			Jajarkot PHC
Dailekh(4)	Dailekh Hospital	Salyan (3)	Salyan Hospital
	Dullu Hospital		Tharmare PHC
	Lakandra PHC		Lekhpokhara PHC
	Naumule PHC	Rukum West(7)	Aathbiskot Hospital
Surkhet (6)	Awalching PHCC		Chaurjhari Hospital
	Dasharatpur PHCC		Rukum Hospital
	Salkot PHCC		Eye Hospital, Sallay
	Surkhet Eye Hospital		Shshid Smriti Nagar Hospital
	Melkuna Hospital		Kotjhari PHCC
			Sanibheri Hospital
	Province Hospital	Kalikot(2)	Kamalgaun PHCC
			Kalokot Hospital
Dolpa(1)	Dolpa Hospital	Mugu(2)	Mugu Hospital
			Kotdanda PHCC

Table 8.2 Total Insured population in Karnali Province

District	Tota population *(CBS 2078)*	Insured Population			% of population	
		2077/78	2078/79	2079/80	2078/79	2079/80
Dolpa	42774	2269	2578	4763	7	11.13
Mugu	64549	5957	5811	7228	10.5	11.19
Humla	55394	10424	14101	15725	27.7	28.38
Jumla	118349	36845	62280	86689	57.2	73.24
Kalikot	145292	53764	44069	51213	32.2	39.24
Dailekh	152313	4490	18795	28169	7.2	11.16
Jajarkot	189360	52899	44001	48424	26	29.57
Rukum-West	166740	40471	65723	77276	42.6	48.34
Salyan	238515	7333	8803	12447	3.6	9.21
Surkhet	415126	55451	69929	96734	21	23.3
Total	1688412	269903	336090	428668	21.4	29.38

Source: Annual review, 2078/79,2079/80 HIB presentation

Table 8.1 shows 269903 population insured across social health insurance implementing districts. Till the end of fiscal year 2079/80, total of 428668 people been insured in Karnali province. According to the report, 1688412 targeted people in Karnali a total of 269903 (31.4%) been insured in province.

Annex 1: NATIONAL HEALTH POLICY 2076

राष्ट्रिय स्वास्थ्य नीति २०७६

निर्देशक सिद्धान्त

१. गुणस्तरीय स्वास्थ्य सेवाको सर्वव्यापी पहुच अविच्छिन्न पर्याप्तता, पारदर्शिता र व्यापकता ।
२. संघीय संरचना अनुरुप स्वास्थ्य प्रणालीमा बहुक्षेत्रीय सहभागिता, सहकार्य र साझेदारी ।
३. अति सिमान्तकृत दलित र आदिवासी समुदायलाई लक्षित विशेष स्वास्थ्य सेवा ।
४. स्वास्थ्य सुशासन र पर्याप्त आर्थिक लगानीको सुनिश्चितता ।
५. समतामूलक स्वास्थ्य बिमाको विविधीकरण ।
६. स्वास्थ्य सेवामा पुनर्संरचना ।
७. सबै नीतिमा स्वास्थ्य तथा बहुक्षेत्रीय समन्वय र सहकार्य ।
८. स्वास्थ्य सेवा प्रवाहमा व्यवसायिकता, इमान्दारी, पेशागत नैतिकता ।

भावी सोंच

स्वस्थ तथा सुखी जीवनलक्षित सजग र सचेत नागरिक ।

ध्येय

साधन स्रोतको अधिकतम प्रयोग गरी सहकार्य र साझेदारी मार्फत नागरिकहरूको स्वस्थ्य सम्वन्धी मौलिक अधिकारको सुनिश्चित गर्ने ।

लक्ष्य

संघीय संरचनामा सवै वर्गका नागरिकहरुका लागि सामाजिक न्याय र सुशासनमा आधारित स्वास्थ्य प्रणालीको विकास र विस्तार गर्दै गुणस्तरीय स्वास्थ्य सेवाको पहुँच र उपभोग सुनिश्चित गर्ने ।

उद्देश्यहरू

१. संविधान प्रदत्त स्वास्थ्य सम्वन्धी हक सबै नागरिकले उपभोग गर्न पाउने अवसर सिर्जना गर्नु ।
२. संघीय संरचना अनुरुप सबै किसिमका स्वास्थ्य प्रणालीलाई विकास, विस्तार र सुधार गर्नु ।
३. सबै तहका स्वास्थ्य संस्थाहरुबाट प्रदान गरिने सेवाको गुणस्तरमा सुधार गर्दै सहज पहुँच सुनिश्चित गर्नु।
४. अति सीमान्तकृत वर्गलाई समेटदै सामाजिक स्वास्थ्य सुरक्षा पद्धतिलाई सुदृढ गर्नु ।
५. सरकारी, गैर सरकारी तथा निजी क्षेत्रसंग बहुक्षेत्रीय साझेदारी सहकार्य तथा सामुदायिक सहभागितालाई प्रबर्द्धन गर्नु ।
६. नाफामूलक स्वास्थ्य क्षेत्रलाई सेवामूलक स्वास्थ्य सेवामा रुपान्तरण गर्दै जानु ।

नीतिहरू

१ सबै तहका स्वास्थ्य संस्थाहरुबाट तोकिए बमोजिम निःशुल्क आधारभूत स्वास्थ्य सेवा सुनिश्चित गरिनेछ ।
२ स्वास्थ्य बिमा मार्फत विशेषज्ञ सेवाको सुलभ पहुच सुनिश्चित गरिने छ ।
३. सबै नागरिकलाई आधारभूत आकस्मिक स्वास्थ्य सेवाको पहुच सुनिश्चित गरिने छ ।
४. स्वास्थ्य प्रणालीलाई संघीय संरचना अनुरूप संघ, प्रदेश र स्थानीय तहमा पुनर्संरचना, सुधार एवं विकास तथा विस्तार गरिनेछ ।

५. स्वास्थ्यमा सर्वव्यापी पहुच (Universal Health Coverage) को अवधारणा अनुरूप प्रवर्द्धनात्मक, प्रतिकारात्मक, उपचारात्मक, पुनर्स्थापनात्मक तथा प्रशामक सेवालाई एकीकृत रूपमा विकास तथा विस्तार गरिनेछ ।

६. स्वास्थ्य क्षेत्रमा सरकारी, नीजि तथा गैरसरकारी क्षेत्रबीचको सहकार्य तथा साझेदारीलाई प्रबर्द्धन, व्यवस्थापन तथा नियमन गर्नुका स्वास्थ्य शिक्षा, सेवा र अनसुन्धानका क्षेत्रमा निजी, आन्तरिक तथा बाह्य लगानीलाई प्रोत्साहन एवं संरक्षण गरिनेछ ।

७. आयुर्वेद, प्राकृतिक चिकित्सा, योग तथा होमियोप्याथिक लगायतका चिकित्सा प्रणालीलाई एकीकृत रूपमा विकास र विस्तार गरिनेछ ।

८. स्वास्थ्य सेवालाई सर्व सुलभ, प्रभावकारी तथा गुणस्तरिय बनाउन जनसंख्या, भूगोल र संघीय संरचना अनुरूप सीप मिश्रित दक्ष स्वास्थ्य जनशक्तिको विकास तथा विस्तार गर्दै स्वास्थ्य सेवालाई व्यवस्थित गरिने छ ।

९. सेवाप्रदायक व्यक्ति तथा संस्थाबाट प्रदान गरिने स्वास्थ्यसेवालाई प्रभावकारी, जवाफदेही र गणुस्तरीय बनाउन स्वास्थ्य व्यवसायी परिषद्हरूको संरचनाको विकास, विस्तार तथा सुधार गरिने छ ।

१०. गुणस्तरीय औषधी तथा प्रविधिजन्य स्वास्थ्यसमाग्रीको आन्तरिक उत्पादनलाई प्रोत्साहन गर्दै, कुशल उत्पादन, आपूर्ति, भण्डारण, वितरणलाई नियमन तथा प्रभावकारी व्यवस्थापन मार्फत पहुच एवं समुचित प्रयोग सुनिश्चित गरिने छ ।

११. सरुवा रोग, किटजन्य रोग, पशुपन्छी जन्य रोग, जलवायु परिवर्तन र अन्य रोग तथा महामारी नियन्त्रण लगायत विपद् व्यवस्थापन पूर्वतयारी तथा प्रतिकार्यको एकीकृत उपायहरू अवलम्बन गरिनेछ ।

१२. नसर्ने रोगहरूको रोकथाम तथा नियन्त्रण का लागि व्यक्ति, परिवार, समाज तथा सम्बन्धित निकायलाई जिम्मेवार बनाउदै एकीकृत स्वास्थ्य प्रणालीको विकास तथा विस्तार गरिनेछ ।

१३. पोषणको अवस्थालाई सुधार गर्न, मिसावटयुक्त तथा हानिकारक खानालाई निरुत्साहित गर्दै गुण स्तरीय एवं स्वास्थ्यवर्द्धक खाद्य पदार्थको प्रबर्द्धन, उत्पादन, प्रयोग र पहुँच लाई विस्तार गरिनेछ ।

१४. स्वास्थ्य अनसुन्धानलाई अन्तर्राष्ट्रिय मापदण्ड अनरूप गुणस्तरिय बनाउदै अनसुन्धानबाट प्राप्त प्रमाण र तथ्यहरूलाई नीति निर्माण, योजना तर्जुमा तथा स्वास्थ्य पद्दतिको विकासमा प्रभावकारी उपयोग गरिनेछ ।

१५. स्वास्थ्य व्यवस्थापन सूचना प्रणालीलाई आधुनिकीकरण, गुणस्तरीय तथा प्रविधि मैत्री बनाई एकीकृत स्वास्थ्य सूचना प्रणालीको विकास गरिनेछ ।

१६. स्वास्थ्य सम्बन्धी सूचनाको हक तथा सेवाग्राहीले उपचार सम्बन्धी जानकारी पाउने हकको प्रत्याभूति गरिनेछ ।

१७. मानसिक स्वास्थ्य, मुख, आखँ, नाक कान घँटी स्वास्थ्य सेवा लगायतका उपचार सेवालाई विकास र विस्तार गरिनेछ ।

१८. अस्पताल लगायत सबै प्रकारका स्वास्थ्यसंस्थाबाट प्रदान गरिने सेवाको गुणस्तर सुनिश्चित गरिनेछ ।

१९. स्वास्थ्य क्षेत्रमा नीतिगत, संगठनात्मक तथा व्यवस्थापकीय संरचनामा समयानकुल परिमार्जन तथा सुधार गर्दै सुशासन कायम गरिनेछ ।

२०. जीवनपथको अवधारणा अनरूप सुरक्षित मातृत्व, बाल स्वास्थ्य, किशोर-किशोरी तथा प्रजनन स्वास्थ्य, प्रौढ तथा जेष्ठ नागरिक लगायतका सेवाको विकास तथा विस्तार गरिनेछ ।

२१. स्वास्थ्यक्षेत्रको दिगो विकासका लागि आवश्यक वित्तीय स्रोत तथा विशेष कोषको व्यवस्था गरिनेछ ।

२२. बढ्दो सहरीकरण, आँन्तरिक तथा बाह्य बसाइ सराइ जस्ता विषयहरूको समयानुकूल व्यवस्थापन गर्दै यसबाट हुने जनस्वास्थ्य सम्बन्धी समस्याहरूलाई समाधान गरिनेछ ।

२३. जनसांख्यिक तथ्यांक व्यवस्थापन, अनसुन्धान तथा विश्लेषण गरी निर्णय प्रक्रिया तथा कार्यक्रम तर्जुमा संग आबद्ध गरिनेछ ।

२४. प्रतिजैविक प्रतिरोधलाई न्यूनीकरण गर्दै संक्रामक रोग नियन्त्रण तथा व्यवस्थापनका लागि एकद्वार स्वास्थ्य पद्धतिको विकास तथा विस्तार गरिनुका साथै वायु प्रदूषण, ध्वनि प्रदूषण, जल प्रदूषण लगायतका वातावरणीय प्रदूषणका साथै खाद्यान्न प्रदूषणलाई वैज्ञानिक ढंगले निमयन तथा नियन्त्रण गरिनेछ ।

२५. आप्रवासन प्रक्रियाबाट जनस्वास्थ्यमा उत्पन्न हुन सक्ने जोखिमलाई न्यूनीकरण गर्न तथा विदेशमा रहेका नेपाली नागरिकहरूको स्वास्थ्य सुरक्षाका लागि समुचित व्यवस्थापन गरिनेछ ।

Annex 2: PROVINCIAL HEALTH POLICY 2076

प्रदेश सरकार स्वास्थ्य नीति २०७६ कर्णाली प्रदेश

१. दूरदृष्टि

सबै प्रदेशबासीको पहुचमा सबल स्वास्थ्य प्रणाली - सचेत, स्वस्थ र सुखारी कर्णाली ।

२. ध्येय

उपलब्ध साधन-स्रोतको प्रभावकारी प्रयोग गरी सम्बन्धित सरकार, सेवाप्रदायक एवं सरोकारवालाबीच समन्वय र सहकार्य मार्फत प्रदेशबासीको स्वस्थ रहन पाउने मौलिक हक सुनिश्चित गर्ने ।

३. लक्ष्य

प्रदेशबासीको गुणस्तरीय स्वास्थ्य सेवामा पहुँच तथा यसको उपभोगलाई सुनिश्चित गर्न समतामूलक एवं जवाफदेही स्वास्थ्य प्रणालीको माध्यमबाट अविच्छिन्न सेवा उपलब्ध गराउने ।

४ उद्देश्यहरू

क. संविधान प्रदत्त स्वास्थ्य सम्बन्धी हकको उपभोग गर्ने परिवेश सुनिश्चित गर्नु ।
ख. प्रभावकारी एवं मैत्रीपूर्ण स्वास्थ्य सेवाको विकास र विस्तार गर्नु ।
ग. स्वास्थ्यमा पर्याप्त लगानीलाई दिगो बनाई कुशल व्यवस्थापन गर्नु ।
घ. स्वास्थ्यमा सरकारी, गैरसरकारी तथा निजी क्षेत्रसँग साझेदारी, सहकार्य र जनसंलग्नता प्रवर्द्धन गर्नु ।
ङ. आयुर्वेद तथा वैकल्पिक लगायतका स्वास्थ्य प्रणालीहरूको सन्तुलित विकास एवं विस्तार गर्नु ।
च. स्वास्थ्य संस्थाहरूबाट प्रदान गरिने सेवाको गुणस्तर सुनिश्चित गर्नु ।
छ. स्वास्थ्य सम्बन्धी सामाजिक सुरक्षा कार्यक्रमहरूमा सामन्जस्यता स्थापित गर्दै थप सुदृढ गर्नु ।

५. नीतिहरू

५.१. प्रदेशबासीलाई निःशुल्क आधारभूत स्वास्थ्य सेवा प्रवाहित भएको सुनिश्चित गरिनेछ ।

५.२. आकस्मिक स्वास्थ्य सेवाको पहुँच वृद्धि गरी सेवाको व्यवस्थापनलाई सुदृढ गरिनेछ ।

५.३. प्रदेशभित्रका स्वास्थ्य संस्थामा विशेषज्ञ स्वास्थ्य सेवाको पहुँच सुलभ गराइनेछ ।

५.४. स्वास्थ्य सेवाको प्रभावकारिता वृद्धि गर्न पूर्वाधार विकास, स्वास्थ्य उपकरणको व्यवस्था तथा स्वास्थ्य संस्थालाई प्रविधिमैत्री बनाइनेछ ।

५.५. प्रचलित स्वास्थ्य सम्बन्धी सूचना प्रणालीलाई एकिकृत गरी सुदृढ बनाइनुका साथै प्रदेशभित्र स्वास्थ्य अनुसन्धानलाई प्रवर्द्धन गरिनेछ ।

५.६. स्वास्थ्य सेवालाई प्रभावकारी र गुणस्तरीय बनाउन सीप मिश्रित स्वास्थ्य जनशक्ति विकास र विस्तार गरिनेछ ।

५.७. गुणस्तरीय औषधि तथा प्रविधिजन्य सामग्रीमा पहुच वृद्धि गर्न उत्पादन, आपूर्ति, भण्डारण तथा वितरण र प्रयोगलाई व्यवस्थित गरिनेछ ।

५.८. प्रदेश भित्र सञ्चालित स्वास्थ्य संस्था मार्फत प्रवाह हुने सेवाको गुणस्तरियता सुनिश्चित गर्न प्रभावकारी समन्वय, सहकार्य, अनुगमन तथा नियमन गर्ने व्यवस्था मिलाइनेछ ।

५.९. जनस्वास्थ्यको क्षेत्रमा प्रदेशको लगानीलाई वृद्धि र व्यवस्थित गरी व्यक्तिगत खर्च गर्नुपर्ने अवस्थाको न्यूनीकरण गरिनेछ ।

५.१०. आपत्कालीन स्वास्थ्य अवस्था तथा अन्य सरुवा रोग एवं महामारी नियन्त्रणका लागि बहुपक्षीय सहकार्य गरी यसका असरको न्यूनीकरण र सेवामा निरन्तरता प्रदान गरिनेछ ।

५.११. स्वास्थ्य क्षेत्रमा समुदायको संलग्नता सहितको सुशासन तथा स्वास्थ्यकर्मीको सूरक्षाको प्रत्याभूति गरिनेछ ।

५.१२. सूरक्षित मातृत्व, बाल स्वास्थ्य, किशोरावस्थाको स्वास्थ्य, परिवार नियोजन तथा प्रजनन स्वास्थ्य सेवाको विकास र विस्तार गरी पहुँचमा थप सहजता ल्याइनेछ ।

५.१३. व्यक्ति, परिवार र समाजलाई परिचालन गरी स्वस्थ जीवनशैली अपनाउन अभिप्रेरित गर्दै नसर्ने रोगको उपचारलाई आधारभूत स्वास्थ्य सेवास्तर देखिनै व्यवस्थापन गरिनेछ ।

५.१४. जनस्वास्थ्यको संरक्षण र प्रवर्द्धन गर्नका लागि प्रवर्द्धनात्मक तथा प्रतिकारात्मक सेवाको विकास र विस्तार गरिनेछ ।

५.१५. प्रदेशबासीको पोषण अवस्थामा दीगो सुधार गर्न स्थानीयस्तरमा उत्पादन हुने स्वास्थ्यवर्धक रैथाने खाद्यवस्तुको प्रयोग र पहुचलाई विस्तार गरिनेछ ।

५.१६. सीमान्तकृत लक्षित वर्गलाई समेट्दै स्वास्थ्य सेवामा उनीहरूको पहुच सुनिश्चित गरी सामाजिक सुरक्षा कार्यक्रमलाई सुदृढ गरिनेछ ।

५.१७. प्रदेशबासीलाई स्वास्थ्य सेवा सुविधा उपलब्ध गराउनका लागि आयुर्वेद तथा वैकल्पिक चिकित्सा पद्धतिलाई सन्तुलित रूपमा विकास, विस्तार र सुदृढ गरिनेछ ।

५.१८. प्रदेशको स्वास्थ्य तथा जनसांख्यिक तथ्यांक तथा सूचनाको संकलन, विश्लेषण तथा प्रयोगलाई विकास कार्यक्रम तर्जुमाको मूल आधार बनाइनेछ ।

Annex 3: SDG TARGET AND INDICATOR FOR NEPAL (2014-2030)

Target with proposed indicators, current status and future projection						
Target and Indicators	**2014**	**2017**	**2020**	**2022**	**2025**	**2030**
Target 2.1 by 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants to save, nutritious and sufficient food all for all year round						
2.1 a Households with in educate food consumption (%)	36.1[a]	29.52	22.94	18.55	11.97	1
2.1 b Population spending more than two thirds of total consumption on food (%)	20[b]	16.44	12.88	10.50	6.94	1
2.1c per capita food grain production(kg)	341[c]	373	404	426	457	510
Target 2.2 by 2030, end all forms of malnutrition, including acheiving by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age and addressing the nutritional needs of adolescent girls, pregnant and lactating women and older persons						
2.2a Prevalence of underweight children < 5 years (- 2 SD)(%)	30.1[d]	24.64	19.19	15.55	10.09	1
2.2b Stunted children under 5 years(- 2 SD)(%)	37.4[d]	30.58	23.75	19.20	12.38	1
2.2c Prevalence of wasted children < 5 years -2 SD	11.3[d]	9.37	7.44	6.15	4.22	1
2.2d Proportion of population below minimum level of dietary energy consumption	22.8[d]	18.71	14.63	11.90	7.81	1
2.2 e Prevalence of anaemia among women of literary age adults and girl percent	38.5[e]	31.47	24.44	19.75	12.72	1
2.2 f prevalence of anaemia among children under 5 years of age(%)	46 [e]	37.56	29.13	23.5	15.06	1
Target 3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births						
3.1.Maternal mortality ratio(per 1000, Live births)	258[a]	151 [b]	127 [b]	116	99	70
3.2 By 2030, end preventable deaths of newborns and children under 5 years of age,						
3.2.a Neonatal mortality rate	23[c]	17[b]	14[b]	11.3	8.5	1
3.2.b Under-five mortality rate	38[C]	28[b]	23[b]	18.4	13.8	1
3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases						
Target 3.3a by 2030 end the epidemic of AIDS						
3.3a.1 HIV prevalence for the overall population,15-49 years(%)	0.2[d]	0.163	0.125	0.1	0.063	0
3.3.a2 HIV prevalence among men and women population,15-49 years(%)	0.03[e]	0.015	0.009	0.006	0	0
3.3a3 proportion of population with advanced HIV infection receiving antiretroviral combination therapy(%)	38.8 [e]	50.28	61.75	69.4	80.88	100

Target with proposed indicators, current status and future projection						
Target and Indicators	**2014**	**2017**	**2020**	**2022**	**2025**	**2030**
Target 3.3b by 2030, end the epidemics of Tuberculosis						
3.3.b Tuberculosis incidence per 1,000 population	211	171	132	106	66	0
Target 3.3c by 2030 in the epidemic of malaria						
3.3c Confirm malaria cases(Number)	1674[g]	1360	1046	837	523	0
Target 3.3d by 2030, end the epidemics of neglected tropical disease						
3.3d1 register prevalence rate(per 10000 population) for leprosy	0.83[h]	0.67	0.52	0.42	0.26	0
3.3d2 Kala-azar cases(Number)	325[g]	264	203	163	102	0
3.3d3 Average prevalence of lypphatic filariasis(%)	13[i]	10.56	8.13	6.5	4.06	0
3.3d4 Cases of Dengue	728[j]	592	455	364	228	0
3.3d5 People die annually due to rabies(Number)	100[j]	81	63	50	31	0
3.3d6 Active trachoma cases(Number)	136[j]	111	85	68	43	0
3.3d7 Average prevalence of soil transmitted helminthes among school going children(%)	15[j]	12.19	9.38	7.5	4.69	0
Target 3.3e by 2030 combat hepatitis						
3.3e1 Confirm case of hepatitis A(Number)	174[j]	141	109	87	54	0
3.3e2 Confirm case of hepatitis B(Number)	101[j]	82	63	51	32	0
3.3e3 Causes of unspecified viral hepatitis(Number)	173[j]	141	108	86.5	54	0
Target 3.3f by 2030 combat water borne diseases						
3.3f1 Annual incidence of diarrhoea(per 1000 under 5 years children)	578[j]	470	361	289	181	0
3.3f2 Children under age 5 years with diarrhoeal in the last 2 weeks(%)	12[j]	10	8	6	4	0
3.3f3 causes of typhoid (number)	9549[j]	7759	5968	4775	2984	0
3.3f4 causes of Cholera (number)	33[j]	27	21`	16.5	10	0
Target 3.3g by 2030, combat number other communicable diseases						
3.3g1 confirm cases of Japanese encephalitis (JE) number	118[g]	96	74	59	37	0
3.3g2 to confirm cases of Influenza H191 (number)	204[g]	166	128	102	64	0
Target 3.4 by 2030 reduced by one third premature mortality from non communicable disease in cities through prevention and treatment and promote mental health and wellbeing						
Target 3.4a by 2030 reduced by one third premature mortality from non communicable disease						
3.4.a1 Death (aged 30-70) from cardiovascular disease(CVDs), cancer, chronic respiratory disease and diabetes(%)	22.0[k]	19.2	16.5	14.7	11.9	7.3

Target with proposed indicators, current status and future projection						
Target and Indicators	**2014**	**2017**	**2020**	**2022**	**2025**	**2030**
3.4.a2 Death from NCDs out of all deaths (%)	43.7 l	38.2	32.8	29.1	23.6	14.5
3.4.a3 Death from CVDs out of all deaths (%)	22.3 l	19.5	16.7	14.9	12.1	7.4
3.4.a4 Death from cancers out of all deaths (%)	7.0 l	6.1	5.2	4.7	3.8	2.3
3.4.a5 Death from chronic obstructive pulmonary disease out of all deaths (%)	4.9 l	4.3	3.7	3.3	2.6	1.6
3.4.a6 Death from diabetes out of all deaths (%)	1.7 l	1.5	1.3	1.1	0.9	0.5
Tiger 3.4b 2030 reduced by one third premature mortality from non-communicable disease through prevention and treatment						
3.4b1People (aged 15-69years) with rised total cholesterol	22.7 m	19.9	17.0	15.1	12.3	7.5
3.4b2 People (aged 15-69 years) with rise blood pressure level (%)	88.3 m	77.3	66.2	58.9	47.8	29.4
3.4b3 People (age 15-69 years) not engaging in vigorous activities %	53.6 m	46.9	40.2	35.7	29.0	17.8
3.4b4 People(aged 15-69 years) who are overweight(%)	21.6 m	18.9	16.2	14.4	11.7	7.2
3.4b5 People (age 15-69 years) who currently drink or drank alcohol in the past 30 days(%)	17.4 m	15.2	13.1	11.6	9.4	5.8
3.4b6 People(aged 15-69 years) who smoke tobacco daily (%)	15.8 m	13.8	11.8	10.5	8.5	5.2
Target 3.4c by 2030, promote mental health and wellbeing						
3.4c1 mental health problem percent	14.ol	12.26	10.51	9.35	7.6	4.7
3.4c2 suicide rate per (100,000 population)	25 n	20	16	13	8	1
3.4c3 Women (aged15- 24 years who are very or some what satisfied with their life (%)	80.8 c	83.5	86.1	87.9	90.6	95
Target 3.5 strengthen the prevention and treatment of substance abuse including drug abuse and harmful use of alcohol						
3.4 hard drug users estimated number	91534o	78662	65790	57209	44337	22884
Target 3.6 by 2020, halve the number of gold Global death and injuries from road traffic accidents						
Target 3.6a by 2020 halve the number of Global deaths from road traffic accidents						
3.6a1 Road Traffic accident mortality (per 100,00 population)	33.7 p	25.25	16.8	-	-	-
Target 3.6b by 2020, halve the number of injuries from road traffic accidents						
3.6b1 Serious Injuries (per 100,000 population)	71.7 p	53.8	35.9 b			

Target with proposed indicators, current status and future projection						
Target and Indicators	**2014**	**2017**	**2020**	**2022**	**2025**	**2030**
3.6a2 Slight Injuries (per 100,000 population)	163.7[p]	122.8	81.9[b]			
3.7 by 2030 Ensure Universal access to sexual and reproduction reproductive health care service including for family planning information and education and integration of reproductive health International strategy and programs						
3.7a Contraceptive prevalence rate modern method percent	49.6[c]	54.4	59.1	62.3	67.1	75
3.7.b proportion of birth attended by SBA(%)	55.6[c]	62.1	68.5	72.8	79.3	90
3.7c Adolescent fertility rate (birth per 1,000 women age 15 to 19 years)	71[c]	63.3	55.6	50.5	42.81	30
3.7d antenatal care(ANC) coverage at least 4 vigit (%)	59.5[c]	65.2	70.9	74.75	80.5	90
3.7e Institutional delivery(%)	55.2[c]	61.73	70	74.35	80.88	90
3.7f Postnatal care (PNC) for mothers(%)	57.9[c]	63.92	70	74.01	80.03	90
3.7g Unmet need for family planning(%)	25.2[c]	22.4	19.5	17.6	14.75	10
3.7h Proportion of demand satisfied for family planning(%)	-	-	-	-	-	-
3.7 I Total Fertility rate(TFR) (births per women)	2.3[c]	2.3	2.20	2.16	2.106	2
3.7j Household within 30 minute travel time to a health facility(%)	61.8[q]	67.09	85	86	87.5	90
3.7 k prevalence of uterine prolapse among women of reproductive age	7[r]	5.7	4.4	3.6	2.25	0.1
Target 3.8 Achieve Universal health coverage, including financial risk protection, access to quality essential Health-care service and access to safe, effective, quality and affordable essential medicine and action for all						
3.8a Government health expenditure as % of GDP	5.3[s]	5.81	6.31	6.65	7.16	8
3.8a Health facilities meeting minimum standard of quality of care(%)	-	-	-	-	-	-
3.8 Children is 12 - 20 months who received all vaccinations(%)	84.5[c]	87.41	90.31	92.25	95.16	100
3.9 2030, substantially reduce the number of death and illness from hazardous Chemicals and air, water and soil pollution and contamination						
3.9a Daeths from hazardous chemicals(toxic substances, etc.) number)	22[j]	18	14	11	7	0
3.9b Illness from hazardous Chemicals toxic substance, etc (number)	1205[j]	998	791	653	445	100

Sources: a WHO et al 2015,[b] MOHP,2015,[c]CBS,2014a, [d] MOHP2014a, [e] MOHP2014a, [f] MOHP2014c, [g]MOHP2014d, [h] MOHP2014a, [i] MOHP2012a, [j]MOHP2013a, [k] WHO2012, [l] MOHP/WHO2014, [m] NHRC,2013, [n] WHO,2014, [o] MOHP,2012a, [p]Thapa2013, [q]CBS,2011, [r]MoHP,2006a, [o] MOHP,2009c.
Source: SDG 2016-2030 National (Preliminary) Report

Annex 4: TARGET POPULATION OF KARNALI PROVINCE FISCAL YEAR 2079/80

Data	Karnali Province	DOLPA	MUGU	HUMLA	JUMLA	KALIKOT	DAILEKH	JAJARKOT	RUKUM WEST	SALYAN	SURKHET
Total population	1725340	44431	68941	57442	121410	148252	258480	193155	168147	241375	423707
Total expected live birth	35463	1017	1803	1459	2457	3757	5658	4552	3229	4567	6964
Total expected pregnancies	45010	1287	2271	1838	3122	4734	7177	5740	4106	5819	8916
Population under 1 year	36802	989	1908	1494	2684	4118	5850	4776	3326	4611	7046
Nutrition (0-23 Month)	73430	1961	3800	2975	5351	8224	11670	9525	6627	9208	14089
Population 12 - 23 months	36676	976	1902	1482	2674	4117	5824	4750	3302	4598	7051
Nutrition (6-23 months)	55045	1471	2853	2228	4007	6169	8745	7138	4967	6903	10564
Population aged 6-59 months	164412	4318	8473	6585	12044	18475	26048	21339	14708	20589	31833
Nutrition (12-59 Month)	145988	3828	7515	5836	10697	16417	23118	18943	13041	18285	28308
Population under 5 years ARI/ CDD/ Nutrition	182776	4812	9422	7332	13382	20526	28968	23724	16362	22892	35356
Population of 0-14 yrs	552073	13687	26255	20052	42556	60225	87673	71305	48878	68617	112825
Adolescent population aged 10-19 years	350620	8837	14051	11077	25206	31905	54322	42690	33427	47164	81941
Married Female population aged 15-49 years	397215	9976	14361	12058	25947	29549	58615	40828	40090	59359	106432
Female population aged 15-49 years	481892	12088	17539	14671	31792	36705	71469	50534	48678	71341	127075

Annex 4: TARGET POPULATION OF KARNALI PROVINCE (LOCAL LEVEL) FISCAL YEAR 2079/80

Organisation un	Total population	Total expected live birth	Total expected pregnancies	Population under 1 year	Nutrition (0-23 Month)	Population 12 - 23 months	Nutrition (6-23 months)	Population aged 6-59 months	Nutrition (12-59 Month)	Population under 5 years ARI/ CDD/ Nutrition	Population of 0-14 yrs	Adolescent population aged 10-19 years	Married Female population aged 15-49 years	Female population aged 15-49 years
Dolpo Buddha RM	2537	49	62	48	97	48	72	211	187	237	665	458	603	732
Shey Phoksundo RM	3823	67	88	64	126	62	93	271	244	303	872	696	929	1123
Jagadulla RM	2678	69	87	68	132	66	101	294	261	327	930	551	568	700
Mudkechula RM	6092	165	206	159	316	158	237	695	616	775	2159	1328	1243	1535
Tripurasundari MUN	12744	316	399	310	617	307	464	1370	1212	1523	4334	2652	2737	3329
Thulibheri MUN	10539	229	292	222	438	219	329	968	859	1081	3127	2080	2421	2907
Kaike RM	4255	92	116	87	174	86	131	381	335	423	1200	780	1020	1223
Chharka Tangsong RM	1763	30	37	31	61	30	44	128	114	143	400	292	455	539
Mugumkarmarog RM	7519	178	225	185	367	185	275	816	723	906	2542	1433	1692	2057
Chhayanath Rara MUN	26563	668	846	708	1411	705	1060	3148	2794	3503	9889	5401	5631	6850
Soru RM	14900	436	544	453	902	451	677	2008	1780	2233	6186	3196	2980	3656
Khatyad RM	19959	521	656	562	1120	561	841	2501	2218	2780	7638	4021	4058	4976
Chankheli RM	6875	195	244	201	399	200	300	884	782	984	2670	1426	1348	1660
Kharpunath RM	7225	190	240	196	390	193	292	863	765	961	2615	1396	1525	1862
Simkot RM	12507	265	336	264	526	260	394	1157	1024	1288	3570	2263	2956	3545
Namkha RM	4619	69	90	72	144	71	107	320	285	358	1070	656	987	1168
Sarkegad RM	11444	305	382	318	634	317	474	1409	1249	1567	4279	2262	2260	2759
Adanchuli RM	8430	254	318	256	510	255	381	1125	997	1254	3388	1797	1685	2081
Tanjakot RM	6342	181	228	187	372	186	280	827	734	920	2460	1277	1297	1596
Patarasi RM	17225	357	456	390	772	388	578	1743	1548	1937	6301	3725	3702	4541
Kanaka Sundari RM	13963	284	359	307	614	307	459	1390	1235	1542	4900	2788	2977	3636
Sinja RM	12993	262	332	295	587	294	439	1325	1176	1471	4750	2678	2649	3243
Chandannath MUN	22032	339	435	376	755	376	567	1700	1511	1888	5982	3804	5089	6075
Guthichaur RM	11099	219	279	236	476	236	356	1064	946	1184	3758	2296	2508	3073
Tatopani RM	16005	331	422	356	709	354	531	1590	1410	1765	5674	3539	3411	4231
Tila RM	15013	365	458	393	776	389	583	1748	1552	1944	6021	3458	2991	3739
Hima RM	13080	300	381	331	662	330	494	1484	1319	1651	5170	2918	2620	3254

Organisation un	Total population	Total expected live birth	Total expected pregnancies	Population under 1 year	Nutrition (0-23 Month)	Population 12 - 23 months	Nutrition (6-23 months)	Population aged 6-59 months	Nutrition (12-59 Month)	Population under 5 years ARI/ CDD/ Nutrition	Population of 0-14 yrs	Adolescent population aged 10-19 years	Married Female population aged 15-49 years	Female population aged 15-49 years
Palata RM	18131	502	628	557	1111	554	834	2480	2203	2759	7901	3922	3363	4204
Pachal Jharana RM	13975	341	431	375	744	375	560	1678	1492	1862	5548	3017	2745	3413
Raskot MUN	16816	416	524	449	897	449	674	2012	1788	2236	6636	3690	3446	4280
Sanni Tribeni RM	13134	318	404	349	699	349	524	1560	1385	1732	5070	2817	2678	3340
Naraharinath RM	22924	592	743	649	1298	649	970	2901	2577	3227	9225	4933	4651	5811
Khandachakra MUN	23877	577	729	645	1285	645	962	2898	2580	3219	9649	4980	4698	5799
Tilagupha MUN	16649	422	534	463	926	463	695	2096	1863	2327	6899	3544	3302	4087
Mahawai RM	8520	216	272	231	463	233	349	1051	933	1167	3478	1845	1742	2135
Kalika RM	14226	373	469	400	801	400	601	1799	1596	1997	5819	3157	2924	3636
Naumule RM	21011	456	579	480	954	479	715	2136	1897	2375	7175	4306	4694	5720
Mahabu RM	18386	409	518	418	831	414	623	1850	1640	2056	6185	3910	4373	5320
Bhairabi RM	18357	418	530	416	828	412	621	1841	1635	2049	6242	4058	4252	5206
Thantikandh RM	19105	476	602	490	975	486	730	2174	1927	2418	7204	4370	4026	5021
Aathbis MUN	32555	778	981	799	1595	796	1196	3569	3168	3968	12170	7445	6905	8535
Chamunda Bindrasaini	27183	651	822	671	1338	668	1003	2989	2655	3325	10011	5977	5709	7051
Dullu MUN	40350	878	1111	888	1777	885	1331	3963	3518	4410	13347	8434	9348	11357
Narayan MUN	26238	472	607	499	1000	499	747	2233	1982	2481	7535	4818	6556	7816
Bhagawatimai RM	18744	409	520	441	876	438	656	1946	1726	2166	6438	3931	4193	5134
Dungeshwor RM	14860	284	363	297	591	297	444	1321	1173	1469	4416	2778	3604	4318
Gurans RM	21691	427	544	451	905	450	679	2026	1797	2251	6950	4295	4955	5991
Barekot RM	22448	506	639	528	1049	524	784	2343	2077	2606	7975	5054	4759	5917
Kuse RM	24026	599	754	622	1238	618	929	2776	2463	3084	9185	5567	4909	6141
Junichande RM	24398	671	836	709	1414	703	1059	3141	2786	3499	10152	5650	4641	5862
Chhedagad MUN	38854	977	1228	1031	2055	1028	1539	4617	4104	5131	15244	8766	7978	9949
Shivalaya RM	15004	351	445	367	736	365	554	1652	1465	1835	5606	3355	3159	3905
Bheri MUN	39011	769	981	802	1608	801	1204	3616	3214	4018	12374	7745	9259	11151
Nalagad MUN	29414	679	857	717	1425	711	1069	3194	2834	3551	10769	6553	6123	7609
Aathabisakot MUN	36471	775	981	784	1562	780	1170	3462	3070	3855	11611	7874	8134	10050
Sanibheri RM	25143	518	658	537	1075	534	806	2387	2116	2655	7908	5198	5804	7116

Organisation un	Total population	Total expected live birth	Total expected pregnancies	Population under 1 year	Nutrition (0-23 Month)	Population 12 - 23 months	Nutrition (6-23 months)	Population aged 6-59 months	Nutrition (12-59 Month)	Population under 5 years ARI/ CDD/ Nutrition	Population of 0-14 yrs	Adolescent population aged 10-19 years	Married Female population aged 15-49 years	Female population aged 15-49 years
Banphikot RM	21204	410	526	427	849	423	637	1891	1681	2103	6292	4252	5048	6129
Musikot MUN	34989	609	775	628	1247	623	935	2768	2453	3077	9164	6457	8538	10249
Tribeni RM	20741	378	480	393	786	391	589	1738	1542	1935	5730	4012	5268	6353
Chaurjahari MUN	29599	539	686	557	1108	551	830	2462	2179	2737	8173	5634	7298	8781
Darma RM	20281	439	555	436	871	434	653	1949	1731	2167	6448	4255	4716	5732
Kumakh RM	25177	507	645	516	1030	516	772	2312	2053	2569	7679	5028	6007	7242
Banagad Kupinde MUN	34190	700	888	696	1393	693	1045	3116	2769	3467	10435	7109	8128	9863
Siddha Kumakh RM	13290	257	327	257	513	257	384	1145	1019	1275	3818	2675	3275	3963
Bagachour MUN	34451	651	832	657	1304	652	977	2914	2588	3242	9709	6766	8509	10248
Chhatreshwori RM	21573	378	482	387	779	387	581	1728	1533	1922	5746	3949	5565	6617
Sharada MUN	34988	585	750	596	1188	594	892	2655	2357	2950	8842	6359	8984	10727
Kalimati RM	22759	423	541	435	865	434	649	1940	1723	2155	6534	4483	5441	6552
Tribeni RM	16905	281	359	286	575	285	433	1280	1134	1422	4207	3037	4424	5236
Kapurkot RM	17761	346	440	345	690	346	517	1550	1378	1723	5199	3503	4310	5161
Simta RM	24697	482	615	468	934	466	700	2098	1864	2330	7373	5378	6411	7719
Chingad RM	16053	336	427	329	662	328	495	1488	1320	1651	5184	3607	3796	4652
Lekabeshi MUN	32358	533	682	542	1080	542	811	2440	2172	2713	8712	6329	8146	9750
Gurbhakot MUN	50257	878	1126	906	1809	906	1356	4094	3640	4547	14480	9914	12563	15033
Bheriganga MUN	49406	870	1112	885	1766	883	1324	3973	3533	4419	13959	9955	12731	15233
Birendranagar MUN	160630	2103	2713	2131	4271	2144	3207	9726	8655	10787	35066	27470	41955	49348
Barahatal RM	26010	468	597	463	934	462	699	2100	1871	2335	7410	5304	6264	7559
Panchapuri MUN	36727	712	907	727	1450	727	1085	3257	2894	3620	11426	7918	8544	10394
Chaukune RM	27569	582	737	595	1183	593	887	2657	2359	2954	9215	6066	6022	7387

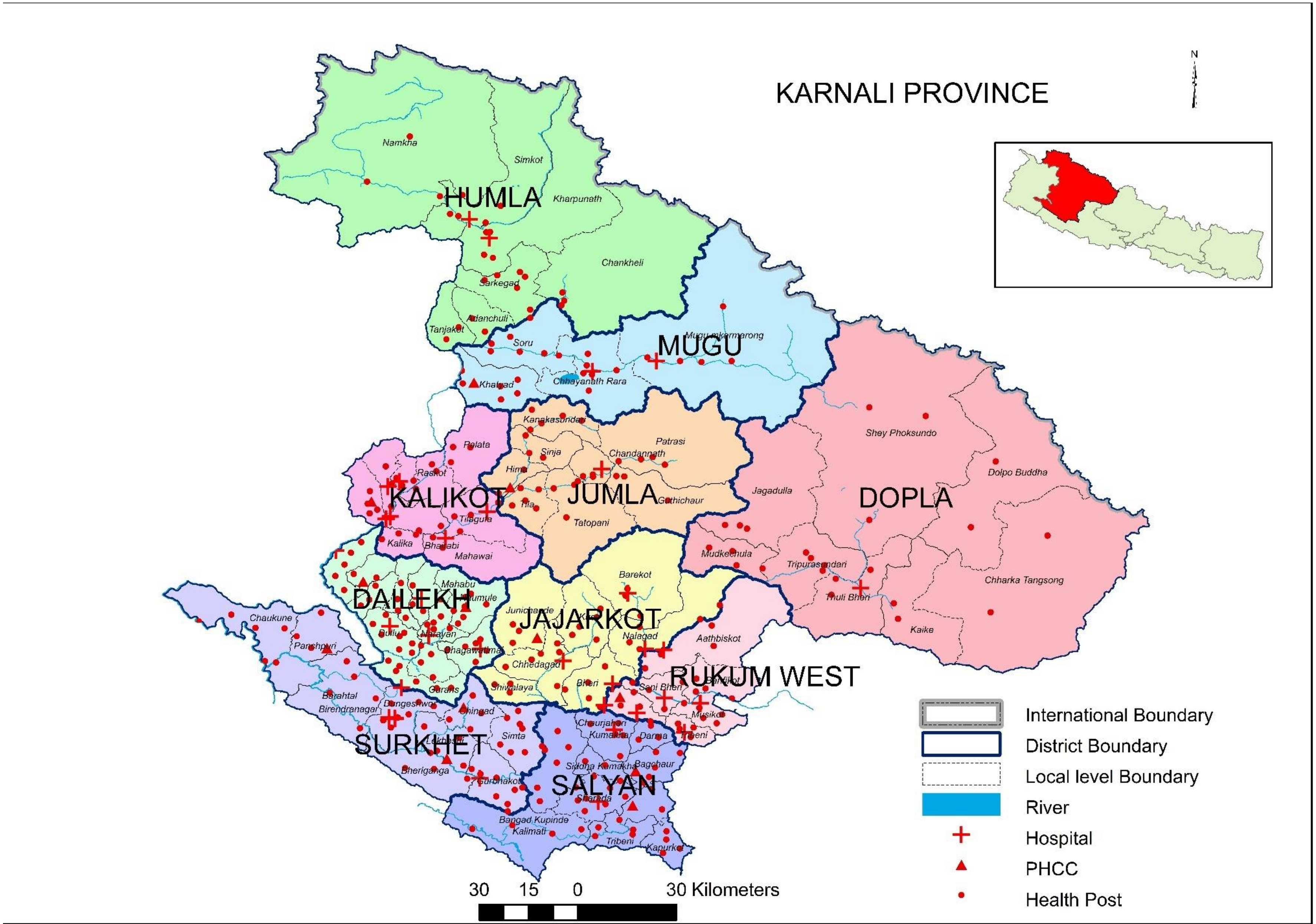
Annex 6: SOME LOCAL LEVEL'S INDICATORS FISCAL YEAR 2079/80

Organisation unit / Data	Percentage of children under one year immunized with BCG	% of children under one year immunized with DPT-HepB-Hib3	% of children aged 12-23 months immunized with measles/rubella 2	% of children aged 0-11 months newly registered for growth monitoring11 months%	% of newborns with low birth weight (<2.5KG)	ARI incidence rate among children under five years (per 1000)	Diarrhoea incidence rate among children under five years	Percentage of women who had four ANC check-ups as per protocol)	Percentage of pregnant women who had at least eight ANC visits as per protocol	% of institutional deliveries	% of modern contraceptives new acceptors among WRA	New case detection rate of leprosy	Total TB cases notified	Case notification rate (all forms of TB cases)	Treatment Success Rate	Total Malaria positive Cases	Total New OPD Visits	Number of OPD New Visits per 1000
Karnali Province	90.7	88.6	87.7	113.1	7.1	405.9	216	85	31.4	83.4	10.7	4.2	1577	91.4	93.2	34	1513412	877.2
DOLPA	74.2	76.4	83.8	99.8	3.6	357.4	271.8	48	9	49.1	14.8	2.3	38	85.5	100	0	35355	795.7
Dolpo Buddha RM	70.8	62.5	110.4	143.8	0	514.8	303.8	12.2	0	12.2	14.5	0	3	118.2		0	2800	1103.7
Shey Phoksundo RM	40.6	37.5	33.9	71.9	0	419.1	207.9	28.4	9	1.5	2.4	0	2	52.3		0	3265	854
Jagadulla RM	54.4	79.4	72.7	76.5	11.1	431.2	198.8	46.4	15.9	52.2	12.3	0	0	0	100	0	2423	904.8
Mudkechula RM	67.3	76.1	70.3	89.3	0	504.5	292.9	59.4	15.8	50.9	11.2	0	8	131.3	100	0	7471	1226.4
Tripurasundari Mun	68.7	77.7	79.5	84.5	2.5	143.1	155	38	2.5	38	14.3	0	12	94.2	100	0	7796	611.7
Thulibheri Mun	102.3	86	100	137.4	5.4	469	420.9	57.6	10.5	91.7	19.8	9.5	9	85.4	100	0	9034	857.2
Kaike RM	80.5	79.3	82.6	36.8	0	368.8	352.2	80.4	13	43.5	23.6	0	1	23.5	100	0	1570	369
Chharka Tangsong RM	64.5	83.9	170	254.8	0	405.6	286.7	23.3	16.7	6.7	10.9	0	3	170.2		0	996	564.9
MUGU	74.9	71.9	58.2	144.2	5.2	314.4	215.5	92.1	42.3	67.4	10.6	4.4	47	68.2	100	1	53086	770
Mugumkarmarog RM	59.5	56.2	44.9	110.3	15.7	359.8	406.2	90.4	43.8	44.4	11.3	0	4	53.2	100	0	7509	998.7
Chhayanath Rara Mun	87.4	81.4	69.2	247	8.3	233.8	153	98.5	24.6	82.5	13.4	11.3	28	105.4	100	0	18218	685.8
Soru RM	60.3	53.9	49.7	87	1.7	567.4	392.3	56.2	25.9	41.3	12.2	0	9	60.4	100	1	17727	1189.7
Khatyad RM	76.2	79.5	55.6	71.9	0.49	197.8	89.9	114.6	78.1	77.9	5.5	0	6	30.1	100	0	9632	482.6
HUMLA	75.8	79.3	85.2	98.1	2.2	470.3	386.7	68.3	33.8	63.5	17	3.5	20	34.8	96	7	68167	1186.7
Chankheli RM	53.7	61.7	74	107.5	0	283.5	199.2	61.5	39.5	39.5	14	0	0	0		0	3847	559.6

Kharpunath RM	79.1	72.4	85	124.5	1.6	785.6	652.4	37.9	32.6	62.1	28	0	2	27.7		0	10908	1509.8
Simkot RM	92.8	84.8	84.6	141.7	4.1	708.9	574.5	91.7	23	101.9	20.6	8	7	56	100	0	17178	1373.5
Namkha RM	36.1	62.5	94.4	55.6	0	745.8	500	40.6	17.4	29	4.5	0	0	0		0	9890	2141.2
Sarkegad RM	67.3	78.3	69.7	82.1	0.47	287.2	301.9	81.3	36.4	70.5	15.7	8.7	2	17.5		0	9518	831.7
Adanchuli RM	82.8	94.1	87.8	85.9	2.2	410.7	395.5	67.3	33.5	36.2	17.3	0	4	47.4	90	2	12279	1456.6
Tanjakot RM	92.5	85.6	117.7	58.8	3	292.4	134.8	63	47	74	10.3	0	5	78.8	100	5	4547	717
JUMLA	82.7	78.2	83	77.1	8.7	410.1	191.2	92.6	51.9	77.7	12.2	3.3	106	87.3	96	0	117047	964.1
Patarasi RM	80.5	75.4	67.5	68.7	3.3	521.9	227.2	94.7	26.1	42.9	8.6	5.8	18	104.5	95.7	0	11775	683.6
Kanaka Sundari RM	63.5	59.9	87	62.9	5	402.7	134.9	79.2	32	63.4	11.2	0	6	43	100	0	11511	824.4
Sinja RM	85.4	99	103.1	72.9	4.5	194.4	148.9	82.4	67.2	67.2	16.1	0	9	69.3	100	0	8765	674.6
Chandannath Mun	130.6	97.3	101.1	122.1	13.4	532.8	217.7	101.2	127.7	283.2	19.2	4.5	26	118	84.2	0	50046	2271.5
Guthichaur RM	86.9	75	87.3	79.7	3.6	428.2	205.2	150.7	32	37.9	8	0	8	72.1	100	0	7212	649.8
Tatopani RM	74.2	76.1	73.2	51.4	1.1	230.6	111	87.6	39.9	28.4	7.7	6.2	14	87.5	100	0	5566	347.8
Tila RM	65.9	69.7	73.3	69	0.65	440.3	263.9	81.6	32.6	36.7	13.1	0	13	86.6	100	0	11623	774.2
Hima RM	72.2	72.8	78.2	88.5	9.4	480.9	198.7	78	53.3	42.7	9.7	7.6	12	91.7	100	0	10549	806.5
KALIKOT	66	69.5	67.2	99.7	5.9	381.6	208.8	85.4	36.4	67.8	11.3	4	111	74.9	97.8	2	118869	801.8
Palata RM	63.9	65.7	66.2	91.6	6.1	402.3	251.9	53.6	16.3	53	9	5.5	13	71.7	100	0	13544	747
Pachal Jharana RM	63.5	67.7	71.5	98.7	5.1	345.9	210	69.5	27.6	58.1	7.5	7.2	11	78.7	90	0	9591	686.3
Raskot Mun	69.7	72.8	73.3	107.3	6.3	363.6	197.7	107.2	36.3	83.9	11.2	0	5	29.7	100	0	14191	843.9
Sanni Tribeni RM	67	68.8	66.2	109.2	2.1	272.5	181.3	72.6	42.8	60.1	11.2	0	4	30.5	100	0	9543	726.6
Naraharinath RM	65.3	68.4	58.1	109.9	7.1	406.6	180.7	51.4	22.5	69.6	12.7	4.4	12	52.3	100	0	17217	751
Khandachakra Mun	76.7	76.9	76.6	94	9.2	337.4	259.7	173	61.9	98.3	16.4	4.2	31	129.8	94.4	2	21850	915.1
Tilagupha Mun	59	64.1	65.9	78.4	2.6	275.5	153.8	73	48.1	54.5	8.7	12	12	72.1	100	0	9669	580.8
Mahawai RM	62.8	78.8	64.8	101.3	4.9	1024.9	259.6	64.4	36.6	56.5	14.4	0	5	58.7	100	0	14596	1713.1
Kalika RM	60.3	63.5	61	111.3	2.7	279.4	182.3	73.7	35.4	56.8	8.7	0	18	126.5	100	0	8668	609.3
DAILEKH	75.5	81.3	85.2	94.6	6.5	321.7	194	73.4	26	74.7	7.9	3.5	161	62.3	94.1	2	178680	691.3
Naumule RM	74.2	79.6	77.9	102.3	5.3	290.1	180.2	60.7	30.9	59.6	7.3	0	9	42.8	100	0	16364	778.8

Mahabu RM	68.4	75.1	82.9	84.4	0.73	280.6	128.4	48.2	23.5	66.5	12.7	0	15	81.6	91.7	0	10878	591.6
Bhairabi RM	78.4	78.6	95.6	95.7	6.7	149.8	90.8	53.1	12	43.3	7.1	5.4	15	81.7	77.8	0	6285	342.4
Thantikandh RM	68	82.4	77.2	99	17.4	294.5	241.9	47.7	13.2	61.3	7.2	5.2	13	68	100	0	10016	524.3
Aathbis Mun	90.2	90.5	91.6	85.7	6.7	291.3	210.7	61.8	20.3	65.9	5.8	0	17	52.2	95.8	0	22245	683.3
Chamunda Bindrasaini Mun	69.2	77.5	73.4	87.3	6.8	217.4	161.8	54.4	15.7	65.9	7	7.4	19	69.9	92.6	0	11519	423.8
Dullu Mun	81	81.6	91.8	110.9	6.6	322.9	145.8	105.1	28.9	93.8	8.5	12.4	31	76.8	96.6	0	26356	653.2
Narayan Mun	92.2	101	102.6	116.2	6.4	719.9	496.6	165.3	54.4	152.3	10.8	0	13	49.5	100	2	36748	1400.6
Bhagawatimai RM	65.3	69.8	70.8	65.5	4.8	315.8	187.9	56.5	20.5	71.9	6.9	0	7	37.3	100	0	12381	660.5
Dungeshwor RM	62.6	74.4	84.2	75.4	3.3	305.7	106.9	65.8	38.7	54.2	6.2	0	8	53.8	85.7	0	11822	795.6
Gurans RM	61.4	72.5	83.1	101.1	5.2	360.7	152.8	64.2	36.8	64.4	7.1	0	14	64.5	87.5	0	14066	648.5
JAJARKOT	87.3	83.6	83.7	104.9	4.4	320.1	186.9	58.8	16	58.1	13.7	5.2	127	65.8	92.2	0	120178	622.2
Barekot RM	87.3	89.2	92	80.5	4.8	468.5	265.5	76.1	20.6	82.4	13.1	4.5	25	111.4	96	0	13875	618.1
Kuse RM	85.4	88.1	73.8	85.7	0.78	301.9	204	43.1	10.4	65.1	19	4.2	8	33.3	100	0	8064	335.6
Junichande RM	85.5	68.5	73	105.8	3.1	175.2	144.3	30.8	11.5	34	8.7	8.2	8	32.8	88.2	0	12044	493.6
Chhedagad Mun	81.9	74.8	78	111.2	1.5	300.3	178.9	57.4	16.8	53.4	9.8	5.1	11	28.3	86.4	0	23969	616.9
Shivalaya RM	67.6	70.6	82.5	92.9	1.4	204.9	103.5	78.9	13.4	19.7	13	6.7	8	53.3	100	0	7904	526.8
Bheri Mun	100	101.9	98.6	122.9	8.7	365.6	139.6	60.1	18.6	77.1	13.3	7.7	35	89.7	83.3	0	30695	786.8
Nalagad Mun	94.3	89.3	88.7	115.3	5.7	406.4	264.2	77.6	19.4	62.4	19.9	0	32	108.8	100	0	23627	803.3
RUKUM WEST	107.5	106.1	102.7	122.6	6	626.9	307.7	87.9	25.7	102	12.7	6.5	169	100.5	92.6	2	192250	1143.3
Aathabisakot Mun	106.4	107.3	101.3	130.9	3.6	468.7	303	65.8	13.8	71.4	13.4	5.5	52	142.6	90	0	30407	833.7
Sanibheri RM	101.1	102.8	93.6	116.6	6.3	396.6	221.1	71.2	9.3	51.7	11.1	8	18	71.6	100	0	19167	762.3
Banphikot RM	113.1	119.2	116.1	101.9	4.5	629.6	285.3	73.9	24.1	58.8	13	0	21	99	91.3	0	19927	939.8
Musikot Mun	97.9	95.1	94.4	129	5	514.1	237.9	97.5	23.8	137.8	12.1	2.9	45	128.6	92.9	1	39422	1126.7
Tribeni RM	109.4	106.6	105.4	109.7	4.2	675.5	315.2	67.7	12.4	75.4	12.2	0	14	67.5	91.7	0	21845	1053.2
Chaurjahari Mun	120.5	109.5	110.9	134.5	8.7	1163.3	488.5	149.5	71.4	205.8	14.2	20.3	19	64.2	93.8	1	61482	2077.2
SALYAN	94.8	96.1	92.5	130	7.9	418.6	191.5	104.6	32.5	79.4	6.3	3.7	246	101.9	91.2	0	167349	693.3
Darma RM	91.7	86.7	86.9	107.8	4	491.9	228	49.7	26.9	51.5	4.7	0	12	59.2	100	0	17263	851.2

Kumakh RM	86.6	89.5	85.1	114.5	7	420	176.7	65.9	23.9	47.7	4	4	8	31.8	88.2	0	15333	609
Banagad Kupinde Mun	79.6	84.5	85.7	165.4	8	459.8	282.7	65.4	16.3	39.1	8.7	5.8	28	81.9	85	0	33399	976.9
Siddha Kumakh RM	106.6	110.1	96.9	125.3	5.2	422.7	171	59.5	40.9	38.5	4	15	8	60.2	100	0	8995	676.8
Bagachour Mun	93.3	95.3	94.3	134.6	5.8	489.8	189.7	73.4	34.1	76.5	7.2	2.9	23	66.8	100	0	20267	588.3
Chhatreshwori RM	104.4	108	99.5	148.8	7.4	507.3	181.1	72.2	45.5	41.8	3.5	0	43	199.3	78.4	0	14250	660.5
Sharada Mun	105	102.5	93.3	139.4	11.6	305.8	141.7	343.1	55.7	266.5	9	0	35	100	96.3	0	26461	756.3
Kalimati RM	89	93.8	89.4	118.2	1.5	279.8	164.3	81.6	31.2	48.5	5.8	4.4	27	118.6	89.7	0	11816	519.2
Tribeni RM	122	114.7	111.2	112.6	2.9	291.8	132.9	92.5	19.9	61.9	6.5	5.9	23	136.1	100	0	7579	448.3
Kapurkot RM	92.2	94.8	96.5	97.1	2.6	476.5	182.2	72.8	34.1	55.8	5.6	5.6	39	219.6	95	0	11986	674.8
SURKHET	122	108.1	105	136.9	9.3	452.4	197.5	101.5	38	124.6	11.1	4.2	552	130.3	92	20	462431	1091.4
Simta RM	75.9	92.9	111.2	107.7	6.3	648.5	194	79.5	24.1	59.8	8	0	24	97.2	95	0	22005	891
Chingad RM	62	88.8	98.8	102.7	6.6	1049.7	355.5	62.5	21.7	58	8.5	0	15	93.4	87	1	23203	1445.4
Lekabeshi Mun	59.4	95.8	86.3	93	8.1	381.1	163.7	136.8	50.8	49	7	9.3	54	166.9	91.7	0	24226	748.7
Gurbhakot Mun	73.2	100.2	92.1	133.3	6.7	369.5	184.3	113.7	41.2	83.9	7.3	2	65	129.3	93.5	4	34819	692.8
Bheriganga Mun	70.8	102.1	93.9	132.9	12.2	320.2	163.8	82.8	19.4	52.8	9.5	6.1	55	111.3	93.6	1	36324	735.2
Birendranagar Mun	248.1	144.8	136.9	202.2	10.3	470.8	213.9	136.1	54.6	275.3	15.3	5	245	152.5	89.6	6	252823	1573.9
Barahatal RM	52.9	81.9	86.8	97	6	506.2	187.6	62.2	28.6	36.1	7.6	7.7	31	119.2	92.9	1	18219	700.5
Panchapuri Mun	71.1	86.4	79.8	88.7	6	378.7	204.1	76.7	30.9	64.9	11.6	2.7	39	106.2	93.5	6	32020	871.8
Chaukune RM	63.4	78	87	86.4	4.8	334.8	153.7	56.4	26.6	54	8	0	24	87.1	100	1	18792	681.6


KARNALI PROVINCE
HUMLA
MUGU
JUMLA
KALIKOT
DOPLA
DAILEKH
JAJARKOT
RUKUM WEST
SURKHET
SALYAN
International Boundary
District Boundary
Local level Boundary
River
Hospital
PHCC
Health Post
30 15 0 30 Kilometers