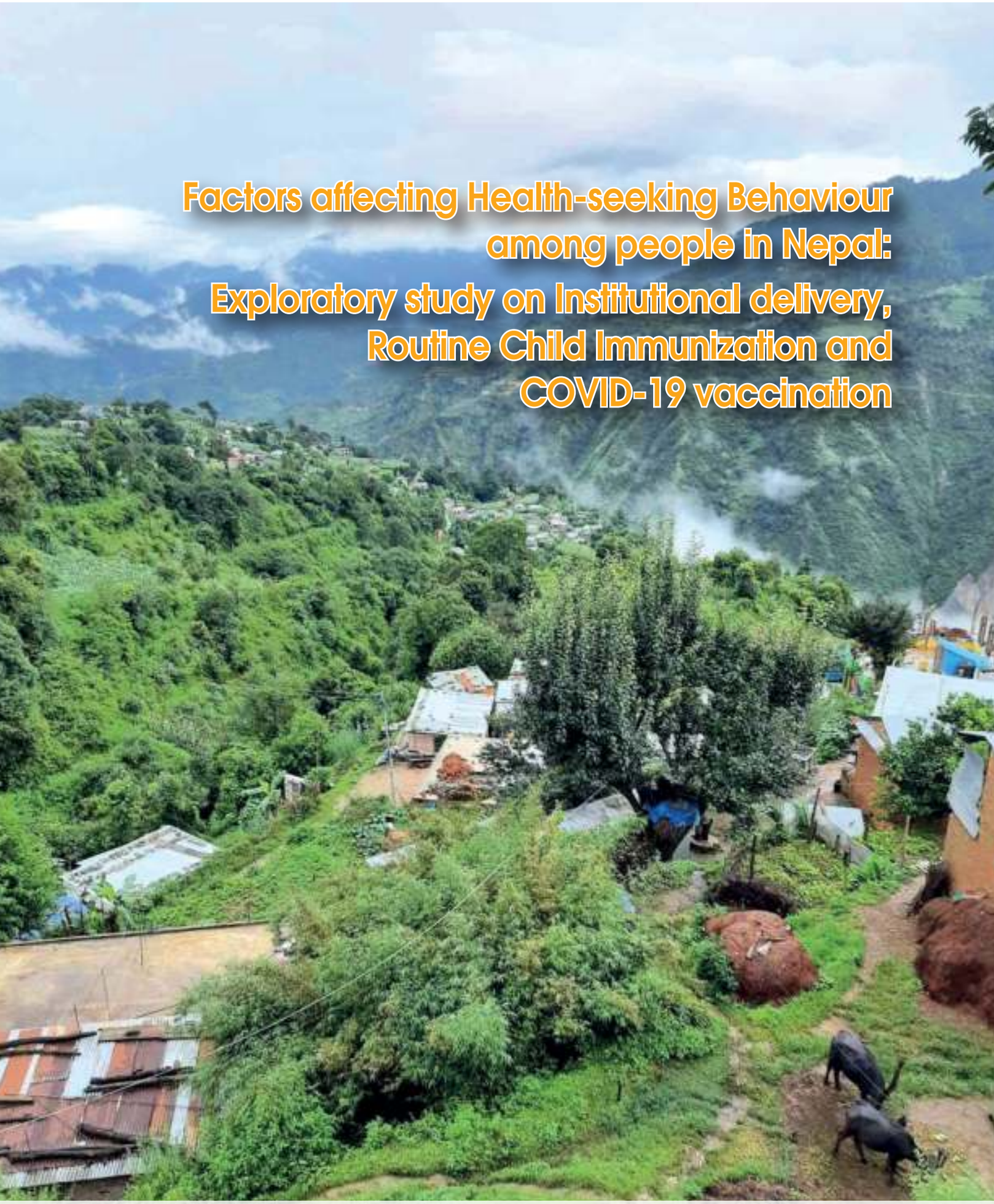
Factors affecting Health-seeking Behaviour among people in Nepal:

Exploratory study on Institutional delivery, Routine Child Immunization and COVID-19 vaccination



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Factors affecting Health-seeking Behaviour among people in Nepal: Exploratory study on Institutional delivery, Routine Child Immunization and COVID-19 vaccination

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Acknowledgement

It is a great pleasure to present this report of the study, *Factors affecting Health-seeking Behaviour among people in Nepal: Exploratory study on Institutional delivery, Routine Child Immunization and COVID-19 vaccination*. This qualitative study aims to explore the health-seeking behaviour of Nepalese people and was completed with the great support, cooperation and coordination from many individuals.

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Dr. Pradip Gyanwali
Member Secretary (Executive Chief)
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Acronyms

AHW	Axilliary Health Worker
AM	Ante Meridiem
ANC	Anti-natal Care
ANM	Axillary Nursing Midwifery
BCG	Bacille Calmette-Guerin
BHCC	Basic Health Care Center
CEONC	Comprehensive Emergency Obstetric and Neonatal Care
COVID-19	Coronavirus disease of 2019
DoHS	Department of Health Service
DPT	Diptheria Pertusis Tetanus
ERB	Ethical Review Board
EUA	Emergency Use Authorization
FCHV	Female Community Health Volunteer
FDA	Food and Drug Administration
FM	Frequency Modulation
HMIS	Health Management Information System
HP	Health Post
HSB	Health Seeking Behavior
ID	Institutional Delivery
IDIs	In-Depth Interviews
IHMIS	Integrated Health Management Information System
IMU	Information Management Unit
KIIs	Key Informant Interviews
LDCs	Least Developed Countries
MMR	Maternal Mortality Ratio
MoHP	Ministry of Health and Population
mRNA	Messenger Ribonucleic Acid
NDHS	Nepal Demographic Health Survey
NDVP	National Deployment and Vaccination Plan

NHRC	Nepal Health Research Council
NIP	National Immunization Program
OPD	Out Patient Department
OPV	Oral Polio Vaccine
ORC	Out-reach Clinic
PCR	Polymerase Chain Reaction
PM	Post Meridiem
PNC	Post Natal Care
RCI	Routine Child Immunization
RM/M	Rural Municipality/Municipality
RQDA	R Package for Qualitative data Analysis
SBA	Skilled Birth Attendant
SBC	Social Behavior Change
SDGs	Sustainable Development Goals
SEE	Secondary Education Examination
TV	Television
UN	United Nation
UNICEF	United Nation Children's Fund
USG	Ultrasonography
WHO	World Health Organization

Executive summary

Background

Health care-seeking behaviour is defined as, "The actions that people undertake when they perceive themselves to have some health problems or have some illness." The behaviour guides people to find an appropriate remedy for their health concerns. People are influenced by various factors when they seek to make decisions concerning their health. This study aims to explore factors that act as facilitators and barriers to institutional delivery. The study also aims to explore the barriers and facilitators to routine child immunization and vaccination against Coronavirus Disease 2019 (COVID-19).

A mixed method study was adopted in which the national data on coverage of institutional delivery, routine child immunization and COVID-19 vaccination was obtained through desk review followed by identification of study sites (local governments) having the lowest coverage of at least two indicators; institutional delivery, routine child immunization or COVID-19 vaccination for each selected sites. To collect information on the barriers to, and facilitators of, the participants' health-seeking behaviour, and to explore stakeholders' perceptions for those indicators, a focused ethnographic study design was applied. In-depth interviews (IDIs), Key informant interviews (KIIs), kuragraphy and transect walk were used to collect information. Two hundred and nineteen interviews were conducted, of which IDIs were conducted with 174 participants and KIIs with 45 participants. Kuragraphy was also conducted with villagers. Through the transect walk, researchers observed community settings, community practices, distance to the health facility, water sources, and available health care facilities in the study sites. This study was conducted in all seven provinces of the country. In each province, a rural municipality and an urban municipality was selected, while in Bagmati province, an urban slum area was also selected along with both rural and urban municipalities. Therefore, in total, 15 sites were selected for the study. Participants were selected purposively. Interview guidelines were used for IDIs with participants who had not used the services and those who had chosen to use the health services. KIIs were also undertaken with service providers. Interviews were recorded with the help of a recorder. They were then transcribed and translated into English language. Thematic analysis was performed using the RQDA package of R software.

Institutional delivery

Various activites on safe motherhood and newborn health programme such as: community level maternal and newborn health interventions, rural ultrasound programme, expansion and quality improvement of service delivery sites, emergency referral funds, *aama surakshya* program and free newborn programme implemented by the Government of Nepal, the number of people choosing institutional delivery has increased over time. Greater understanding of the decrease in risks in institutional delivery has been an important factor in influencing people to choose institutional delivery. The additional provision of benefit packages such as providing clothes for newborn baby and mother, oil, eggs and other food supplies provided by selected local government has given further motivation to make the recommended antenatal care (ANC), delivery and postnatal (PNC) visits at health facilities. There has been a change in practice, as mothers-in-law who used to deliver at home are now increasingly sending their daughters-in-law for institutional delivery.

Despite those positive changes, some women still deliver at home. This was found to occur especially in areas where a health facility's accessibility is challenged by difficult roads, unavailability of regular transport, and disruption of travel by landslides during the monsoon. A high cost of transportation not covered by the government incentive is another challenge for poorer people. Further barriers to institutional delivery include, unavailability of birthing centre facilities in nearby health posts, unavailability of Ultrasonography (USG) services at the entire local level, unavailability of adequate service providers,

especially trained birth attendants. These factors are the main reasons why delivery happens at home or en route to the health facility. In some settings, privacy also influenced the decision to opt for home delivery. In some places, cultural factors such as untouchability of women in their postpartum period along with the family culture of home deliveries supported by similar practices in the community also acted as reasons not to choose institutional delivery. Those that chose to deliver at home also included many who either had previously multiple or uncomplicated deliveries at home and women who had married early and did not fully understand the risks involved in the process of delivery.

However, many people chose to deliver in higher centres that provided comprehensive emergency obstetrical and nenoatal care (CEmONC) in cities. Some were also referred to higher centres by local health facilities. This was a significant factor for the institutional delivery data appearing to be very low at the local level.

Routine Child Immunization

Vaccination has been taken as the practice in the present day, which acted as a facilitator for the routine child vaccination in Nepal. Better educational status, availability of relevant information and a significant role played by the Female Community Health Volunteer (FCHV) in tracing and tracking children eligible for routine immunization in their catchment area are the major factors responsible for complete immunization of children. The work of the national government plus the efforts made by local government in bringing immunization services closer to target households irrespective of challenges in transportation, seasonal road blocks and the pandemic are the major factors that have helped in child immunization coverage.

However, there are some instances where children missed their vaccination. Loss of vaccination cards followed by the fear of being scolded by the health worker at the vaccination site, along with the child's illness at the time of immunization were important factors observed in many areas of the country. Internal migration at the time of child's immunization and migration to multiple places for work were also found to explain children missing their immunization. In brick factories particularly, missed vaccinations were found where there was no FCHV reach and parents there did not have adequate knowledge of vaccination sites and schedules for their child. Other factors influencing children missing their routine immunization include non-availability of FCHV to publicize immunization schedules, and mental illness in parents and family members. The status of broken families and decision-making largely by males who may be busy at work and therefore give less importance to their child's immunization were also observed to hinder immunization.

Despite some laudable efforts made for routine child immunization, coverage appeared not to reach the desired level, the national data suggests. However, health workers and representatives mentioned there being no or very few cases of missed immunization in their area. From the key informant interviews, it was found that the discrepancy observed in the national data and the ground reality at the local level concerning routine child immunization is due to the setting of impractically high levels of targets.

COVID-19 vaccination

The extensive vaccination programme launched by the Government of Nepal resulted in good Coronavirus Disease 2019 (COVID-19) vaccination coverage throughout the country. Media campaigns to inform people about COVID-19 and the available vaccines helped to generate public awareness of the vaccine and of vaccine demand. The trace and vaccination activities carried out by health workers and local community groups at the community level strengthened the COVID-19 vaccination campaign.

Despite efforts made by the government and others, some people were found not to have taken the vaccine. Personal choice was found to be the most important factor in choosing not to be vaccinated. Those who claimed themselves to be illiterate attributed their instinct for not accepting the vaccine, while those that were more educated often claimed that the vaccination is propaganda and there is no assurance about the long-term safety of a vaccine developed in foreign countries. Among people with multiple co-morbidities, a fear of side effects post-vaccination made them decide to not take the vaccine. The decision

of husbands who decided not to have the vaccine influenced their wives, many of whom also rejected the vaccine. Because of being pregnant, females were deprived of vaccination; however, along with the course of time, they did not give importance to vaccination and remained unvaccinated.

That was also the case for people who could not get the vaccine because of the large crowds in the early days, as they too lost interest in vaccination and stayed unvaccinated. Physical disability was a factor that made the family decides on there being no need to vaccinate the family member and, in another situation, the high transportation cost required to transport physically disabled people for vaccination also resulted in unvaccinated status.

In conclusion, the government has made great efforts in promoting institutional delivery, routine child immunization and, more recently, vaccination against COVID-19. People have also realized the importance of such services and have adopted behaviour to seek health care services for the prevention of disease and promotion of health using those services. However, there are scattered cases of people who do not seek health services whose decisions were influenced by their level of awareness, cultural beliefs, and access to service centres along with issues in the quality of services provided at the health facilities and by the service providers.

The findings of this study provide local evidence that help policy makers and implementers to develop strategies for improvement of institutional delivery, routine child immunization and COVID-19 vaccination. Local evidence will help to prepare context-specific micro planning to increase their coverage.

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Introduction

Background

Health-seeking behaviour (HSB) incorporates actions taken to uphold good health and prevent ill health, as well as dealing with any departure from a state of good health. It includes the timing and types of health care service utilization, which affects health outcomes.[1] It involves a decision-making process that is also influenced by people's and/or households' behaviour, societal norms and expectations, as well as characteristics and actions particular to the behaviour.[2]

Institutional delivery

Pregnancy and childbirth occur during a woman's reproductive age. However, complications may arise during antepartum, intrapartum and postpartum that endangers the lives of mothers. There were an estimated 295,000 maternal deaths globally in 2017 and the maternal mortality ratio was estimated as 211 maternal deaths per 100,000 live births.[3] Globally, the maternal mortality ratio (MMR) is highest in least developed countries (LDCs), with estimates as high as 415 maternal deaths per 100 000 live births (UI 396 to 477) in developing countries, which is more than 40 times that of the MMR in Europe (10; UI 9 to 11), and almost 60 times higher than in Australia and New Zealand (7; UI 6 to 8).[3]

Women's health-seeking behaviour affects not only the lives of women but also those of their children. However, women face different barriers in seeking the health care services.[4] The study entitled barriers and facilitators to health care seeking behaviours in pregnancy in rural communities of southern Mozambique showed unavailability of transportation, lack of knowledge of warning signs, discouragement for disclosing pregnancy early in gestation, complicated and inefficient decision-making processes, fear of being mistreated by health care professionals, complexity of the decision-making process, and financial limitations as the common barriers for women to seek maternal health care services.[5]

COVID-19 Vaccination

On 23 January 2020, Nepal reported its first case of COVID-19. In its wake, the Government of Nepal took a number of actions to control the spread of the infection.[6] With the first Emergency Use Authorization (EUA) issued by the Food and Drug Administration (FDA) for the first Messenger Ribonucleic Acid (mRNA) COVID-19 vaccine on 11 December 2020, a ground-breaking milestone was reached: a positive hope that COVID-19 can be fought.[7] In early 2021, Nepal's Ministry of Health and Population (MoHP) submitted the National Deployment and Vaccination Plan (NDVP), developed with technical support from World Health Organization (WHO) country office and partners, to the COVID-19 Vaccines Global Access (COVAX) Facility. The National Deployment and Vaccination Plan (NDVP) was reviewed and quickly approved by the regional COVID-19 review committee. The plan was to secure enough doses to vaccinate 20 per cent of the population at highest risk of contracting and dying from COVID-19, through the COVAX Facility.[2] Under the first COVAX allocation, the COVAX Facility was expected to deliver 1.92 million vaccine doses to Nepal, of which 348,000 doses as a first tranche were delivered in March 2021. Based on vaccine availability, Nepal could further receive 9.73 million vaccine doses (indicative allocation) in 2021. At the end of January 2021, a nationwide vaccination campaign was launched with the formation of operational committees and task forces at all levels—federal, provincial, district, and local levels.These committees and task forces drew on existing immunization coordination committees, at all levels, which were extended in response to demand.[8] As of 21 April, 2022 Nepal achieved 81 per cent (first dose) and 83 per cent (second dose) vaccination coverage in the over-12 years

of age population.[9] Despite government efforts, many people were reluctant to be vaccinated. Beliefs and negative perceptions were potential barriers to vaccination against COVID-19.[7]

Routine Child Immunization

Immunization is crucial, particularly for children. Improvements in immunization coverage and access to services will help ensure that all children are protected. Ideally, immunization has to be completed once children pass their first birthday. However, there were many constraints to children getting fully immunized.[10]

The control, elimination and eradication of preventable diseases require optimum coverage of childhood immunization. In spite of providing routine child health care services free of cost, barriers remain to receiving the services. Poor interpersonal communication between health service providers and caregivers, unavailability of skilled staff and inadequate health care services are among the barriers for not seeking the health care services for Routine Child Immunization in a study conducted in Nigeria.[11]

Improved health outcomes are not achievable only by improving the quality and coverage of health products and services. It can be possible through improved HSB of individuals and communities, as well as the norms that underpin those behaviours. Individual and societal factors, which include knowledge, attitudes and norms, need to be addressed to change behaviour through Social and Behaviour Change (SBC) interventions. SBC interventions are critical to ensure that people who are most in need can access available health care.[12] Therefore, the intention of this study was to understand the health-seeking behaviour of the Nepalese population in priority areas of health: maternal and child health, and COVID-19 vaccination. The enablers and barriers of HSB were explored in detail from both supply and demand sides' perspectives.

Rationale for the study

Countries have come together behind a new common goal to accelerate the fall in maternal mortality by 2030 as part of the Sustainable Development Goals (SDGs). SDG 3 calls for reducing the MMR worldwide to less than 70 deaths per 100,000 live births, with no nation experiencing maternal mortality rates that are more than twice the global average.[13] The notion that maternal mortality is the key aim in SDG goal 3 highlights the growing importance of maternal health. Understanding health-seeking behaviour has become a vital component of health management and system development as it reduces delays to diagnosis, improves treatment compliance and improves health promotion strategies in a variety of contexts.

The National Immunization program is a Priority 1 program of the government of Nepal. The program was launched in the year 2034 as the Expanded Program on Immunization. Over the course of 4 decades, the program has been improvised repeatedly and at present provides live saving vaccines to children against 11 antigens. With the aim of providing equitable services to the people of all geographic regions, economic status and the marginalized communities, the program is conducted through more than 16,000 outreach sessions. Despite the efforts made, only 78% of children aged 12-23 months received all basic vaccines at any time before the NDHS survey of 2016. This is a 9% decrease from the 87% of basic vaccine coverage as per the NDHS survey of 2011. These figures not only show the absence of coverage of all children by the NIP but also reveal the existence of a decrease in the vaccination rate.

New vaccine's implementation has various factors that act in its acceptance and hesitancy among the general population. While some people show willingness to take the vaccines considering its value and utility at the time of emergency, others see the new vaccine with doubt in its development and usefulness. The factors that play role in some people to not accept the vaccines can act as be influences to the other people as well to reject the vaccines. Likewise, the factors that play role in positively influencing some people for vaccine uptake can be set as example of enabling factors to promote vaccination during emergencies.

The Government of Nepal offered free institutional delivery, routine child immunization and COVID-19

vaccination programmes up to the community level. Yet, coverage is insufficient. Deeper insights are therefore needed for not having the full coverage of health care services on these components. The HSB approach offers an opportunity to identify key junctions where there may be a delay in seeking competent care, and is therefore of potential practical relevance for policy development. Public health practitioners and policy makers may be able to improve the health care system and health promotion programmes by better understanding the patterns of health care-seeking behaviour.When seeking health care services, it is often insufficient to understand only the perspectives of the service providers. It is as crucial to consider how the recipients receive the services. Therefore, both the supply and demand sides were considered in depth while looking at the enablers and barriers of HSB in this study.

Objectives of the study

General Objectives

- To explore the factors affecting health-seeking behaviours of people for institutional delivery, routine child immunization and COVID-19 vaccination in Nepal

Specific Objectives

- To explore underlying causes of health-seeking behaviour for institutional delivery, routine child immunization and COVID-19 vaccination among people in Nepal.
- To explore perceptions of stakeholders and health care providers on health-seeking behaviours for institutional delivery, routine child immunization and COVID-19 vaccination of people in Nepal.
- To triangulate findings of desk review with the qualitative study on health-seeking behaviours for institutional delivery, routine child immunization and COVID-19 vaccination of people in Nepal.

Methodology

Desk review was done along with qualitative data collection on institutional delivery, routine child immunization and COVID 19 vaccination in this mixed method study. Following this, triangulation of information was done based on the findings of desk review and primary data.

Study design

A focused ethnographic study design was used to explore the underlying determinants of health-seeking behaviour of people on institutional delivery, routine child immunization and COVID-19 vaccination. Along with that, stakeholders' perceptions were also explored concerning the selected health indicators. Researchers spent at least 20 days observing the community and its people from the socio-cultural and behavioural lens.

Study setting

The study was conducted in all seven provinces of Nepal, including the three ecological zones and representing both urban and rural settings in each province. The study was conducted in selected local government units (*Palikas*), which were identified from the evidence generated from the desk review and analysis of institutional delivery, routine child immunization and COVID-19 vaccine coverage data obtained from the Integrated Health Management Information System (HMIS) on 9 June 2022. In addition to the selected *Palikas*, one additional urban slum was selected to represent slum areas (Tables 1 and 2).

Study duration

The study was conducted over six months from June 2022 to November 2022.

Study participants

Table 1: Study participants for Institutional delivery, routine child immunization and COVID-19 vaccination

Interview	Institutional delivery	Routine Child Immunization	COVID-19 Vaccination
In-Depth Interview	Mothers of children under 2 years of age	• Mothers of children under 2 years of age • Caregivers (Grandmother, father, other family members)	COVID-19 vaccine recipients/non-recipients including: • Age categories: 3 categories (<20 years, 21-60 years, >60 years) • Gender • Education status • Locally relevant ethnic groups • Special needs groups
Key Informant Interview	Service providers/Stakeholders • Health coordinators (For Institutional delivery, routine child immunization and COVID-19 vaccination) • Skilled Birth Attendant (SBA), Nursing Professional, Midwives (For Institutional delivery) • Vaccinators (for routine child immunization and COVID-19 vaccination)		

Study sites

Table 2: Selected local governments with number of study participants from each level

Province	District	Local Government	IDI	KII	Total
Province 1	Ilam	Mangsebung Rural Municipality	3:1 (Home: Institutional delivery) from each study site 3:1 (no/ incomplete routine child immunization: complete routine child immunization) from each study site 3:1 (no: complete COVID-19 vaccination) from each study site	3	15
	Morang	Belbari Municipality		3	15
Madhesh Province	Sarlahi	Parsa Rural Municipality		3	15
	Rautahat	Maulapur Municipality		3	15
Bagmati Province	Dhading	Khaniyabas Rural Municipality		3	15
	Kathmandu	Dakshinkali Municipality		3	15
		Urban Slum		3	15
	Dhading	Khanyabash Rural Municipality		3	15
Gandaki Province	Tanahu	Rhishing Rural Municipality		3	15
	Nawalparasi east	Bungdikali Rural Municipality		3	15
Lumbini Province	Palpa	Rambha Rural Municipality		3	15
	Rupandehi	Tilottama Municipality		3	15
Karnali Province	Jajarkot	Junichande Rural Municipality		3	15
	Surkhet	Barahatal Rural Municipality		3	15
Sudurpaschim Province	Bajhang	Durgathali Rural Municipality		3	15
	Kailali	Janaki Rural Municipality		3	15
TOTAL			180	45	225

[Among the total sample size of 225, we could not find any RCI Barrier cases in Rishing Rural Municipality, Tanahun; and Durgathali Rural Municipality, Bajhang]

Selection of study sites and participants': Secondary data on the status of ID, RCI and COVID-19 vaccination were obtained from the (IHMIS) and the Information Management Unit (IMU), Department of Health Service (DoHS), along with the desk review of those selected indicators.

For each indicator, 10 local governments with low coverage were identified. To select the local level for the study, the first priority was given to those local levels having low coverage on all three indicators. Then, the *Palikas* having low coverage on any two indicators were selected. In this way, within a province, two local governments were selected for the study where, whenever possible, one was rural municipality and the other was urban municipality. While selecting the two municipalities, geographic location was also taken into consideration so that the study sites could be inclusive of the three geographical regions; mountainous, hilly and terai region.

Desk review was carried out using the following resources,

- Journal articles, reports and other grey literature were reviewed.
- Data from HMIS and IMU as of 9 June 2022 on Institutional delivery, routine child immunization and COVID-19 vaccination was extracted and analysed.

For in-depth interviews (IDI), in each local level the household/mothers who had had home delivery were identified. The mother was then asked about her child's vaccination status. If the child was found to be unvaccinated, the same mother was also taken as an IDI participant. In this way, a mother could be taken as a participant for two IDIs if she met these criteria and gave her consent to take part in both interviews. This approach was used until the required sample size was met in every study site. When the mother who had home delivery was found to have had her child vaccinated, another mother was identified for the interview on routine child immunization.

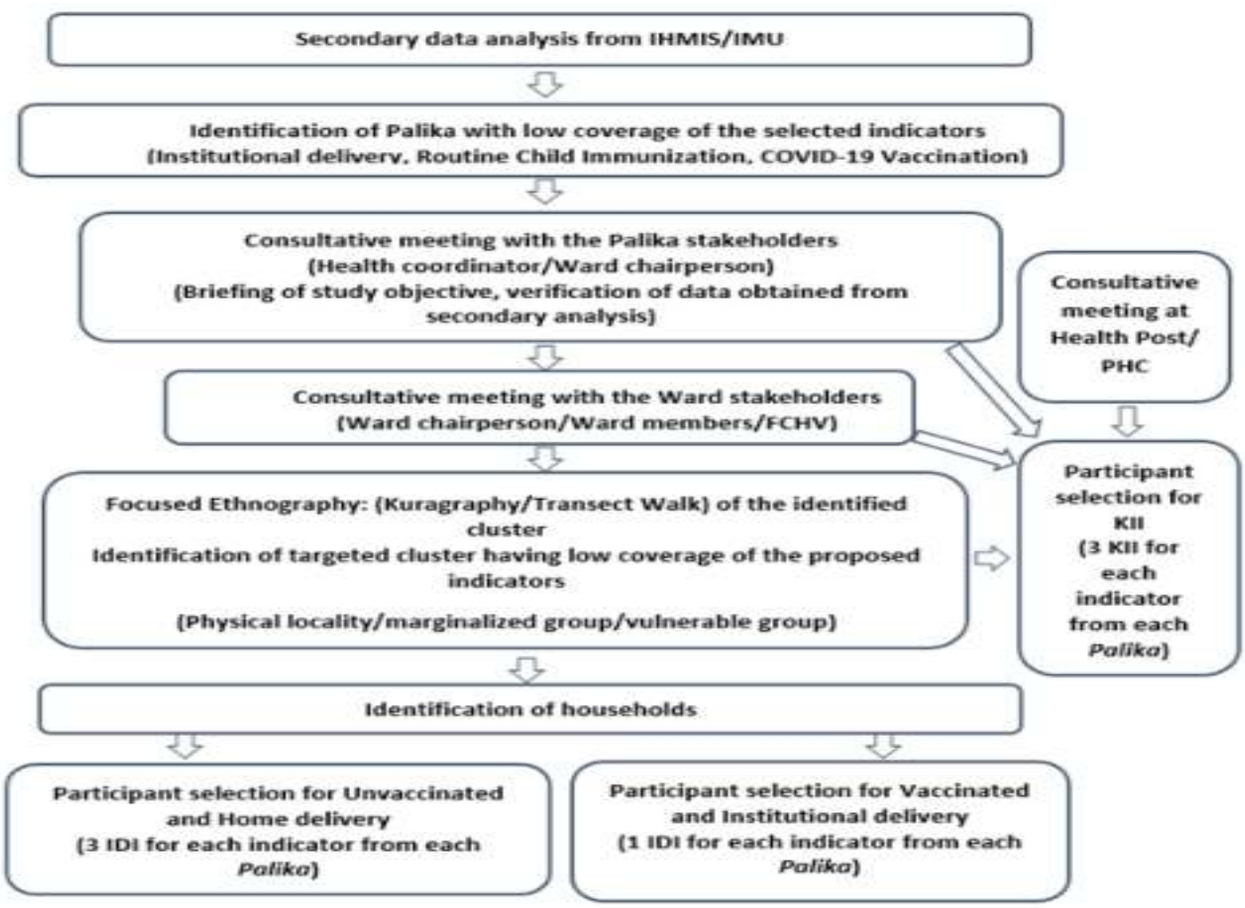

Figure 1: Information collection flowchart

Information collection tools and techniques

Qualified and experienced public health professionals carried out the desk review. Preliminary findings from the desk review were also shared among members of the steering committee and technical working committee. With technical assistance from the experts/groups, guidelines for qualitative information collection were developed and drafted.

Interview guidelines were developed for IDIs with mothers of children under two years of age (for institutional delivery), mothers/caregivers of children under two years of age (for routine immunization) and COVID-19 vaccine recipients/non-recipients covering the following areas:

- Geographic and demographic variables (sex, caste and ethnicity, education, age at marriage, first childbirth, spouse's information, family size, economic status, vulnerable/ethically marginalized groups, religious minority, disability)
- Social and behavioural factors (knowledge, perception, values and beliefs, decision-making norms: at community and family, social norms/meta norms)
- Cost and quality of services (perceived and real), access (source of information and services)
- Responsibility sharing
- Prejudices and biases
- Peer influences
- Barriers and facilitators

Journal articles, reports and other grey literature were consulted for the desk review.

Qualitative information was collected using purposive/judgmental sampling technique. IDIs were conducted with service users/non-users and KIIs were conducted with stakeholders and health service providers from the selected areas.

Information collection procedure

At first, the indicator data was obtained from HMIS and researchers reviewed it. Then local levels were selected based on low coverage of routine child immunization, institutional delivery and COVID-19 vaccination coverage. Then it was brought to the local level during data collection by a researcher and verified with the local stakeholder (health coordinator) of the selected palika.

With the support of local stakeholders, we made a social mapping, followed by a transect walk during household visits. During the transect walk, researchers observed the participants' environment that influence their access to health services. FCHV also play a significant role in transferring information about health services provided by health facilities. Therefore, the houses of FCHVs were also observed and marked carefully in an effort to understand accessibility to the health service provider.

With adequate probing information, the team was formed taking into consideration the following: gender-inclusive, public and social science group, and ability to speak local language. Two days' context-specific training was provided to the field researchers. The interview guidelines were piloted in Nagarjun municipality and an urban slum in Kathmandu before the actual data collection. Following this exercise, field researchers discussed practical experiences; any problems encountered that required modification in the tool finalization meeting. Feedback from field-testing was incorporated in the tools in terms of adjustment in language used and consistency in the survey instrument. Researchers spent at least 20 days in each study site to collect the information.

An official letter was issued by the Nepal Health Research Council (NHRC) to the selected municipality's office outlining the project details and requesting support for coordination.

Trustworthiness of the study

Interview guidelines were developed with a rigorous literature review and in collaboration with the content expert working in government, United Nations (UN) agencies and academia. Members of the project's steering and technical working committees provided feedback for face-to-face work and the tool's content validity. Qualitative interview guidelines developed in English language were translated into Nepali and after the data had been collected they were translated back into English. Forward and back translations of the tool were done to ensure the rigor of the study.

Reflexivity

The positionality of the researchers did have some level of influence on the conduction of the study. As representatives of NHRC, the researchers were able to reach out to key stakeholders easily when asking for their participation in the study. Local leaders also showed keen interest in the study and assisted in the information collection process after learning about the study and that it was conducted under the aegis of a Council of the Ministry of Health and Population.

However, in some places, when community people and especially those that had not been vaccinated were contacted, there was often an initial hesitation about participating in the study after learning that the researchers were from health units. The researchers then had to introduce themselves as mere data collectors involved in a study.

Supervision and monitoring

In order to ensure that standard procedures were maintained in data collection, the core research team was frequently monitored and supervised during the data collection in the field. The field-level activity was updated on a daily basis. Secondary data were checked regularly for inconsistencies.

Information management and analysis

The information collected in the form of audio recordings were collected from all the study sites in a common drive shared with the researchers. The information was first transcribed and then translated to English. Inductive coding was done and themes and sub-themes were developed based on the identified codes using qualitative data analysis in R (RQDA) package of R software. Thematic analysis was done using Braun and Clarke's framework of thematic analysis.

Ethical consideration

Ethical clearance was obtained from the NHRC's Ethical Review Board (ERB) (Reg. no. 229/2022). The purpose of the study and the procedures were clearly explained and written informed consent was obtained with the interviewee before starting the interview. The participants were also informed that their participation was voluntary, and that they could withdraw at any moment. Moreover, they were assured of anonymity, and of the confidential treatment of their responses. All personal information of participants are kept confidential, and the consent forms are recorded with a code number for anonymized identification.

Limitations of the study

The study was conducted and combined for three indicators and thus the site selection was done keeping in consideration the low coverage of all three indicators. This could have resulted in limitations in reaching some of the focal and specific areas of interest. With the time limitation for the study, the researchers had limited time to spend in the study setting. That also acted as a limitation to extracting maximum information. There might have been loss of original meaning of some information due to direct translation into English as well.

Findings

This section presents the findings of the study obtained using focused ethnographic approach; desk

review, along with the triangulation of information obtained from the desk review and qualitative study. In total, 219 interviews were taken, and IDIs were conducted with 174 participants. KIIs were conducted with 45 participants. Kuragraphy was conducted with the villagers during the data collection journey to obtain information on these indicators. Informal discussion with local people also provided good information about the study setting, along with the general health-seeking practices of the society as a whole. In addition, transect walk was conducted to observe situations and features of the community. Through the transect walk, researchers observed community settings, community practices, distance to the health facility, and water sources, along with the available health care facilities in the study sites.

The findings of the three major indicators of the study (institutional delivery, routine child immunization and COVID-19 vaccination) are presented separately.

Institutional delivery

Institutional delivery is a delivery that takes place at any health facility staffed by skilled delivery assistants. Although there is provision of free institutional delivery in most health facilities in Nepal, a significant proportion of the population still delivers at home despite knowing of the complications of home delivery.

In this section, the study's findings are presented based on the objectives of the study, such as:

1) Underlying causes of health-seeking behaviours for institutional delivery.
2) Perceptions of stakeholders and health care providers on health-seeking behaviours for institutional delivery.
3) Triangulation of the desk review's findings with the qualitative study on health-seeking behaviours for institutional delivery.

Underlying determinants of health-seeking behaviours for institutional delivery

Table 3: Major themes along with their sub-themes

SN	Major Themes	Sub-Themes
1.	Awareness on institutional delivery	a. Information on ANC and institutional delivery b. Source of information on institutional delivery c. Importance/value of institutional delivery
2.	Personal intuition and experiences	a. Personal intuition b. Experiences c. Trust of the health worker
3.	Family support	
4.	Religious beliefs	
5.	Social and meta norms influencing institutional delivery	a. Social beliefs and practices b. Decision-making dynamics c. Family culture
6.	Availability of services of institutional delivery	a. Infrastructure b. Human resources for health
7.	Accessibility to services of institutional delivery sites	a. Geography of the study setting b. Distance and roadway to health facility c. Transportation services to health facility
8.	Affordability to services of institutional delivery	
9.	Acceptability of the services of institutional delivery	a. Supportive management services
10.	Satisfaction of people with the service providers for institutional delivery	a. Service provision by service providers b. Counselling c. Behaviour of health worker
11.	Pandemic effect	

1. Awareness on institutional delivery

a. Information on ANC and institutional delivery

Most study participants were aware of the institutional delivery services and ANC services. Participants said that they were recommended to visit the health facility if they experienced any difficulties, such as bleeding or breakage of water (amniotic fluid) at the time of pregnancy and delivery.

"Institutional delivery means giving birth to your child in a well-equipped facility with minimum risk of delivery complications."[Province 1_Mangsebung_IDI 4]

Participants believed that institutional delivery helps to reduce life-threatening conditions for both the mother and newborn baby. Most participants said that institutional delivery has been well-established practice in the community. Participants who were aware of the incentives for institutional delivery were motivated to opt to institutional delivery. They also mentioned that health facilities are safe, as the health workers are well trained in conducting delivery services.

"They provide clothes, money, medicines to the baby and mother in the Hospital/Birthing Centre." [Madhesh_Parsa_IDI 3]

"I know that I need to do check-ups during the time of pregnancy and also heard that Rs 2,000 and some clothes are provided to the mother."[Province 1_Mangsebung_IDI 1]

"We are informed that we get clothes and money when delivery is done at the hospital. We get Rs 500 and a maxi (a type of gown) for mother and some clothes for the child."[Lumbini_Tilottama_IDI 1]

"There is a huge difference in delivering a child at home and in hospital. We should tie the cord with thread here, but they use something else in the hospital. After cutting the cord also, they use medicine in the hospital. They also tell us about the situation of our own body when we deliver in hospital. We know nothing at home."[Karnali_Barahatal_IDI 2]

Despite many participants, having knowledge of institutional delivery, some participants still lacked the information on the need for, and importance of institutional delivery. They did not have adequate information on the health facilities that provided free institutional delivery.

"I do not know about the services and facilities provided during the delivery at the hospital."[Province 1_Mangsebung_IDI 2]

"It is shameful to say this but we do not know which hospital performs the Institutional delivery and what services are provided over there."[Bagmati_Slum_IDI 1]

"I don't know where the delivery should be conducted. I think it's better to deliver at home."[Lumbini_Rambha_IDI 1]

Case story of home-delivery (Participant from Lumbini Province)

The participant was a 17-year-old lady, who had a troubled relationship with her husband and financial issues at home. She had studied to grade 7 and was involved in household chores and made some extra cash by working in the neighbourhood. The husband lived in multiple places as he worked as a driver assistant and did not support the family.

She delivered at home, because she chose not to stay at the health facility after the onset of labour pain, thinking it would cost her a lot of money. Eventually, after severe labour pain encouraged her to go to the health facility, she delivered the baby on her way there.

The health facility was 30 minutes' walk from her home.There was access to the road and the area had autos that worked on reservation basis. The delivery was assisted by an FCHV who lived 15 minutes' walk from her home.

Some participants were found to not have adequate information about the risk of complications in home delivery. Participants also said that despite having an FCHV in their locality, their understanding of institutional delivery was outdated, because the FCHV rarely came to their home to give information.

"I don't know about the complications that can arise when delivering the child at home." [Gandaki_ Baudikali_IDI 2]

"FCHV do not come to our house often. They live far from our house that is why we are lagging behind in all the information and knowledge about Institutional delivery." [Bagmati_Dakshinkali_IDI 2]

b. Source of information on institutional delivery

Most study participants were informed about the need for, and importance of, institutional delivery. They said that they received information about it through the school curriculum, and the health facility's workers had informed them of institutional delivery.

"In my curriculum also I have read and known about institutional delivery. That is why I prefer institutional delivery rather than delivering the baby at home." [Bagmati_Dakshinkali_IDI 4]

They said that whenever they went to the hospital for a check-up, the doctors and nurses would advise them to give birth at the hospital. Along with health care providers, FCHVs played an important role in delivering health messages about institutional delivery in their communities.

"The sisters told me about the importance of institutional delivery." [Province 1_Belbari_ IDI 1]

"The staff of the health post had provided me with information on the importance of institutional delivery." [Province 1_Mangsebung_IDI 1]

"We are informed by the health workers that, if there are any difficulties, like the flow of water or bleeding, we should go to the hospital." [Bagmati_Dakshinkali_IDI 1]

"FCHV sisters made us aware about this." [Province 1_Mangsebung_IDI 1]

"I knew about institutional delivery from the hospital. Whenever I went for my regular check-up I was advised to perform institutional delivery." [Bagmati _Dakshinkali_IDI 4]

Some participants were even informed about institutional delivery through the locally formed community group meeting like mother's group meeting.

"I got information about Institutional delivery from a mother's group meeting." [Madhesh_Parsa_IDI 3]

c. Importance of institutional delivery

Most research participants were aware of the basics of institutional delivery. Several study participants also said they might occasionally bring their infant and mother to the health facility because there are now more health facilities and they are easier to get to. Additionally, some study participants mentioned that availability of skilled birth attendant and hygenic environment at the health facility promote them to deliver at health facility. A few study participants also talked about the benefits and services of institutional delivery in a similar way.

"Regular check-ups at the time of pregnancy will help my baby remain healthy." [Province 1_ Mangsebung_IDI 2]

"In the past, there used to be fewer hospitals and they used to be far away from the place of residence, but now, there are more hospitals and are at a nearby distance too. During pregnancy, there might be the risk of complication to the baby in the womb of the mother. If they could reach the health institution on time, both the health of the mother and baby will be protected. Also the people are conscious, and prefer

Institutional delivery." [Province 1_Belbari_IDI 4]

"We need to go for check-ups to know if the baby is moving or not."[Lumbini_Rambha_IDI 3]

Some participants said that choosing the health facility to deliver their child was beneficial as the health care provider provides range of services to ease the delivery process.

"They placed me at the bed and gave me the medicine that would accelerate my delivery process. I do not even remember the delivery process or the difficulties involved. I did not have to care about the delivery process of taking care of the baby. They did it all." [Gandaki_Rishing_IDI 2]

"It is beneficial to deliver in a health care setting as hygiene is maintained, mother's health can be good, and health workers have good skills to deliver a child so it is really important to go to a health care institution to get delivery."[Lumbini_Tilottama_IDI 3]

"At home the umbilical cord is cut with the help of a sickle. Such a habit exists in the village but now we do not have any idea how the umbilical cord is cut. We do not have any idea. The health care staffs have all the ideas about it."[Sudurpaschim_Janaki_IDI 4]

However, some participants were unaware of the benefits to the mother and child of institutional delivery. The participants believed that there were some benefits to the newborn baby after institutional delivery while there were no benefits to the mother for going to the health facility to deliver. They also opined that taking a mother to the health facility for delivery was just a waste of money. Others, however, believed that home delivery was very risky as there was no certainty that both the mother and the newborn baby would survive.

"Normally, there is no benefit to delivering a baby at a health institution. Only, we need to spend more money at the hospital."[Madhesh_Maulapur_IDI 1]

"No, I haven't heard about the benefits of institutional delivery. Who will tell me?" [Gandaki_Rishing_IDI 1]

"There is no benefit to the mother; children are more benefited after birth at a health institution. A mother is also saved from a life-threatening situation while delivering at a health facility. If we deliver a baby at home, there is no certainty about death or saving of life. If the baby lies normally in the uterus, it is delivered normally in the hospital. And if the child does not lie normally it is delivered through operation."[Madhesh_Maulapur_IDI4]

2. Personal intuition and experiences

a. Personal intuition

Whether or not they were aware of it, participants' own intuition had a significant impact on either encouraging or discouraging institutional delivery. Some research participants were inspired by personal beliefs and instincts to opt for institutional delivery.

"My personal instinct and belief forced me to have the delivery in the institution."[Bagmati_Dakshinkali_IDI 4]

Some participants even rejected institutional delivery because they were afraid of injections. Some participants were reluctant to deliver their babies in a hospital setting, as they were shy. In addition, one participant decided not to tell her husband about her labour pain, since she did not want to wake him up in the middle of the night.

"I did not go for institutional delivery because I am scared of syringes. He (husband) said to go for check-up several times but I did not care to go." [Gandaki_Rishing_IDI 1]

"I did not tell my husband about the labour pain that I had at night because he and everyone else were in a deep sleep." [Lumbini_Tilottama_IDI 2]

Case story of home delivery(Participant from Lumbini Province)

Belonging to the Chaudhary caste, this 23-year-old lady married at 17 and became a mother at 18. She had two children. She was shy about recounting her experiences and answering questions. She studied until class 3 and married a man who had studied to class 5. Originally from Dang, her family of four lives at the Siddhartha Brick Factory in Tilottama municipality where both husband and wife work as daily wage workers.

While she had delivered her first baby at the health facility, she delivered the second child at home. Her labour pain began at 02:00 AM, but she did not tell her husband because he was sleeping at that time.The delivery happened at 08:00 AM in the room where they live as the husband was arranging an ambulance.The delivery was assisted by the health worker from the nearest health post to cut the cord and clean the baby.

The distance to the nearest health facility is a 30 minutes auto ride away, and transportation services were easily available in the area.

"I felt that it is important to go to the health facility to check the health of the baby and myself. However, I felt shy to go so did not go for institutional delivery. I would not go even if they provided me with more money." [Gandaki_Baudukali_IDI 3]

"I felt so ashamed in front of the health workers and did not like to visit health facilities. Rather I would prefer home delivery."[Bagmati_Dakshinkali_IDI 2]

Case story of home delivery(Participant from Bagmati Province)

Suntali married at 17, and had her first baby when she was 20. All three of her children were delivered at home, as no one told her about the importance of institutional delivery. She also felt happy that the baby was born at home instead of the hospital because she thought it was troublesome and she was shy in front of health workers.

The couple said that there were various reasons for home delivery in that area, including the financial burden, which is why it was common there. The husband also told us: "*90 per cent of births happen at home; only 10 per cent of mothers delivered in an institution.*"

Both Suntali and her husband had no idea of the incentives available for institutional delivery, and did not want to ask the FCHVs since they were not good to them.

The health institution is a 30-minute bus ride from her home. There was no access to transportation during emergencies.

b. Experiences

Most participants experienced no issues or complications in previous home deliveries. That encouraged them to continue with home delivery, believing it would be just as convenient as their previous experiences.

"I had borne my first baby at home and I did not feel any complications. That is why I thought about giving birth at the home."[Province 1_Belbari_IDI 2]

"I had all my past deliveries at home so I did not think about going to the health centre for delivery. And it all went well when I delivered this child at home."[Gandaki_Baudikali_IDI 2]

Some participants ended up delivering their baby at home because they did not experience the labor pain. As a result, the baby was delivered before planning to go to the health facility. While, other participants

experienced symptoms like labour pain throughout pregnancy, but were confused if it was actual labour pain; thus, had home delivery.

"The baby was born while I was letting my leg down from my bed. I did not go to the hospital because there was no labour pain and the date was not near either. The labour started without knowing. I did not feel the pain and I did not know if there was any problem. Well, if there was labour pain or stomach ache, I would have gone to hospital."[Sudurpaschim_Janaki_IDI 1]

"I always had symptoms like labour pain since the pregnancy started, if I bent down I couldn't be straight or if I sat down I wasn't able to stand, it used to happen a lot since early days. So, I didn't know anything as it happened all the time."[Sudurpaschim_Janaki_IDI 3]

Some participants experienced rapid progression of labour. In such circumstance, they did not have sufficient time to travel to a health facility for delivery so delivered the baby at home.

"It took only half an hour for me to deliver the baby and I did not face any difficulties. In my previous pregnancy also, I delivered the baby at home without any difficulties."[Bagmati_Dakshinkali_IDI 1]

c. Trust in the health worker

It was also found that participants would visit the health facility if there were specific health workers available at the facility that they trusted.

"Others do not carry out the delivery. She (SBA) is the only one to attend deliveries here. In addition, she went to Bhimad at the time of my delivery. Moreover, I knew that others could not attend the delivery. She had said that she is at Bhimad so I did not feel encouraged to go to the health facility either. Also, the delivery happened very soon at the home itself."[Gandaki_Rishing_IDI 2]

3. Family Support

Most participants acknowledged that they received family assistance with institutional delivery. They also said that their relatives had recommended institutional delivery. Some said that their husband and their family not only encouraged institutional delivery, but supported them morally, financially and emotionally as well.

"My husband had asked me to have the delivery done at a health facility and had also sent money some 15-20 days earlier. He would never make me short of money even when I had to go for my video X-rays." [Lumbini_Rambha_IDI 1]

"My mother and father-in-law were there to look after the kids at home when I went for my ANC visits." [Sudurpaschimpradesh_Durgathali_IDI 3]

"My mother-in-law and husband suggested that I have the institutional delivery by explaining its advantages and the benefits."[Bagmati_Dakshinkali_IDI 2]

"I feel that if I do institutional delivery then they (family) may support us. However, due to problems, I did not go to health facilities. I feel like if I go to health centres then who will handle my work, like in the village if something happens then they gossip about it."[Gandaki_Rishing_IDI 3]

Case story of home delivery (Participant from Gandaki Province)

This 20-year-old lady married at 16 and had her first and only child at 20. The house was made of mud and had a tin roof. She has to walk 30 minutes to get drinking water, and it was a two-hour walk to get to the health post. The FCHVs house was a 10-minute walk away. She said she had studied until class 9 and now looks after the home and child along with a farm and cattle. Her husband had studied to class 7 and works abroad.

She is responsible for the agricultural and household activities. So, she felt more comfortable delivering her child at home instead of going to the health facility, as she would have nobody there to help her. At least she could find her mother and mother-in-law to support her during delivery until the child's naming ceremony. In that time, she felt that if her husband was there, he would manage all the required care and facilities. Although she had visited the nearby ORC clinic three times for ANC, no health worker told her about the safe delivery incentive and free delivery programme. The FCHV advised her to choose institutional delivery, but she preferred home delivery because of the available help and because she could, also do her normal household work. She also knew about the PNC, but she did not make use of that service. She felt shy or fearful to go for PNC as she had home delivered her child despite the efforts made by health workers and the FCHV.

Some participants said that their husbands did not voluntarily accompany them to the health centres, while other study participants reported unavailability of family members to look after their house and children when they went to a health centre for delivery.

"It would have been very easy if my husband was with me at the time of delivery."[Lumbini_Rambha_IDI 1]

"At that time, I was alone and my mother-in-law also had her work… We had to carry the baby clothes, there were no other accompanying people at home. There is the need to look at cows and goats, cut the grass for cows so I didn't go to the health post."[Gandaki_Rishing_IDI 3]

"I delivered the baby at home because there is no one to take care of the baby at the hospital. At home there are all my relatives to take care of me and the baby."[Bagmati_Slum_IDI 1]

Case story of home delivery (participant from Bagmati Province)

Sujita Rai was 24 years old and the mother of two children. She married when she was 20. The first baby was born when she was 21 and the second when she was 23.

Although she gave birth to both of her children at home, she was aware of the advantages, facilities, and incentives associated with institutional delivery. Fear was the driving force for home delivery. She gave birth in the cold weather, during Poush, and did not have anyone to accompany her to the hospital. Her husband was at work and she was alone. She also explained that home delivery was her own choice, following discussion with the family. She said that home delivery was simple, because a relative who was a midwife performed it. She also said that she had no problems after giving birth. Her sisters and husband had no problem doing the home delivery, but her mother-in-law scolded her afterwards. She added that she had an ANC check-up in the hospital, but had misplaced the ANC card.

"Where could I go at night and with whom to leave the elder child? My mother-in-law was asleep and no one was there at home. If there were family members present that night, I would have gone to hospital. Or if I had my delivery in the daytime, I might have used the service. I couldn't go as it was a dark night." [Karnali_Junichande_IDI 3]

Some participants expressed that home delivery was normal and acceptable if there were no complications.

"The baby should be delivered at the hospital but if everything is normal and no complications, then delivering at home is best because we get better care at home than in the hospital." [Madhesh_Parsa_IDI 2]

4. Religious Beliefs

Participants reported that there were no religious beliefs or perceptions about home delivery. Religious beliefs were not found to be the barrier to home delivery.

"There is no influence or restriction in the tradition of the our communities in the matter of delivery. One can be delivered either at home or at institution. Our tradition does not have any influence on it." [Province 1_Mangsebung_IDI 1]

"Yes, we are also surrounded by our community but we are never forced to perform home delivery just because of the community value and culture." [Bagmati_Dakshinkaali_IDI 1]

5. Social and meta-norms influencing institutional delivery

a. Social beliefs and practice

Social norms are fundamental to interaction, culture, language and social life. These relate to birthing behaviour, particularly for institutional delivery. The study found that people refused to seek care through the health facility because they had to cross the river to reach the health facility. In addition, social beliefs of that community was that, pregnant woman and the baby inside her womb risked attack from a ghost or evil spirit if they crossed the river during pregnancy.

"We have to go to the health post by crossing a river. According to the locals here, there are ghosts and evil spirits, which will attack pregnant women as well as babies inside the womb, if we cross the river in this situation. Once, there had already been such an incident. One pregnant lady was severely ill after crossing the river for delivery. After delivery, the baby was also found weak and they called the Dhami from another village to get rid of the evil spirits." [Karnali_Junechande_IDI 3]

In some communities, home delivery is a very common practice. Untrained traditional birth attendants assisted mothers during delivery process. Most mothers in the community refused to have institutional delivery perceiving that, health workers of the health facilities would conduct Caesarean Section irrespective of the need.

"I did not go to the hospital because we were scared that doctors would needlessly do an operation in the hospital." [Madhesh_Parsa_IDI 1]

"I gave birth to my baby at home. An untrained traditional birth attendant (Sudeni didi) helped me to deliver my baby. Almost all of the people of this community had home deliveries assisted by her (Sudeni)." [Province 1_Belbari_IDI 2]

Case story of home delivery (Participant from Province 1)

The lady was 27 years old. She had completed her higher secondary studies. Her husband was working abroad. She had two children.

Despite her education, she gave birth at home. The youngest was just five months old. She said that her sister talked to her about the importance of institutional delivery, as did the FCHVs and her neighbours. Yet she had her first baby at home. There were no complications. That is why she thought that giving birth to the next baby at home would also be straight forward. She added that Sudheni and her mother helped her during delivery. She had no regrets at having the baby at home although she was aware of the importance, benefits and incentives of institutional delivery.

The health posts and clinics were nearby her home. The FCHVs were not there when we visited, but Sudheni was there.

"We work here and there even after labour start in our Madhesh community. We do not really care much about it. But Pahadiya rush to hospital even in stomach pain." [Lumbini_Tilottama_IDI 1]

b. Decision-making dynamics

The husband-wife dynamic and status of the woman in the family was found to influence the wife's decision-making, which often resulted in her giving birth at home. The decision-making also influenced the place of delivery and participants would end up delivering at home when they could not make the decision to call an ambulance on time.

"My mother-in-law had decided to deliver this baby at home. Because my husband was not at home, he was in India. We called a local health worker at home and delivered a baby with help from him." [Madhesh_Maulapur_IDI 3]

"As I was also alone, I was clueless on whom to call, where to go or whom to make phone calls to…My in-laws or other family members did not suggest or recommend me to go to the health centre when the delivery date had come closer." [Gandaki_Rishing_IDI 2]

Case story of home delivery (Participant from Gandaki Province)

This 31 years-old lady married when she was 18 by eloping and had her first child at 19. Currently she has four children. She had studied until class 8 and looks after the home and her children, along with a farm and cattle. Her husband, who had studied to class 3, works as a driver in another city.

She was alone with her children at home when the labour pain started. The SBA trained nurse was not available at the health post near her home, so she had to go to Bhimad for delivery. She had to care for her children and she decided not to go to Bhimad alone, so ended up giving birth at home. She did the work of cutting the baby's umbilical cord herself, as her culture didn't allow others to cut the cord.

Her house was made of mud and appeared uncared of. The FCHV lived 15 minutes' walk away and the health post with birthing centre was a 10-minute walk. There was pitched motorable road to the health facility, but reaching her home required two or three minutes of steep walking – the 'goreto' way from the road is slippery in the monsoon.

"They used to give suggestions to go regularly to the hospital. I used to have stomach pain at that time and they had suggested that I go and do an X-ray to see if anything was wrong. I was new here, my husband was away from home for work and I had no idea where the hospital was. I thought I would go later. [Karnali_Barahataal_IDI 1]

"The decision-making for the delivery of the baby is in the hands of my husband." [Bagmati_Dakshinkaal_IDI 1]

c. Family Culture

In some families, home delivery was a very common practice. Senior family members had neither had institutional delivery nor did they understand the need for institutional delivery. Some reported that they did not have adequate information on institutional delivery. Because the study participants and their families had not encountered any problems previously, they were not receptive to the services that were available for institutional delivery.

"My sister-in-law's children are older than mine and they too were delivered at home. My elder sister also delivered at home. At that time, they did not know about these things of institutional delivery." [Gandaki_Baudikali_IDI 2]

Case story of home delivery (Participant from Gandaki Province)

This 47-year-old lady married at 22 and had her first child a year later. She now has 10 children and lives with her husband, children and grandchildren. She said that she is illiterate and is involved in taking care of the home and children along with a farm and cattle. Her husband is involved in agriculture, which is the source of income in the family.

She delivered all her children at home. She said that she has not been to the health care centre for her ANC check-up, but went once for hypertension treatment. She appeared to have been used to the concept of delivering at home because she had always done it that way. She also said that people used not to know about ANC or institutional delivery, so it was perfectly normal for her to give birth at home. However, she also said that she had sent her daughter-in-law to deliver at a health facility in the city, as this has recently become a trendy thing to do.

Her house has access to an earthen road that was accessible for four-wheelers. The house was two minutes' walk from the health post. The FCHV's house was five-minute walk away.

"Nobody in my family had delivered a baby at the hospital. At the time of first delivery, I was in my native home (Maiti) because at that time there was nobody available at my own home to care for me after delivery."[Madhesh_Parsa_IDI 3]

"My sister-in-law had also delivered her two babies at home. She also suggested to me to conduct home delivery."[Madhesh_Maulapur_IDI 2]

"I do not have adequate information about the Institutional delivery and all of us in the family are performing home delivery till date and none of us have faced any problem because of that."[Bagmati_Dakshinkali_IDI 3]

6. Availability of services of Institutional delivery

a. Infrastructure

Some participants noted that adequate services were available in the health facilities and believed that their life would be safe if they went to the health facilities to have delivery. They reported satisfaction with the services provided by the health care providers at the health care center.

"If we go to a place that has good facilities we can be confident about our health being in the right hands." [Lumbini_Rambha_IDI 4]

"Yes, I have seen the ambulance service provided by the rural municipality."[Gandaki_Rishing_IDI 1]

"I am satisfied with the birthing centre at our place. The services are very prompt and convenient yet there are only few beds. So, if there is the addition of the beds in the delivery room then that would be best."[Bagamti_Dakshinkali_IDI 1]

Nevertheless, some participants who had gone through institutional delivery reported that the health facility was cold in the month of Ashad and many chose to stay at home until the time of delivery. In addition, the cleanliness at the health facility was found to be only just satisfactory. Another participant told of not having a proper waiting area in the health facility.

"The room of the health facility was very cold and my room was nearby as well. So, I went back to my room. The ANM had told me to come back at 9.00 pm. After getting back home, I drank warm liquid and walked around as well. When the pain started increasing, I went back to the health post at around 7:30 and I delivered my son at 8:51pm." [Lumbini_Rambha_IDI 4]

"We didn't receive any money, which we were not satisfied with. In addition, the drinking water should also be nearby, it was too far in the hospital. We needed to walk for five minutes to get drinking water. There was a problem with drinking water in Ghopa. There was no such situation in Koshi; it was satisfactory in terms of drinking water, but it is too dirty in Koshi." [Province-1_Belbari_IDI 4]

"There is no distinct room. We provide six or seven services in this single room and the one with an OPD room, there is a lab, autoclave, dispensary so there is a lack of space building. From conducting FCHV's meetings to management committee's discussions, everything is done there. There is only one waiting room, which is also a delivery room, everything is done there."[Sudurpaschim_Durgathali_IDI 1]

Participants reported the absence of even the basic level of the services at the health facility, such as USG services. Moreover, even if the services were available, they had to pay for those services.

"There are no USG services and we need to pay for it as well."[Lumbini_Rambha_IDI 1]

"There were no services like video X-ray. They used to call me once a month and give me pills for iron and calcium and they sent me to the hospital themselves." [Lumbini_Tilottama_IDI 4]

Some participants reported that even the iron tablets and other medicines were not available at the health facility. Some also said that they had to purchase the prescribed medicine from the private health facilities or the private medical shop.

"I asked for iron tablets. Even that was not available easily." [Lumbini_Tilottama_IDI 3]

"We need to buy medicines from a private clinic. The medicines are prescribed from the health post and bought from outside." [Lumbini_Tilottama_IDI 1]

"Yes, medicines are not available in the health post and we buy it from another private medical shop." [Karnali_Junichade_IDI 1]

b. Human Resource for Health

Human resources in the health care facility play a vital role in the delivery of the services. In this study, participants reported the unavailability of sufficient manpower in the health facilities due to which health care services were compromised. Some participants said that the staff seemed to be in a hurry while others reported that health care providers were often absent.

"The health care providers in the health post are not sufficient and they always seem to be in a hurry." [Bagmati_Dakshinkali_IDI 3]

"At that time the ANM was out of this place for the training… Due to which, we had home delivery."[Sudurpaschim_Durgathali_IDI 1]

Case story of home delivery (Participant from Sudurpashim Province)

This 18 year-old lady married at 17 and had her first child a year later. She had studied until lower secondary level and now looks after her house and children along with the farm and cattle. Her husband studied to higher secondary level and works in agriculture. She lived in a family with her in-laws, husband and their child.

It was election time and the ANM of that area had left the village for training. Later, the AHW refused to attend the lady. The respondent perceived that as the service provider to be reluctant to provide the service because she was linked to a different political party to them, due to which the woman gave birth at home.

The health worker's house was considered as a health institution in that area and was three or four minutes away. The Basic Health Care Centre, however, was near the participant's house. The village road was rocky, accessible only to a four-wheeler jeep once a day.

"It was night time so they (health care worker) weren't there but their home is nearby so they come once we call them." [Karnali_Barahatal_IDI 4]

7. Accessibility to services of institutional delivery sites

a. Geography of the country

The geography of the country, in some context was found to be act as barrier to institutional delivery. In the mountainous region particularly, the steep and bumpy roads made it difficult to access health facilities for institutional delivery.

"I came here (health facility) once, but had to go to other center for the video X-ray. It is quite far from here. It takes one day to go there and return back." [Sudurpaschim_Durgathali_IDI 2]

Case story of home delivery(Participant from Sudurpaschim Province)

This lady married when she was 15 and had her first child at 16. She studied only to primary level and now looks after her house and child along with the farm and cattle. Her husband studied to higher secondary level and works in a bank. She lives with her sister-in-law and her child.

She was living with her sister-in-law who is 12 years old. Therefore, she did not have a guardian to look up to when the labour pain started. She said that being home alone was a reason for her to not go to a health facility for delivery. The route to the health facility also involves an uphill walk. She said that she would have chosen institutional delivery if the circumstances were more in her favour and if the health facility had been easily accessible.

The village road was rocky and only a four-wheeler jeep could reach it once a day. It then required a further 30-minute walk to get to the village itself. There was no FCHV in her village.The health worker and the health institution were both nearly an hour away.

b. Distance and roadway to the health facility

The distance and roadway to the health facility in some context acted as facilitator and in some as barrier to influence the health seeking behavior of the people concerning institutional delivery. Through observations from the transect walk, it was found that in the Terai region, the distance to health facility was nearer compared to that in the hilly region.

Most participants said that farther the health facility was, they were less likely to use skilled delivery service from the health facility. They added that the health post was far from their home and out of their reach. Therefore, some participants refused to go to the health post because they believed it would take too long to get there and that it would be preferable to have the baby at home instead.

"The health post is very far from our house, which is why it is very difficult for us to reach the health post by foot." [Bagmati_Dakshinkali_IDI 1]

"We prefer delivering the baby at home since the health post is very far away from our house." (Bagmati_Dakshinkali_IDI 2]

"It takes me an hour to reach the nearest health facility, from my home. I go there on foot." [Province 1_Mangsebung_IDI 1]

Some participants also stated that the local roads were very difficult to travel. That is why they preferred not to visit the health post. Moreover, the health care provider was often reluctant to visit them at home. Some reported that health care providers along with FCHV refused to visit the place due to the difficult roads, especially during the monsoon season.

"We live in this place and we are not getting the services that are available from the health post and also the health care providers do not prefer coming here as they say the roadways are difficult to reach there." [Bagmati_Dakshinkali_IDI 1]

"No FCHV or health care providers prefer to come to our place, they refuse to come here especially during the rainy season due to the difficult roadways." [Bagmati_Dakshinkali_IDI 3]

In the monsoon season, heavy rainfall and subsequent disrupted roadways, also acted as hinderance for the travel of ambulance. Such situation affected some people from accessing the health facilities for institutional delivery.

"But at the time of delivery, the pain started and while we had called for the ambulance and in heavy continuous downpour, the baby was born at home. While the vehicle had come around the area that had had a landslide, I had delivered." [Lumbini_Rambha_IDI 1]

"It was raining heavily and the auto couldn't come. In addition, the labour pain was so brief that the delivery happened immediately. The labour pain lasted only for two or three hours. We had called for the vehicle, but the rain was so heavy that the water level of the river (BiureniKhola) rose and the vehicles could not cross. For that reason, we couldn't go to the hospital." [Karnali_Barahatal_IDI 2]

Case story of home delivery (Participant from Karnali Province)

A 21 year-old married lady with two children lived in Barhatal, Surkhet. She passed her seventh grade from local government school and her husband completed the 10th grade from the local government school. She was married when she was 18 years old and become pregnant a year later. She and her husband are farmers, mainly in dairy sector.

The FCHV suggested that her to go to the health post. But when her labour began it was raining heavily, The river has risen and could not be crossed. Therefore, no vehicle arrived to take her to the health post. The labour was brief, just two or three hours, and then she gave birth. In her home, her mother-in-law and sister-in-law helped with the delivery. Her sister-in-law cut the cord with a blade. She did go to the hospital later after delivery, where she was medicated.

"It takes 10-15 minutes to reach the nearest birthing centre. If we walk, it will take longer. But during pregnancy and labour it will be difficult." [Sudurpaschim_Janaki_IDI 3]

Case story of home delivery (Participant from Sudurpaschim Province)

This 25-year-old lady married when she was 20 and had her first child at the age of 21. She now has two children. She had studied to class 10 and now looks after her house and children, plus the farm and cattle. Her husband studied until class 9 and works in India. She lives with her in-laws, and children.

Only her mother-in-law was with her when she delivered. It was winter and the labour pains started at midnight. The mother-in-law called for an ambulance, which would be expensive for night service. The mother-in-law also started preparing for the delivery since the husband was not home. The lady noted that, had other members of the family been there at the time, it might have been possible to organize institutional delivery.

The road to her home was gravelled. In parts, it was muddy but accessible to small vehicles, both three-wheelers and four-wheelers. The village was up to one kilometre from the road. The nearest health facility was 10-15 minutes away by vehicle. The FCHV's house is nearby.

"If I had died they would have said that I died of labour. In another situation, there was the fear that people could die due to landslides of rock, slippery uphill roads if they would have carried me to the health facility. They could not carry me as well because of the big stomach. As carrying, a person is possible only when the person is not pregnant. I could not be carried either from the front or behind." [Lumbini_Rambha_IDI 1]

c. Transportation services to the health facility

Most participants said that there is no sufficient access to transportation services to get to the health care facility. Those who wished to use the health care services at the institution said that they wanted to use the services but were unable to do so due to transportation issues. Some participants added that the driver might refuse to go to health facility even after offering high fare because of the bad road conditions.

"We want to go to the health post but can't because there is no vehicle available to reach there at the health post."[Bagmati_Dakshinkali_IDI 2]

"Once I wanted to go to the health post and said I will increase the taxi fare to the driver but he said he was not ready to go there because the roads are very much degraded." [Bagmati_Dakshinkali_IDI 1]

The infrequent availability of vehicles was another challenge that affected accessibility to the health facility. The ambulance provided by the municipality did help people to travel to the health facility at reduced cost, but in the absence of such facilities, they needed to reserve vehicles, which would be very expensive.

"Even to call a vehicle at night, there was nobody with a vehicle in this area." [Lumbini_Rambha_IDI 1]

Case story of home delivery (Participant from Lumbini Province)

The participant was a 31 years old lady. She married when she was 16, had her first child at 17 and currently has 3 daughters. She had studied until class 8 and looks after the house, farm and cattle. Her husband, who studied to class 12, works abroad. She lived with her daughters while her in-laws lived in the city. She said that she was alone at the time of her delivery and carried out all household chores until the day of delivery.

She delivered all her daughters at home and claimed that they all were born during the monsoon when the roads had been obstructed by rain, thus preventing access to the health facility.

She lives in Jheskang village, which is at the upper end of a hill and she needs to travel down the steep hill to get to the health facility. The nearest health post is Pipaldanda HP, which takes 45 minutes by vehicle. Landslides regularly disrupt the road to the health facility during the monsoon.

"There is an ambulance in the municipality. They do provide us emergency services or else we have to reserve a jeep ourselves. While the ambulance charges us Rs 1,000, the reservation of vehicles costs us Rs 2,000." [Lumbini_Rambha_IDI 1]

"No, transport services were not available to go to the health facility." [Sudurpaschim_Durgathali_IDI 3]

Case story of home delivery (Participant from Sudurpaschim Province)

The participant was a 25 years old lady, who was married at 20 and had her first child at 21. She studied until class 10 and is now taking care of her house and children along with the farm and cattle. Her husband did not study and is working as a driver away from home. She lives alone with her children. She delivered all her children at home,because at that time there was no health facility that was easily accessible to her. However, in pregnancy, she wanted to go to the health facility to have the baby. But she experienced rapid onset of labour and delivered the baby at night. She was alone at that time with only her young children present. Despite the houses in the community being scattered, the people helped each other greatly at the time of need. Therefore, a neighbour came to her when she started having the pain and called the ANM who lived nearby. However, she delivered before the health worker reached the lady's home. The village had no access to transportation. The Basic Health Care Centre was just five minutes walk from her home.

"There is no access to the vehicle. I reach there by foot." [Province 1_Mansebung_IDI 1]

8. Affordability to services of Institutional delivery

The expenses involved in giving birth were found to influence the decision making of people for the place of delivery. Some participants said they did not have to pay for the services in the health facility, all were available free of cost in the health facility, enabling them to opt for institutional delivery.

"There is no expense. As well as, there is a place to provide the service free of cost. I did not have other expenses…So, in my own village, there are not many expenses made. As the home is also nearby, they would prepare the food at home and take it to the health centre for me." [Gandaki_Rishing_IDI 2]

"As there were incentives and several services for the Institutional delivery, we did not face any economic burden." [Bagmati_Slum_IDI 4]

Some participants claimed that they had financial difficulties when travelling to the health post since they had to pay for the cost of the transportation as well as the cost of food and stay. They also stated that there is only one vehicle flow every day and that the vehicle fare was expensive.

"The condition was like that. We are a financially poor family. My husband is also a patient of diabetes. In case of any difficulty as well we could not reach the health post as we were not financially stable that was why I thought of having the home delivery."[Province 1_Mangsebung_IDI 1]

"We were at the hospital for three days. We faced many problems and it was costly too…Clothing, transportation and food increased the cost." [Lumbini_Tilottama_IDI 1]

"He (husband) does not have a good income and we thought it would cost lots so did not go for Institutional delivery." [Gandaki_Rishing_IDI 1]

The participants talked about the going to the local health facility or to a higher centre for delivery. While some participants had to bear high costs to reach even the locally present health facility, others faced the same expenses to reach higher health centres. Another participant mentioned that the cost required for the ambulance service was unaffordable.

"If I could have gone, it would have been either the mission hospital or the Prabas hospital as they are the big hospitals near our place. Our Palika would have taken some Rs. 2,100 to Rs. 2,300 if we had used the ambulance but if we had taken a vehicle on reservation, it would have cost us Rs.4,000 to Rs.4,500 to only go there." [Lumbini_Rambha_IDI 2]

"A driver demands Rs.1,000 to take the patient; otherwise he would not carry the patient." [Madhesh_Parsa_IDI 3]

"The ambulance driver takes Rs. 1,100 to Rs. 1,200 in day time. If the driver goes from this same place, then they cost a little less, like Rs.400 to Rs.500 also. But at night then they can charge us Rs. 1,500 to Rs. 2,000 too." [Karnali_Barahatal_IDI 2]

Many participants expressed their need to go to a higher centre for video X-rays, as that service was not available in their area. And accessing such facilities involved higher expenses. Another participant said that the expenses involved in returning from the health facility were more than the incentive provided.

"While, I was pregnant, I could not do the video X-ray here and I had to go to Pokhara for that and to check, if the baby was present outside the uterus or not (ectopic pregnancy), we had to bear the expense of Rs.14,000 in travel at that time to go to the hospital and come back in a reserved vehicle."[Gandaki_Baudikali_IDI 1]

Case story of home delivery (Participant from Gandaki Province)

The participant was a 27 years old lady, who married at the age of 25 and had her first child at 26. She had two children. She had studied to class 10 and looks after her home and children, along with a farm and cattle. Her husband studied until class 10 and now works abroad.

The second pregnancy was unwanted. The couple planned to abort the baby but decided to continue with the pregnancy when the mother's health did not allow for the abortion. She had delivered her first baby at a health facility in the winter month of Mangsir. Her experience of the cold environment and prolonged labour pain made her decide to deliver at home rather than at the cold health facility.

Their house is made of mud. It has two storeys and a tin roof. Cattle shed stood in the backyard, which accommodated buffaloes, goats and chickens. The house had access to water in their front yard. The health post was around 45 minutes walk-away and the FCHV lived nearby. The road connecting the house was earthen and accessible to four-wheelers.

"We returned in a taxi from the health facility after the delivery and it cost us four thousand." [Gandaki_Rishing_IDI 4]

"When I delivered my son, his father had earnings and I went to deliver in the health centre, now there are no earnings and I couldn't go." [Lumbini_Rambha_IDI 1]

Case story of home deliverey (Participant from Lumbini Province)

She was 34 years old, married at 14, gave birth to the first child at 20 years, and now is a mother of three children. Both husband and wife studied upto class 5. The husband works as a painter in Butwal. His is the family's only source of income.

She gave birth to her first two children at a health facility and delivered the third at home. One reason for that was that her husband was COVID-19 positive and she did not want to go to the health facility by herself. In addition, their financial condition was weak and it was the monsoon, which meant no vehicles were available to take her to the facility.

It was about an hour's walk to the nearest health post. Her home was on a hill, with a steep slope that was hard to climb. Three autos worked on a reservation basis to travel the muddy, bumpy road. Her mother-in-law helped with the delivery.

9. Acceptability of the services of Institutional delivery

a. Supportive management services

Study participants appreciated the availability of the supportive services in the health facilities such as: availability of the drinking water, availability of the seating arrangements along with the maintenance of the sanitation of the health facility.

"The best thing I liked at the health post was the availability of the drinking water at the health post in adequate places." [Bagmati_Dakshinkali_IDI 2]

"All the environment of the health care centre is good including the washroom of the hospital and the drinking water facility."[Province 1_Mangsebung_IDI 1]

"*The toilets were clean and the drinking water supply was hygienic*."[Province 1_Mangsebung_IDI 4]

Some participants, however, said that the health facility was not well facilitated as per the infrastructural components. Unavailability of waiting room and inadequacy of the available space resulted in them waiting outdoors and in the sun.

"Down here, there is equipment and all but up there, where a new place for birthing has been established, there is no nearby shop… After the birth of the baby there won't be anything to eat not the clothes for the baby or sanitary pads."[Sudurpaschim_Janaki IDI 3]

"The people in the health post have to wait for the longer time in the scorching sun and there are no seating arrangements made for the people."[Bagmati_Slum_IDI 1]

10. Satisfaction of people on the service providers for Institutional delivery

a. Service provision by service providers

Service provision was found to be associated with the crowd at the health facilities. If there were more service seeker in the health facilities to receive the services, they had to wait to receive the services. Otherwise, beneficiaries could receive the services quickly. Similarly, some of the participants also appreciated the availability of service providers at the time of need.

"It depends on the crowd. If it is crowded, you will have to wait. Otherwise, you will get the services quickly."[Province 1_Belbari_IDI 1]

"There is the FCHV of our ward in a location that is a little uphill from here. She came that very day even in the rain."[Lumbini_Rambha_IDI 1]

"The health care providers are our familiar people that are why we explain about our problem to them without any hesitation and they provide the services as per our need." [Bagmati_Dakshinkali_IDI 4]

"The sisters and health care providers in the health post advised us to contact and ask for the help whenever we required." [Bagmati_Dakshinkali_IDI 1]

b. Counselling

Some participants reported having received proper counselling from the health workers for the institutional delivery. They expressed that they were counselled on the complications that could arise during pregnancy along with the importance of Institutional delivery.

"Yes, they did counsel me for Institutional delivery. They told me I should go to a health institution for delivery. There will be difficulties if the complications arise during home delivery." [Sudurpaschim_Janaki_IDI 3]

"They [Health care provider] asked us to stay there at the health facility. We said the pain has been a little less than before so came back and the baby was born the next day and we returned home." [Lumbini_Rambha_IDI 1]

Both the women who delivered at the institution and at home expressed that they were provided with the counselling on risks that were present in case of home delivery.

"I was asked to go to the medical immediately after I start having my labour pain and if I stay at home, I might start bleeding and things could go bad in regard to the health of the baby and also mine. But while I was planning to go, the delivery happened at home." [Lumbini_Rambha_IDI 3]

Regarding the counselling, one of the participants mentioned that even the health worker said that if the baby could be delivered at home in the case of normal delivery. There was no need to visit the health facility. Similarly, another participant also expressed that she was not requested to stay at the health facility when the date of delivery was near.

"Yes, mostly suggest that a pregnant mother come to the hospital for delivery. However, a doctor said that if you could deliver your baby normally at home then you would not need to come to the hospital; otherwise you should come to the hospital for delivery."[Madhesh_Maulapur_IDI 2]

"I did go to the health facility when my expected date of delivery passed. They did not ask me to stay back at the health facility but told me to do the video X-ray. Moreover, they said that the baby is doing well, and nothing has happened to the baby. And said that it has not been the time for delivery." [Gandaki_Rishing_IDI 2]

"They said nothing about how often I needed to visit the health post during pregnancy." [Lumbini_Tilottama_IDI 2]

To the particular study participant, the health facility nurse explained about there being too little amniotic fluid around the foetus and suggested her to go to the health facility to deliver.

"At my first pregnancy, I went to a birthing centre near my home. That time they (Nurses) told me "there is less fluid around the foetus (Amniotic Fluid) and suggested Birgunj for delivery but I had delivered normally at home. So, we did not trust the health worker of this Birthing Centre." [Madhesh_Maulapur_IDI 3]

c. Behaviour of Health Worker

Most participants praised the good attitude and behaviour of the health workers. They also mentioned that health workers treated them like their own family members. The love, affection and the care shown by the health care providers enabled them to deliver the baby in the health facility.

"I used to do my initial check-ups from this place itself. Moreover, the health workers here, ANM treat me like their own sisters, they also used to tell me that the delivery can be attended in the health post, and if any issue arose, they would refer me to a higher centre promptly. As I used to get the love and affection like a sister, I too felt that it would be easier if I could deliver in this health post. The health facility was near my home and the health workers and ANM were also very nice so I delivered in this place." [Lumbini_Rambha_IDI 4]

"The sister who would check us was distantly related as a mother-in-law to me and lives in the same ward. She would suggest me to eat soup of cereals and around without stressing my body and neither stay at home doing nothing. Maybe it was because she was from the same ward, her behaviour was really nice."[Bagmati_Slum_IDI 1]

"There is no hesitation in sharing and asking our problem to the health care provider as he is familiar with us."[Bagmati_Slum_IDI 2]

In some of the cases, the participants expressed that having a non-local service provider influenced their comfort in accessing the health facility for the delivery of their baby. Some participants, in addition expressed that the health care providers were rude to them. Another set of participants also mentioned about the discrepancy in incentives provided to them by the health service providers.

"Had there been a known (chineko/local) sister, it would have been different in an easy way but when it was an unknown sister, it got different. The thing is that, those nurses that we knew would talk properly and give us suggestions. Those unknown to us are different." [Gandaki_Baudikali_IDI 1]

"I have never met her (FCHV), she didn't come to counsel on diet or other things to be done during pregnancy. Some villagers said she does not talk with us". [Gandaki_Rishing_IDI 1]

Case story of home delivery (Participant from Gandaki Province)

The lady was 35 years old. She married at 14 and had her first child at 16. Currently she has five children and lives with her husband and two children. She studied to class 3 and looks after the home and children, along with a farm and cattle. Her husband studied until class 2 and works in the household as well as in agriculture. The husband was neglected by his family and family property and also socially excluded.

The participant ended up delivering at home, as the family did not have any income and she thought that it would cost a lot to give birth in the institution. Along with that, the fear of injections made her not attend the required ANCs as well.

From the highway, the participant's house could be reached by a steep downhill walk of 20 minutes through a goreto way. The family did not have access to media or any sources of information. The distance to the nearest health post was a one and a half hour walk on an earthen road. The FCHV's house was very far away, and the FCHV rarely visited them.

"In other homes that had the home delivery the incentive was taken half by the health service provider.

However, in our case we did not receive it. The health service provider used to provide half of the incentive to the health service provider (as half of Rs3,800 or sometimes they used to take Rs.800 and provide Rs.3,000 to the patient's family). The health service provider used to tell the patients not to inform about the incentive and to maintain privacy." [Sudurpaschim_Durgathali_IDI 1]

One of the participant complained that the service provider scolded her when she went to the health facility for the delivery of her child. She expressed that she was blamed by the service provider for coming to the health facility only for the greed of incentive.

"They scolded me by saying I did not come to the health institution for check-up and delivery and remembered only after having trouble. She became rude and said why did I not come to check-up but wanted an incentive. I had received incentive only after ambulance driver said health worker to give money to poor client as other receives facility who gives birth at birthing centre. One of the sisters scolded my husband as how he would raise this child?" [Gandaki_Rishing_IDI 1]

Some of the participants expressed being hurt by the behaviour of the service provider. They mentioned about the service providers being rude to them and also not taking adequate care while they were in pain at the time of delivery.

"During labour everyone will have pain and everyone will shout. During that time the nurses do not behave nicely."[Sudurpaschim_Janaki_IDI 3]

"*I can say very clearly that it was said by a sister who was there on a night duty. Other sisters had COVID-19 and were in isolation. Only two sisters were there, one helper and the other sister and she too was somewhat sick. She said that we could either stay or go and that they would come to check on me only after two hours. My heart was very hurt, hearing those words*."[Gandaki_Baudikali_IDI 1]

11. Pandemic effect

The COVID-19 pandemic was also found to be the barrier in health-seeking practices for institutional delivery. Because of the fear of spread of COVID-19 infection, they confined themselves inside home and did not choose to go for institutional delivery.

"Yes, I did. I went to check-up three times on a regular basis but could not go on the fourth time due to COVID-19 pandemic." [Lumbini_Tilottama_IDI 3]

"It was my husband who decided to do delivery at home as his parents are old and also patients of chronic disease such as B.P. Also, our neighbour died after he went to hospital. That too made his mind to not go to the hospital for delivery."[Lumbini_Tilottama_IDI 3]

Case story of home delivery (Participant from Lumbini Province)

The participant was a 21-year-old lady, who married at 18 and has one child. While she had studied to the eighth standard, she was married to an information technology professional. She made three ANC visits and did not continue with the fourth because of COVID-19 pandemic.

At the time of delivery, there was the need for a PCR report to get the delivery services at the hospital. At that time, it took one or two days to get the PCR report. The decision to deliver at home was taken by the husband who believed that it was safer than in hospital during the pandemic. Such fear was explained by an incident where a neighbour had died of COVID-19 while being treated at the hospital. Thus, the husband requested one of the relatives who was a health worker to assist in the delivery process.

The nearest hospital was some 20 minutes' drive from their home and the house was on the main highway with easy access to transportation.

"At that time there was the COVID-19 pandemic so I did not go to the health facility to do my PNC. The FCHV and ANM sisters would call me in time to check on my health."[Lumbini_Rambha_IDI 4]

Diagram showing major barriers and facilitators of institutional delivery

Figure 2: Barrier to institutional delivery, Nepal

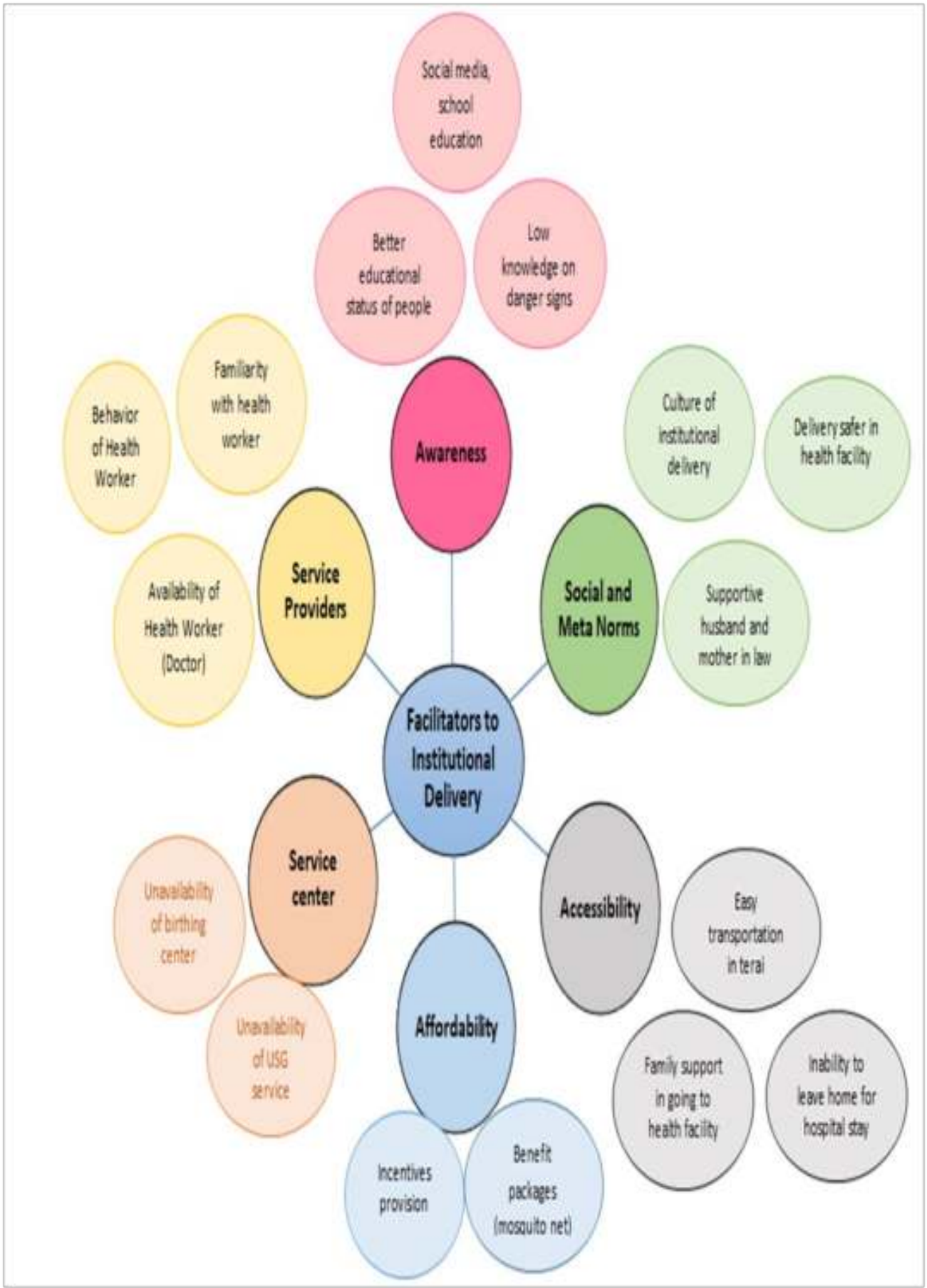

Figure 3: Facilitators of institutional delivery, Nepal

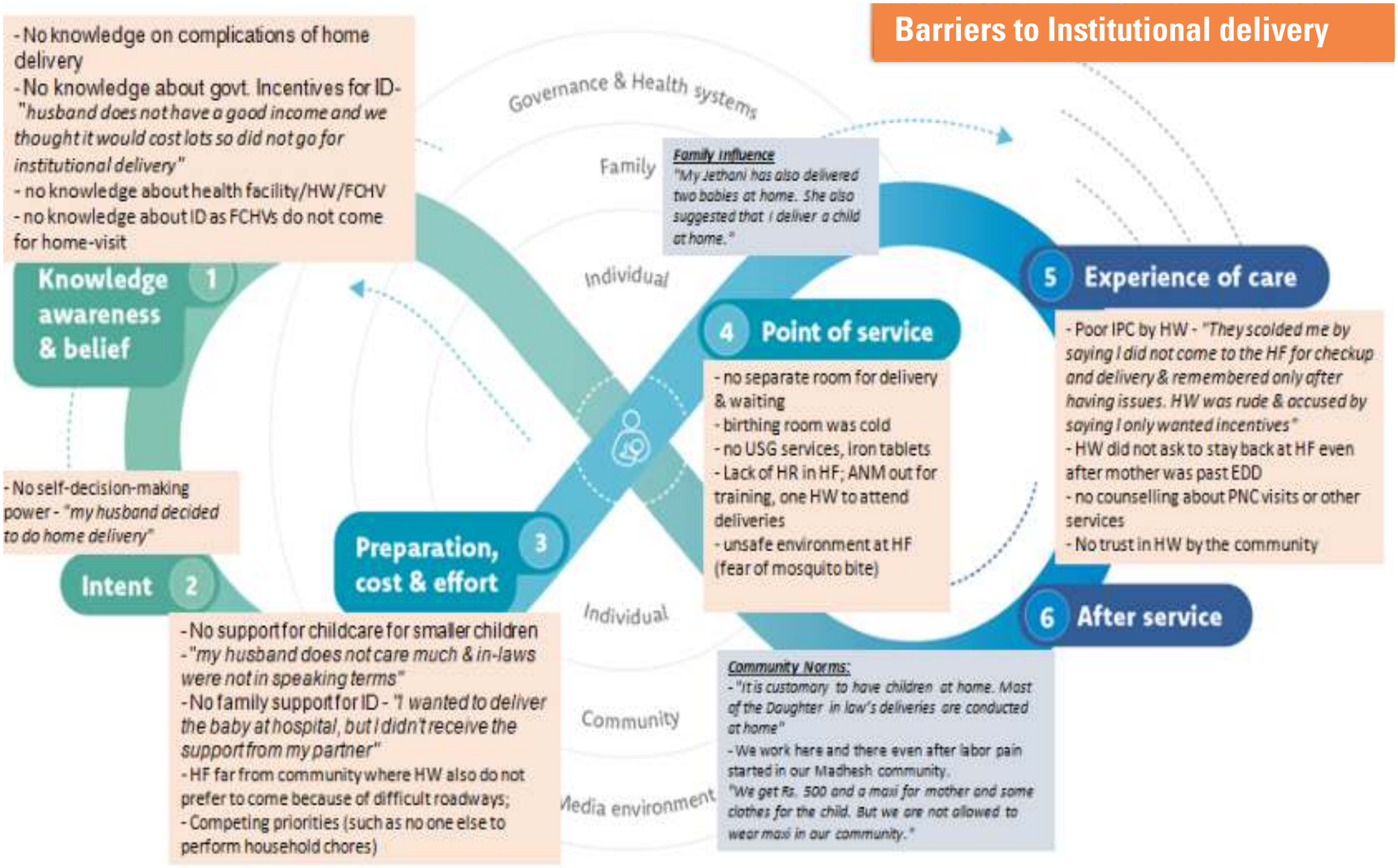

Figure 4: Journey to health for institutional delivery

Perception of stakeholders

Perception of stakeholders and health care providers on health-seeking behaviour for institutional delivery

1. Awareness of antenatal check-up and institutional delivery

a. Information on antenatal check-up and institutional delivery

The health worker believed that the people have the required information about ANC and also about the importance of conducting Institutional delivery. Also, the increased educational status of the people aided in them having awareness about Institutional delivery. Likewise, awareness generation activities also helped in better informing the people about the importance of Institutional delivery.

"They know everything. We inform them about the service of Institutional delivery and free Institutional delivery. They (FCHVs) go to each pregnant woman's home and inform them about Institutional delivery." [Madhesh_Parsa_KII]

"We (health workers) are trying to provide public awareness about harmful effects of home delivery to mother and baby, and also provide information on what should be done during pregnancy, and with this we have been encouraging them to have their delivery done in the hospital itself. We have been conveying messages to all of the people living here regarding free health care services provided through the health care centre."[Province 1_Mangsebung_KII]

"With the help of female health volunteers, we provide information when a mother's group meeting is held in the village. We go there and deliver the information. The municipality started Radio FM for providing information on services, like the pregnancy test is free, eight check-ups during pregnancy and other public awareness." [Lumbini_Tilottama_KII]

"During ORC clinics, we would counsel the pregnant mothers and conduct group awareness at mother's meetings in the community as well." [Gandaki_Rishing_KII]

The health workers also stated that they used to counsel their clients on the importance of institutional delivery when they come to visit the health facility. They added that they provided the information not only through the physical visit but also from the telephone conversation also.

"While they come for ANC, they sometimes come with their mother-in-law and we talk with them and counsel them also about the importance of Institutional delivery…After that, they sometimes telephone us and tell us that their daughter-in-law is having pain and what should be done in that case." [Gandaki_Baudikali_KII]

The health worker claimed that the people in the area were well aware of the incentives and free service provision for institutional deliveries. However, one of the key informants mentioned that the people might not be well aware of the additional free services provided by the Local government.

"We tell the people when they come for ANC that if they come to a health facility for delivery they get the transportation price, and that they would be given Rs.800 for 4 ANC visits and now there is the rule of the same amount for 8 ANC visits. We also give them information about the Nyano Jhola that they get." [Lumbini_Rambha_KII]

"Some of them ask themselves, most of them know about Rs.1000 and Rs.800. Maybe they don't know about the additional Rs.1,000 incentive provided by our municipality." [Lumbini_Tilottama_KII]

However, the key informants also reported that there were some instances where people did not have adequate education. That affected their belief and understanding about the place of delivery. In addition, some municipalities had not supported the benefit packages to mothers unlike in other municipalities to spread awareness on Institutional delivery.

"Many are uneducated even at present. Even if we counsel them taking much time, many remain ignorant and do not want to understand…They even say, "We used to deliver at home before as well, now also we will do the same, who are you to tell us like that." [Gandaki_Rishing_KII]

"May be because the people are unable to understand the values thus do not go for delivery in the health facility." [Gandaki_Baudikal_KII]

"But our rural municipality has not supported any awareness regarding the delivery services/ institutional deliveries. Other municipality support women with a crate of eggs on the first postnatal home visit for promoting Institutional delivery. We have not conducted any awareness or promotional support activities in the communities. This might also be reason for home deliveries in the areas indicated." [Gandaki_Rishing_KII]

b. Source of information

The key informant mentioned that they had made efforts to dissipate the information on delivery services available in the health facilities to the people of the community.

"The information is well circulated through FCHVs. In the monthly meetings of mothers groups and FCHVs, we go from health post and explain about the safe motherhood services. We also explain and counsel for Institutional delivery when they will come here for ANC services." [Gandaki_Rishing_KII]

c. Importance and value of institutional delivery

The health service provider further expressed their understanding that the fear of complications during delivery are factors that influence the importance that the people give to institutional delivery.

"One thing is that, if any complications arise, they will need to take the women to hospital so if they are brought to the health facility early, it gets easier. So, they come because of the concern for any dangers occurring to the mother and child." [Lumbini_Rambha_KII]

2. Family Support

The challenge created by an unsupportive husband and family was also mentioned by one of the service providers, as heard from the pregnant women of the area. The economic status and certain ethnic backgrounds acted as reasons for not visiting the health facility for delivery. The key informant also outlined that people's belief on having normal delivery made them not reach out to health facilities for the delivery. Along with that, the perception of getting complications while delivering at a health facility was also present in some places.

"Some elderly people, like mothers-in-law, advise against travelling to the hospital; they say births should be done at home, but the majority of them suggest going to the hospital for delivery." [Madhesh_Parsa_KII]

"The husbands of most women are staying abroad or outside in nearby cities for work and job opportunities. Thus, mother-in-law also supports home delivery saying we had also delivered in our own house." [Gandaki_Rishing_KII]

"Some people did not want to go to the hospital, because they believe that they can deliver a baby at home normally." [Madhesh_Parsa_KII]

"Few women believed that they would get complications if they delivered a baby at hospital."[Madhesh_Maulapur_KII]

3. Availability of services

The key informants explained the issue outlined by the participants in regard to the unavailability of services of the health facilities. They also expressed about the home delivery situation in areas with inadequate birthing centres.

"When there is cord prolapse, we can't do anything except referral; at least the mother will be safe even though the child isn't alive."[Sudurpaschim_Durgathali_KII]

"In ward number 9, there is no birthing centre. So, they have to visit the birthing centre of ward number 8. So, there was a case of home delivery in ward number 9 in the past year."[Sudurpaschim_Janaki_KII]

4. Accessibility to services of Institutional delivery

a. Distance and roadway to health facility

Key informants reported that the distance to the health facility was very far and located more than 3 hours walking distance from the village, which made it difficult to reach the health facility and access health care services.

"The birthing centre is very far from villages, which are located more than three hours walking distance." [Karnali_Junechande_KII]

"There is a problem with the roadway here. Also, it is difficult to get to this health post as well during rain…In rain the roads get inaccessible and it takes time to repair the road as well here."[Lumbini_Rambha_KII]

Key informants also said that they were requesting the respective authorities to construct a better roadway to the health facilities.

"We have been telling the authorities to make the road to the health post better. If they do it, that is fine, or else we bring them (pregnant women) even by carrying." [Lumbini_Rambha_KII]

The difficulty in accessing the health facilities resulted in people going farther from home to carry out the delivery. Moreover, in such situation, people chose to go to higher health centres in the city areas. This was found to be an important factor to result in low-recorded institutional deliveries in the former health facilities. Such observations were found in both the hilly and terai region.

"This section is an area where the road is not so good. And that's why they have a problem with transportation, so, coming here is difficult and visiting the health facility at Butwal is easier." [Lumbini_Tilottama_KII]

"The place where our health institution is located is a difficult place to find. We live in ward 10. For Ward 11-12 it is a bit far. So, the people of that area go to Devadaha." [Lumbini_Tilottama_KII]

b. Transportation services to health facility

Key informants talked about the unavailability of the vehicles to reach the health facilities. One added, even if the vehicle was available they did not provide service, which made it difficult to reach to the health facility. In addition, the vehicle move only after having sufficient passengers.

"*Sometimes the vehicles aren't available as there are no sufficient vehicles available here. There are one or two jeeps, and about the bus, it does not run at the time of need sometimes. There are the jeeps but it goes only if it has sufficient passengers. So, there are these issues for the people*." [Gandaki_Baudikali_KII]

5. Accessibility of services

The service provider discussed the challenges faced by the service seekers concerning food during their hospital stay. In addition, there would be days when the health facility could not provide the incentive on time because of budget issues.

"But one thing is that, there is no provision of food for the Sutkeri after delivery so it does become a problem. When there was an aunty, she would prepare the food and provide. She is from this very place and knows the people here and when she is not here, people bring the food from hotels that are present nearby." [Lumbini_Rambha_KII]

"Sometimes we cannot give incentive to the people when there is no budget here. Otherwise we usually give it in hand." [Lumbini_Tilottama_KII]

One of the key informants expressed the idea that incentive plays an important role in influencing the people to access services from the health facility. They also expressed the challenges present in ensuring regular supply of those benefit packages.

"Nowadays, the number of people coming to health institutions is due to incentive." [Lumbini_Tilottama_KII]

"We provide the travel cost and Nyano Jhola as an encouragement. From time to time, we provide the hen as nutrition from the agriculture section and from the health section; we provide fruits as nutrition and we also distribute the Shawl and Topi for warmth to the mothers during the time of delivery from our health facility." [Sudurpaschim_Janaki_KII]

"It has always been delayed from the section they do not provide in their hands. We ask the health section but they tell us it was not provided from the Palika. This time it was late because there is a new local government." [Sudurpaschim_Durgathali_KII]

"In our health institution, all the services were made available. There is a separate private place to conduct a safe and healthy delivery."[Province 1_Bansebung_KII]

6. Affordability to services of Institutional delivery

In addition to the expenses outlined by the service seekers, the service providers also mentioned the irrational cost that the people in the area had to bear to commute to the health facility.

"Earlier, there was no ambulance so the vehicle running in the village would take any sum of money and we would not know about that either." [Lumbini_Rambha_KII]

Key informants talked about the provision of the transportation services from the municipal level. He mentioned that the respective pregnant women would receive the money as the transportation cost, however, the amount of the money spent on the vehicle would be reimbursed only after the claim. He added that even the transportation cost was provided if a pregnant woman was referred from one health facility to another.

"If they come here and deliver here, they get a refund of the money that they have paid for the ambulance. If some complication arises and if they have to be referred as well, the Palika has said that it will provide the money for the travel. The Palika doesn't give the money right away and the people have to claim the money later and they get the money." [Lumbini_Rambha_KII]

"The Palika deducts 15 per cent and gives them the money. The people have not received the money for the past year; we will provide the money when the money comes to our institution." [Lumbini_Rambha_KII]

Though the institutional delivery services were free, participants had to pay for the other things such as food and clothes expenses during their stay in the hospital due to which they prefer home delivery rather than Institutional delivery. Key informants said that poorer people did not always receive health facilities services, as they had to pay for the video X-ray and other services.

"In some communities, of the western region like Rishidev, Gangai, and so on, there is still difficulty for giving them birth at a hospital due to financial conditions because, though the institutional delivery is free, they have to pay for other things such as food expenses and others during their stay at hospital." [Province1_Belbari_KII]

"Those who come here to seek services, sometimes mention that their families are not supportive. sometime they say that due to the weak financial situation, they could not come to have their video X-ray. They also need money for video X-rays. Sometimes they talk about how unsupportive their husband is." [Lumbini_Tilottama_KII]

"Those people with low economic status and those from the Dalit background sometimes do not come by themselves to do the delivery at the health facility." [Lumbini_Rambha_KII]

7. Satisfaction of people on the service providers for Institutional delivery

a. Service provision by service providers

A health worker believed that they have not provided proper and timely counselling to pregnant women for Institutional delivery.

"I believe it is due to insufficient counselling. We hardly ever attend mother's group meetings. Counselling would have been better if employees from here went there." [Madhesh_Maulapur_KII]

"They say that we provide the service here in a comfortable and homely manner. However, when they go to a health facility in the city, it is not the same and they face difficulty in sharing their problems there. They also request us to try our best to conduct the delivery in this place itself so they would not have to go to other centres. If they have to go to another health facility outside, they find it very disheartening." [Gandaki_Baudikali_KII]

The service provider explained that the patient flow determined the quality of service provided by them. In addition, when the service seekers were in limited numbers; they could provide good services.

"If the patient flow is low then we also can provide good service in less number of patients. Mainly, there are one or two patients so people are satisfied with services." [Lumbini_Tilottama_KII]

"In the case when the only SBA of the facility needs leave, the services are discontinued as we cannot perform and are not authorized as well. We are not even trained. So, we have to refer to other facilities in such cases." [Gandaki_Rishing_KII]

"At the current scenario, we don't have any manpower for running birth centres so it's primarily closed. Currently we do not have anyone here to run the birthing centre. We are in desperate need of doctors and nurses here." [Province 1_Magnsebung_KII]

"Mainly in the night time, there will be only one staff in your health facility. So, they prefer to go to the higher centre for their services as there will be more staff over there. In our birthing centre, the staffs that have night duty have to provide the services alone." [Sudurpaschim_Janaki_KII]

b. Counselling

Key informants expressed that they did make effort on their own. One of the informants expressed that the people chose to have the delivery at home irrespective of their counselling and there are those situations where the health workers cannot do anything more.

"Yes sir, they try to give birth at home, but no matter how much counselling they do, they don't agree to come here, even if it's difficult, no matter how much we remind them. Someone just called me and said they had a delivery at home, what can we do?" [Karnali_Junechande_KII]

Triangulation of desk review findings with qualitative findings on Institutional delivery

As per the progress report of health and population sector, 2021, the coverage of institutional delivery at the national level is 79.3%. Various factors are found to play role to decide the place of delivery in Nepal. Distance from the health care facility is one of the most important factors that act as a barrier to Institutional delivery. Similarly, rural areas are found to have lower prevalence of Institutional delivery

compared to urban areas. It was also found that access to information played an important role in deciding the place of delivery. Higher parity, educational status of the husband, decision-making power of women are also found to affect the place of delivery in Nepal.

To explore the factors affecting the institutional delivery in Nepal, study sites were selected considering the HMIS data as of 9 June 2022 on low coverage of institutional delivery (Annex 1). Regarding the low coverage of institutional delivery in the respective area, the stakeholders clarified that, people choose to conduct delivery in the higher centre away from the local area that has resulted in lower recorded Institutional delivery of that area. Such a statement is verified by comparing the HMIS data on coverage of Institutional delivery between, e.g. Rambha rural municipality, where institutional delivery stood at 14.3 per cent, and Tansen Municipality where Institutional delivery was 343.

Various factors were found to play role for the people to decide to conduct the delivery in the higher centre. Unavailability of USG services, skilled birth attendants at the local health facility, high chances of referral by the local level in case of any difficulty in normal delivery were some of the factors that influenced people to get to cities and in higher health facilities to conduct the delivery.

"The Mission Hospital and Prabas Hospital are nearby here and it somehow is differently located (Apahi) to the people of Pipaldanda so the people directly go to Tansen and prefer not to come here instead. In the past year, we had 9 deliveries, before that in the time of COVID-19, 15 deliveries. In this fiscal year, we have had only 1 delivery" [Lumbini_Rambha_KII]

"It seems that the reporting is not good. Because there are also people who are sitting with SBA in the private clinic. This is one of the reasons. There is also a hospital nearby so if people go there and get delivery that might not be recorded. It seems that the data of the deliveries at the hospital has not been done." [Lumbini_Tilottama__KII]

"This is one of the things we see in our context; people go to Lumbini Provincial Hospital, one to Devdah Medical College and another go to Bhairahawa Medical College." [Lumbini_Tilottama__KII]

Routine Child Immunization

In this section, the findings of the study are presented based on the objectives of the study such as:

1) Underlying causes of health-seeking behaviour of people for Routine Child Immunization
2) Perceptions of stakeholders and health care providers on health-seeking behaviour for Routine Child Immunization
3) Triangulation of the findings of desk review with the qualitative study on health-seeking behaviours for Routine Child Immunization

Underlying causes of health-seeking behaviour of people for Routine Child Immunization

Major themes along with their subthemes obtained after the analysis of data are presented below in Table 4.

Table 4: Major themes on Routine Child Immunization

SN	Major Themes	Sub-Themes
1.	Awareness on routine child immunization	a. Information on routine child immunization b. Source of information on routine child immunization c. Importance/value of routine child immunization
2.	Personal views and experiences	a. Medical/Health Issues b. Vaccine negligence c. Missed opportunity to get vaccinated d. Documentation issues
3.	Family Support	
4.	Social and meta norms influencing Routine Child Immunization	a. Social beliefs and practice b. Decision-making dynamics
5.	Availability of Routine Child Immunization services	a. Availability of vaccine products and services b. Infrastructure of health facility
6.	Accessibility to services of Routine Child Immunization sites	
7.	Affordability to services of Routine Child Immunization	a. Travel costs in routine child immunization b. Other expenses in routine child immunization
8.	Supportive management services	
9.	Satisfaction of people on the service providers for Routine Child Immunization	a. Service provision by service providers b. Counselling c. Behaviour of Health Worker

1. Awareness on Routine Child Immunization

a. Information on Routine Child Immunization

Some of the participants had the information in general, that children should be vaccinated. Participants were self-aware and took their children to the vaccination centre looking at the dates of vaccination in the calendar and vaccine card.

"No, I myself look on the calendar and vaccination card, and then I take my son for vaccination." [Madhesh_Maulapur_IDI 4]

"From the beginning, I knew about Routine Child Immunization even when my child was not yet born, by seeing other children get vaccinated." [Lumbini_Rambha_IDI 1]

However, majority of the participants were not aware regarding the vaccination; they did not even know where the vaccine was available. Even the participants living near the health facility were not aware of the child vaccination.

"I do not know about the different types of vaccine given to the babies."[Bagmati_Dakshinkali_IDI 1]

Case story of unvaccinated case of Routine Child Immunization of Bagmati Province

Participant was a 20-year-old lady married at the age of 19. She studied up to class six and was a homemaker. Her husband was not well educated and worked as a mason. Sharmila has one child of seven months.

The child had missed one vaccine. According to her, health workers provided only one vaccine instead of two, as the vaccine was not available in the health post. The health workers suggested her to visit next month for the remaining vaccine but she did not get time to visit the health post because she was shifted to her husband's house. No one told her about the missed vaccine. She also gets confused about where she can get her child vaccinated with a missed vaccine.

"No, I do not know about the health post being 30 minutes away from here. I have never been there and I am unaware of that. However, I once went 10 minutes from my home to do some traditional rituals to my child when he was sick. Otherwise I have never gone anywhere else alone." [Lumbini_Tilottama_IDI 3]

"She (child's mother) doesn't understand anything about it. She would take the child when I told her to take for the vaccination or else would not care about it. Some say she would not take the child at all." [Lumbini_Rambha_IDI 1]

Case story of unvaccinated case of Routine Child Immunization of Lumbini Province

The mother of the child was 31 years old. She married at 28 and had the child a year later. She is mentally unstable, along with her father, mother and married a person similar to her. She has three siblings who are mentally stable and doing well in their lives. The son working in the city managed the expenses of the family and another sister had taken the responsibility of child care. When she left the home after the marriage, the timely vaccination of the child was interrupted. The house was one storey, located some 10 meters up from the motor-able road that was gravelled. There was access to jeep and bus in the area, but they only ran every two or three hours. The house was 30 minutes' drive from the health post and the house of FCHV was at a distance of 30 minutes' walk. The FCHV was the maternal aunt of the respondent, which appeared as an asset to the service provision as she often visited the child's home to track vaccination.

"Actually we don't give much importance to child vaccination." [Lumbini_Tilottama_IDI 3]

"I don't know much about the vaccination; where it is given or when it is given. However, it is necessary to vaccinate children that I am aware of." [Lumbini_Tilottama_IDI 3]

"I don't know much. Immunization does better for the child. It prevents my child from diseases." [Province1_Mansebung_IDI 2]

For most of the participants, lack of understanding was found in regard to the diseases and conditions prevented by routine child immunization. They failed to express the benefits of the vaccine and could only say that the vaccine is important.

"I have no idea. I do not know which vaccine the baby has taken. Maybe the baby has only taken the first dose of the vaccine. The baby was also given the polio drops." [Province 1_Mansebung_IDI 1]

Unavailability of the information was the major barrier in seeking health care. That population who did not have adequate information regarding the need, importance, vaccination sites would not receive the vaccination services.

"We are living here little far from the health post and we do not know our FCHV well. She does not provide us information related to vaccination. She does not tell us if there are any changes on vaccination day or even the exact vaccination dates." [Bagmati_Khaniyabas_IDI 3]

"We are living in solitude. We do not get information when we are not in contact with FCHV." [Lumbini_Rambha_IDI 3]

Case story of unvaccinated case of Routine Child Immunization of Lumbini Province

The participant was a 24-year-old lady. She married at 15, gave birth to her first child at 17, and is now a mother to three children. She studied to class four and said that her husband is literate. She takes care of the home and children whereas the husband makes musical instruments and takes care of the farm they own.

When the child missed the vaccine, the area had no FCHVs. In addition, the mother's group had not been able to appoint an FCHV for around six months, which the health worker said was linked to political matters. There was only their house and it stood at the top of a hill. The thatched house was made of mud. We observed that they had problems with drinking water and had to go 30 minutes downhill to find a water source in the jungle. The house did not have electricity. The nearest house was 30 or more minutes on foot, making the home very isolated.

b. Source of information on Routine Child Immunization

The participants in general understood that children should be vaccinated. They had obtained such information from their family, friends and the health workers. In addition, media sources like television and internet were important sources of information that enabled some participants to learn about routine child vaccination. Some participants said that they learned about the child vaccination by seeing other children get vaccinated.

"FCHV sister says about immunization and vaccination time." [Madhesh_Maulapur_IDI 1]

"I discovered these things from television. Along with that, nowadays, it is all over the internet."[Lumbini_Tilottama_IDI 3]

"The doctor from across next to our village is there and he informs me. The FCHV is there and she will also inform us about the vaccination and vaccine day."[Karnali_Junechade_IDI 3]

In the case of brick factory, one of the participants expressed that they were in no contact with the health system or even the FCHVs. Such situation resulted into missed vaccination of their children.

"No FCHV or health care workers came here to the brick factory to tell us about the vaccine." [Lumbini_Tilottama_IDI 2]

c. Importance of Routine Child Immunization

The participants understood the importance of routine child immunization in different ways. They believed that the vaccines in general helped for the good health of their child. Participants were informed that children were at risk of different vaccine preventable diseases and vaccinating the child would protect them from different potential infections such as tuberculosis, diphtheria, poliomyelitis etc.

"*Infants are particularly vulnerable to infections; that is why it is important to protect them with immunization. Immunization help prevent the spread of disease and protect infants against dangerous disease and complications complications.*" [Province 1_Belabari_IDI 1]

"I do not know much about child vaccination. But, I heard that it prevents LAKAWA (Paralysis). After vaccination the child was not infected by any diseases immediately."[Madhesh_Parsa_IDI 1]

"I got to know that if your children are not vaccinated they might be crippled as well and they might get Tuberculosis along with other diseases." [Lumbini_Tilottama_IDI 1]

Participants also mentioned that vaccination is important to prevent their child from being disabled.

"Children get nutrition and the children won't be weak, they won't be disabled, I have known this much madam…Vaccinated children will be energetic, active, they will gain proper height, weight, they get all the nutritious value and they won't suffer from disease." [Sudurpaschim_Durgathali_IDI 4]

"It's not important but it is better if we get vaccinated." [Lumbini_Tilottama_IDI 1]

"After we immunize children, it might prevent disease while some children might also get disease. But my

child has been healthy. After immunization as well, no disease attacked him." [Karnali_Junechade_IDI 3]

2. Personal Views and experiences

a. Health Issues

Most participants with children said that they missed the vaccination of the children in the regular vaccination schedule due to the health issues of the babies, such as fever, cough and cold.

"In case of fever, the health worker says that taking vaccination during illness can cause difficulty. That's why we didn't take the child for vaccination." [Karnali_Barahataal_IDI 3]

Case story of unvaccinated case of Routine Child Immunization of Karnali Province

This Dalit lady was 22 years old. She was married at 18 and became pregnant a year later. There are four members in their family, including two children. The youngest was one-year-old. She told us that the child would be protected from other diseases after receiving the vaccine. Therefore, we must provide the vaccine in order to avoid disease. There was a regular activity of Routine Child Immunization, but she had missed one dose of measles vaccine. She had good knowledge of vaccination schedules. She had not paid for vaccination. On vaccination day, her child had suffered from fever and she had also suggested that it might be severe after vaccination. So, she did not go to the vaccination centre for immunization. The health post was far from her house; it took one to one and half to reach by walking. The road to the health facility was gravelled but there was no public vehicle facility. In the summer season; they used vehicles and they take Rs. 50 from their home. She used to go to the health facility with her friends. Normally, they lost seven hundred, when they go to a health facility for vaccination. She agreed that there are toilets but water supply is not available. She also added that few people had returned from the health facility without receiving a vaccine. She recommended that the health facility should be closer to our home to access the health services in the proper manner.

"The child always gets sick and needs to take medicine. So, we did not take him for vaccination. He is too weak. There is fever, sometimes diarrhoea and cold. It happens frequently. He keeps getting sick when the vaccination date is near. So, the health workers did not vaccinate the sick child even if we went there." [Sudurpaschim_Janaki_IDI 3]

"I sent my husband to ask Laxmi sister (FCHV). She called the health post and they said if the baby has fever, the vaccine cannot be given and they called us in the coming month."[Lumbini_Tilottama_IDI 4]

b. Vaccine negligence

Although vaccines are life saving tools, most participants had not internalized the importance of getting their children vaccinated. They were found to be negligent towards vaccination considering their lack of seriousness about the child's vaccination. Participants expressed that they were busy with their own work and could not make free time to take their child for vaccination. Also, participants expressed that they could not vaccinate their child as the vaccine would make their baby cry of pain during injection.

"She happened to have some quarrel with her husband. The son said something and to show attitude, the daughter-in-law stayed some extra days at her maternal home and the vaccine got missed here. Such a thing also happened one time."[Gandaki_Bungdikali_IDI 1]

"I knew about the vaccination but I thought the vaccinated child would cry. So, I would vaccinate him after completion of the bank's work." [Lumbini_Rambha_IDI 3]

"They (participant's husband and family members) do say that vaccines should be given to the child, but they are always busy with their work so they can't manage time for it. It's like he (the husband) doesn't think it's a priority." [Lumbini_Tilottama_IDI 3]

"He (husband) never has free time. He is very busy with his own work and always goes to work so that is

also a reason for us not taking the baby for vaccination." [Lumbini_Tilottama_IDI 3]

c. Missed vaccination opportunity

Most participants said that they missed the vaccination opportunity because of the unavailability of vaccine in the vaccination centre. In addition, the practice of not vaccinating a single child until the availability of a fixed number of children to open the vial resulted into delayed and eventually missed vaccination of some children.

"At first, I went to my native home so I missed the vaccination of my child but after returning from there, I went to the health facility to vaccinate my child but the vaccine had already been finished so I could not vaccinate my child." [Madhesh_Maulapur_IDI 1]

Story of unvaccinated case on Routine Child Immunization from Lumbini Province

The participant was a 20-year-old Muslim lady. She married at 14 and had her first child at 15. She currently has two children. She lives with her husband and children in the brick factory and also works there with her husband, while her elder daughter takes care of the younger child. They initially worked in Gorkha and from there moved to a brick factory in Sainamaina and then to the currently working brick factory. While working at Gorkha they had missed their elder child's vaccination because of frequent mobility. In the case of their younger child, they did not know about the vaccination venue as it had been running for just seven months.

The samara health post is a 15-minute drive by auto. The road was gravelled and the availability of auto was not on a regular basis and they had to be reserved for the commute. The brick factory was placed at a somewhat isolated location so the house of FCHV was not nearby.

"They said only one baby is available so they cannot vaccinate, and that they could vaccinate only if there are two or three babies. They told us to go back home and then come to the health post some other day so we did that." [Lumbini_Tilottama_IDI 4]

Some participants reported that they missed their opportunity due to the change in the vaccination schedule and their temporary location. Also, when the participants were not at home when the health workers visited them to notify about the next vaccination day, participants ended up missing their child's vaccine.

"My sister passed away, I needed to go back home (pahad). I forgot to take my child's vaccination card; hence it was missed." [Sudurpaschim_Janaki_IDI 1]

"I didn't vaccinate my daughter at the 15th month because we were in Gorkha at that time. And there was no vaccination centre nearby." [Lumbini_Tilottama_IDI 2]

"I know the day and date but the schedule was changed in the previous month. They changed the schedule to 16 instead of 18. So, I went at 18 and they said immunization was conducted at 16. Thus, I missed my child's vaccination." [Lumbini_Rambha_IDI 1]

"I used to live in my native home in Dailekh. I got my child vaccinated there. Here, they give vaccination on the fifth of every month. I did not have time to go there to get the vaccination. So, I told them to give it here but they said I have to go to the same place where I was taking the vaccine for children. They said we can't get it here so we didn't take the vaccine."[Karnali_Barahatal_IDI 2]

"*We did not get information about the vaccination day because the health workers visit to inform about vaccination after 10 AM. That time many mothers have gone to the farm or somewhere else.*" [Madhesh_Maulapur_IDI 1]

d. Documentation Issues

The loss of immunization cards was also the barrier to seeking routine child immunization services.

Similarly, when the vaccination card was torn, people felt reluctant to go for vaccination because of the fear of being scolded by the service providers.

"I had made an immunization card from Parsa Health Post and I had lost it at my home. After that when I went to my mother's home; I tried to make another card but they told me that they could not issue a new card there. It should be made only in that place where it was issued for the first time. And I also ignored it." [Madhesh_Parsa_IDI 1]

Story of unvaccinated case on Routine Child Immunization from Madhesh Province

This 24-year-old lady with two children lives in a single family. She married at 15 and had her first baby at 17. Her youngest child is about 22 months old.

Six to seven years ago, she had to pay Rs.5 for a card. She said that she had gone to her maita (mother's home) and forgot to carry the immunization card with her. In her maita, a health worker did vaccinate her child without checking her baby's card. So, she missed immunizing her child for measles. The vaccination centre is near her home. It is a five to ten minutes walk from her home. The road was pitched and there are no problems with transport. However, she has seen that sometimes vaccines were not available in health posts.

"I (grandmother) used to take the elder granddaughters but in the case of this grandson, his mother used to take him for vaccination for 2/3 times and then after, it just stopped as the vaccination card got torn." [Gandaki_Baudikali_IDI 1]

"I had kept it in place but flood took it and I lost it. Lack of identity card and birth certificate is also the reason behind getting my child unvaccinated." [Lumbini_Tilottama_IDI 3]

In addition, in a case, even after the loss of vaccination card, a participant went to get the child vaccinated but was asked to make payment for the card. Being unable to afford the cost, the child had to remain unvaccinated.

"I had lost the Immunization card and went to the health centre, but they did not give the vaccine to my child. They said that they would issue a new Immunization card to continue immunization. They also said I would need to pay Rs.500 for a new Immunization card which I could not afford to pay." [Karnali_Junechade_IDI 3]

Story of unvaccinated case on routine child immunization from Karnali Province

The child's mother was 21 years old. She married at 18. She said immunization keeps our child healthy and prevents illness/disease. However, she lost her immunization card (laughing as she says this).

When she had no card, she could not immunize her child. She had felt that they would provide vaccine to my child. However, they would not, saying, "*I would not administer a vaccine to that child whose vaccination card had been lost*." Later she returned. After that, they did not give a new card to her. In spite of that, they said it would cost Rs. 500 for a new card. She had decided to not visit the vaccination centre without a card and said that Rs. 500 was a lot of money for her.

The FCHV informed the local people about vaccination day and the FCHV's house was near her home, which is a 15-minute walk away.

3. Family Support

Most participants said that they were supported by their family members, including their in-laws and husband, in the decision to vaccinate their children and also, took the children to vaccination centers at the time of vaccination.

"Usually, I take my child to the health centre and even if I am not there, my mother-in-law takes my child to the health centre." [Madhesh_Maulapur_IDI 1]

"My brother-in-law or my mother-in-law will go with me to vaccinate the baby." [Lumbini_Tilottama_IDI 1]

"I used to send the child with my father…I am afraid of the vaccine. When my son was 15 months old, I kept him in my lap and got him vaccinated. That was my first time."[Lumbini_Rambha_IDI 4]

"Whoever gets free, he/she goes to the immunization centre to vaccinate a child. Sometimes, my mother-in-law assists me to go to the vaccination centre for vaccination." [Karnali_Badichaur_IDI 1]

Participants talked about the relationship dynamics between daughter-in-law and mother-in-law that could make it uncomfortable for the younger woman to ask the mother-in-law to accompany her to the child's vaccination. One said she knew very little about routine child immunization in the case of a first child and that she did not get advice from husband or mother-in-law about the child's vaccination.

"I didn't ask my mother-in-law to accompany me for my child's vaccination because she might get irritated."[Lumbini_Tilottama_IDI 4]

"There was no one to accompany me. My mother-in-law was in Junichade and I was in Surkhet. So, no one was there to take the child to the health facility." [Karnali_Junichade_IDI 2]

In one case, mental illness in the entire family of the participant resulted in the child not being vaccinated. In addition, when the guardian who took care of the child left the family, this resulted in an extended period without vaccination of the child. It was also found that due to the father's ill health, the opportunity to vaccinate the child was missed.

"He (baby's father) also had some mental health issues. He would not take responsibility for the baby and family. Both the mother and father of this baby happened to be of similar kind. If one of them was sane, things would have worked out but both of them happened to be the same."[Lumbini_Rambha_IDI 3]

"My husband was in India. While being there, he fell from the tree and both of his legs were fractured. We managed the loan and went to Surkhet for his treatment. Due to this reason the child's vaccination was missed." [Karnali_Junichande_IDI 1]

Story of unvaccinated case on Routine Child Immunization from Karnali Province

She had married at 18 and was not educated. She had little knowledge about routine child immunization.

At vaccination time, her husband was working in India. While being there, he fell from a tree and both legs were fractured. They managed the loan and went to Surkhet for his treatment. Due to this reason, the child's vaccination was missed. She had to take this breast feeding child with her and she became unable to think about the child's vaccination. She had ignored going to the vaccination centre because she used to know when was the time for vaccination and used to take herself.

She added that the child vaccination was not any big concern (still taking the child's vaccination to be a minor issue in front of the accident her husband had). The health facility and vaccination centre were just nearby her home and FCHVs home was within 10 minutes of walking distance.

4. Social and meta-norms influencing Routine Child Immunization

a. Social beliefs and practices

About the community value in routine child immunization, participants said that they had heard some people talking against the need for vaccination. Such negative perception about vaccination was more prevalent in the old aged people.

"There was an old lady around my in-law's place. She had mentioned that her son was not vaccinated and there is no need to give the vaccine. My mother-in-law would yell at her saying that such things should not be said in the time like today. Such talks had happened when she had come to see my child. Her children had all grown up, without taking the vaccine."[Gandaki_Baudikali_IDI 4]

"Some say we should get it (the vaccines), some say we should not. They are some people who say such things. They say such things because vaccines cause fever."[Lumbini_Tilottama_IDI 2]

"She even said that people in the old times did not vaccinate and despite that they did survive and not die. So, nothing would happen to the child as well if not vaccinated."[Gandaki_Baudikali_IDI 1]

b. Decision-making dynamics

Participants mentioned that the relationship dynamics between the husband and wife resulted in missed vaccination of the baby. Also, when the parents of the child are young in addition to being less educated, the decision making for vaccination of the child gets affected.

"They haven't studied much and neither do they have the understanding of a mature level. Either those who have studied understand well or the ones who have experienced life. They have neither studied nor understood life. This is an age of carelessness (allarey para)." [Gandaki_Bungdikali_IDI 2]

"I have never travelled alone anywhere except to my work so I can't go alone to vaccinate my child." [Lumbini_Tilottama_IDI 1]

While in some cases, the mother of the child was found to be very conscious regarding the vaccination of her baby and also did make the decision by herself for the vaccination.

"I make the decisions regarding the immunization of the child. I usually took my child to the vaccination centre for vaccination on the day of vaccination."[Province 1_Mansebung_IDI 2]

5. Availability of services of Routine Child Immunization

a. Availability of vaccine product and services

There were some instances regarding the requirement of visiting the health facility for multiple times because of the unavailability of vaccines on the scheduled day.

"Yeah, many times I had faced such a situation and was told to come back the next day. One of my grand-daughter has received half of the vaccine and said they will administer it in the next schedule but they have not completed that vaccine yet." [Madhesh_Maulapur_IDI 3]

Story of unvaccinated case on routine child immunization from Madhesh Province

A 24-year-old lady, a resident of Maulapur Municipality in Rautahat, has two children. She has been married for three years and delivered one child two years ago. Her youngest child is one-year-old. She is a Hindu. Regarding routine child immunization, she said that immunization is beneficial for children; it protects children from many diseases. It also helps a child to be strong and healthy. In her village, FCHVs promoted vaccination and vaccine venues. Her youngest child has had three vaccinations. However, the child missed measles vaccine. At the third vaccination, a health worker told her that the vaccines were finished when she reached the vaccination center. One month later, on her fourth visit, an FCHV told her about the vaccination, but she was not available at home. So, she missed the measles vaccine for her youngest child. She wanted to fully immunize her youngest child. Her niece had carried the child to hospital for immunization.

In her society, there were not any social restrictions for child vaccination. In spite of that, she had faced many administrative problems to receive a vaccine for her child because she had delivered her child in her maita (house of mother). At her first visit to the vaccination centre in Maulapur, the health worker suggested to visit her maita (house of mother) for vaccination. Therefore, she went to her maita to receive the first dose of vaccine for her child. After that she brought a child immunization card from her maita. For the second dose, she went to her local vaccination centre in Maulapur Municipality, near a temple. Once, she left the vaccination centre without being vaccinated. She said that her child was delivered at her maita and stayed there for one month after delivery. She said that to solve this type of administrative problem, a doctor should ask another doctor before giving a vaccine and after confirmation of the birth of the child; a new card should be issued.

"During this time my children didn't get the vaccine, FCHVs told me that the vaccine isn't available and it will be administered next time. Madam told me that the vaccine was out of stock at that time and it would be administered next month and I returned." [Sudurpaschim_Durgathali_IDI 4]

Many participants said that they could not get their child vaccinated with BCG immediately after birth because of the issues in opening a vaccine vial just for one child, as mentioned by the service provider. Because of that, additional visits to the health facility were required.

"They have the system of vaccinating the baby with BCG immediately in the areas of Kathmandu and cities but in the villages, they do not do such things. They vaccinate only on the specified days for the vaccination every month. So, I had to wait for 18 days to get the vaccine. Since it was my first child, I was scared as well." [Gandaki_Baudikali_IDI 4]

"They said that all the children should be grouped together, otherwise only one child would not be vaccinated (with BCG)."[Lumbini_Rambha_IDI 3]

Story of unvaccinated case on Routine Child Immunization from Sudurpaschim Province

The participant is a 23-year-old Tharu lady. She married at 20 and had her first child at 21. She studied to primary level and now looks after her house and child along with the farm and cattle. Her husband had studied to secondary level and works in India. She lives in a family with her in-laws and her child.

The baby had taken only some vaccines previously and missed some vaccines. The participant said that the baby was weak and often fell sick. While they had vaccinated the child in the past, the child would develop nodules at the site of vaccination. To that, the health worker would suggest cold compression but the nodule would persist for approximately a week. Later in the course of time as well, the baby would fall sick around the time of vaccination, thus the health workers would suggest not vaccinating the child. As a result, multiple doses of vaccines had been missed from the schedule of routine child immunization. The parents had accepted the fact of missing the child's vaccination on the ground of their baby's weak health.

The FCHV's house was right in front of the participant's house. The health institution was 15 minutes away from her house.

b. Infrastructure of health facility

The participants said that they did not have much difficulty concerning the infrastructure present at the vaccination sites. However, some of the participants mentioned about not having a place for breast feeding the baby. Another participant expressed that they did not have a waiting room while they accessed the health facility for the vaccination of their child.

"There are other places to stay either up or down even when there is sun or if it is raining."[Lumbini_ Rambha_IDI 4]

"There are no specific places to breastfeed the baby...He wants to drink only in bed...I get sad because we need a bed to feed him and even if he is hungry he won't drink." [Lumbini_Tilottama_IDI 4]

"There is nothing good, there is no place to even sit, the hospital is big but the system providing service inside is not good. There is always a lot of queue." [Madhesh_Maulapur_IDI 4]

6. Accessibility to services of Routine Child ImmunizationSites

Majority of the participants mentioned that the vaccination center was within 30 minutes of walk from their residence. Likewise, there was the availability of transportation facilities as well except at certain places.

"There is no road difficulty and there is also the access of auto and for some people who have their own vehicle they can reach through bikes." [Province 1_Belbari_IDI 1]

"No…the immunization centre is not so far…auto is easily available and it easily reaches the hospital." [Lumbini_Rambha_IDI 1]

"There is no public vehicle facility; so, most of the time we need to walk from here to the immunization centre carrying our child on the back. It takes about an hour to reach the health post at Baddichaur." [Karnali_Badichaur_IDI 1]

"The main problem is lack of proper transportation facilities; we have to walk to reach the immunization service centre…Sometimes, I don't even have transportation costs. During that time, it is difficult to walk over in the scorching sunlight, and when I would have managed the transportation cost, the vehicle would not be available in time." [Sudurpaschim_Durgathali_IDI 4]

Story of unvaccinated case on Routine Child Immunization from Bagamti Province

The participant was 23 years old lady, married at 19 and had her first child at 20. Her husband works as a missionary near the village. They both are not well educated. She has two children.

She said that she did not know about vaccines. She didn't know the types of vaccine given to her child, but knew that RCI was good for her child's health. She said that health workers and FCHVs were the source of information about immunization.

She said that her child has missed one dose of vaccine because she forgot the date even though she was well informed by the FCHVs and health workers. However, the FCHV told her the date of vaccination but she was busy with her work and her family members were also busy so she did not go.

7. Affordability to services of Routine Child Immunization

a. Travel costs

There is the fixed date and day of vaccination for the immunization of children in each health facilities. Besides, there is the provision of the vaccination through out reach session to reach hard to reach population. Hence, travel cost was not found to be the specific barrier for the participant.

"There is no restriction to go to the hospital. I do not need to pay for transportation." [Madhesh_ Maulapur_IDI 4]

"I didn't have a financial problem to vaccinate my children. There is a vaccination centre near everyone, so there should not be such a problem." [Gandaki_Rishing_IDI 4]

"No transport cost required. It doesn't take more time and you do not have to pay extra charges for foods and stuff nearby health posts." [Karnali_Barhatal_IDI 4]

b. Other expenses for Routine Child Immunization

Participants expressed that they did not have to pay for the vaccination as it was provided free of cost at the vaccination centre, however, the income of the day would be lost as they have to spend a whole day while going for vaccination.

"I did not have to face such financial problems, I can reach the vaccination centre on foot and the vaccination services are also free of cost. So the financial issues do not matter to me much." [Koshi Province_Mansebung_IDI 1]

"*Because of the work and there being no holiday, we have not been able to go to get our child vaccinated.*"[Lumbini_Tilottama_IDI 1]

8. Supportive management services

One of the participants mentioned that they needed to wait for long hours when they went for the vaccination of the children and that there were limited service providers available. The key informant also expressed the public desire to have the vaccination centre in nearby locations. The participants mentioned that the management of vaccination services was better in the hilly region when compared to that of Terai. While there would be crowds in the Terai, it affected the quality of service delivery but the services provided in the hilly region was claimed to be better.

"No, there is no seat arrangement made. We have to stand and wait in the sun which really is a difficult part." [Koshi Province_Belbari_IDI 1]

"The condition of the toilet is good and the cleanliness is maintained in the health post." [Koshi Province _Belbari_IDI 1]

"The health institution is good, well-managed, toilets are also clean, pure drinking water is available, health services are provided in time, but sometimes medicine is not available." [Koshi Province_ Mansebung_IDI 1]

"They sit in chairs and if not, some have to stand as well. People had to wait in the outer area under the sun for a long time then. They face so many difficulties but it is organized now. They do not have to go through such problems when the municipal hospital has been established. People used to lament a lot back then. They used to complain saying there's no place to sit for like 400 people. There was no place to take shade when it rained." [Koshi Province_ Belbari_IDI 4]

"Due to the crowd, we have to wait for the services at Parasi but here we do not have to. I think it is far better here than in Parasi. In rural areas, it is better and they provide more facilities than in urban areas. For child vaccination I think here in rural areas it is better than urban." [Lumbini_Rambha_IDI 1]

9. Satisfaction of people on the service providers for Routine Child Immunization

a. Satisfaction of people

Study participants were found to be dissatisfied with the service providers as they could not make visits to the households to identify the missed cases of child vaccination, nor could they inform different other possible days of vaccination.

"I was dissatisfied with the health care workers as if one time the vaccine is missed then there is no tradition of asking and providing the vaccine to the baby at that time. She shared that they have to ask about it at the health post and share about the problem there and I did not go again." [Koshi Province 1_Mansebung_IDI 2]

Story of unvaccinated case on Routine Child Immunization from Koshi Province

Saraswati [Name changed] was just 19 years old and lived in Sano Pawa. She left her home and her 15-month-old baby in the village with the baby's grandmother and grandfather. She had already been married for three times and this time she has left the home to marry the next man. According to the villagers, she was mentally unstable and carefree. People also said that she was beaten by her father and scolded by her big brother because of her behaviour. Her father is alcoholic and very old.

While asking with Saraswati's mother about Saraswati; she replied that she had no idea why Saraswati left her home and said that son-in-law (Saraswati's husband) was also very carefree. Saraswati's grandmother said that she was unable to take the baby to the health centre or the vaccination centre, because she was weak as she was already 60 years old. However, she said that her daughter used take the baby to the vaccination centre when she was at home. The grandmother knew about the importance of the vaccination for the baby.

b. Service provision by service providers

FCHV played a very important role in the service provision for routine child immunization. They were the major source of information for the vaccination days and other required information related to child vaccination, their absence was a barrier to information and subsequent vaccination in the case of one of the participants.

"We don't have FCHV in this village of Humin and it has been a year." [Lumbini_Rambha_IDI 3]

"No one (health worker) has ever come to the doorsteps. If they had, I would have gone to hospitals to get vaccinations." [Lumbini_Tilottama_IDI 3]

Familiarity with the FCHV and other health service providers was taken as an advantage by the participants to receive the immunization services for their children. This was claimed to influence the quality of service provided while at the visit for routine immunization.

"Yes, it was easy when I knew FCHV. I called her, who is also my sister-in-law, to enquire about the vaccination of my child. She said that I could go and receive the vaccination so I came here for the childs vaccination." [Lumbini_Rambha_IDI 1]

I keep on visiting so they know us well. They take our cards and weigh our babies. [Lumbini_Rambha_IDI 4]

"I have been living here for 9 years and I don't know who the female community health volunteer in this ward is. Polio (She wants to talk about Vit A), Anti Worm infestation medicine (Albendazole) is known from the internet, Tiktok, Routine immunization service is conducted on the 10th of every month."[Koshi Province_Belbari_IDI 4]

c. Counselling

Many participants said that they were not provided with information on routine child immunization after they had delivered. Participants from the brick factory further said that no health workers visited them to counsel on their child's vaccination at any time.

"At Parasi there is so much crowd so they are busy and didn't explain well (about the child's vaccination)." [Lumbini_Rambha_IDI 1]

Story of unvaccinated case on Routine Child Immunization from Lumbini Province

The participant was a 28 year-old female. She married at 26 and had her first child at 27. She lived in an extended family with her in-laws, husband and children in Parasi. She had received immunization at Parasi and also at Humin.

She said that she was not satisfied with the service provision at Parasi because of the behaviour of service providers and the crowd of the people at the service centre. She had missed the vaccination because of changes in the vaccine schedule, which she was not told about. She also said that there is less acquaintance with the FCHV in the terai but in the hills, there is more familiarity with the FCHV, which helps in getting regular information about the vaccination schedules.

The participant's house was 30 minutes' drive from the health post and the house of FCHV was at a distance of 20 minutes of walking distance.

"The health workers did not teach us about the next schedule of vaccination and the vaccination centre for the next visit. After vaccinating the child, they sent us back to our home without telling us anything about vaccine effect and next dose."[Madhesh_Parsa_IDI 1]

"The sister did not tell me anything like that about the importance of vaccines or the use of the vaccination card. They do not do such activities of counselling about the baby even if I have been there 5-6 times. I do things by my own knowledge." [Gandaki_Baudikali_IDI 4]

"They didn't say about the child immunization…it was the time of Dashain festival, the staff were there but were not so good." [Lumbini_Rambha_IDI 1]

"No, the doctors did not give any dates to come back after the delivery of the baby."[Lumbini_Tilottama_IDI 1]

Story of unvaccinated case on routine child immunization from Lumbini Province

The participant was a 21-year-old female, who married at 17 years and had her first child at 19. She lives with her mother-in-law, brother-in-law, husband and children.

The area had about 150 houses. Some of the houses were made of mud and had thatched roofs whereas some houses were pakki made of cement and bricks. The road was muddy and at some places had sewage draining over the road. The area had a number of kids that were seen playing on the road. The area was inhabited by Harijan, Lodh, Tharu and Yadav people.

The village was on the bank of Rohini river. The distance of the health post was around 40 minutes of auto drive and the road was gravelled. However, the EPI clinic was at Thathariya located some 15 minutes' walk away. The house of FCHV was a five-minute walk away.

The FCHV had provided the information about vaccination to the family members. They went for the vaccination on Friday and on reaching there, the service providers asked them to come on the next day. However, they assumed that the vaccination program does not run on the weekends, thus, chose not to go to the health facility. When they went for the vaccination on Sunday, they were told that the vaccination session had closed. Thus, due to miscommunication, the vaccination of the child had been missed. After that, the family did not give much priority to the child's vaccination.

"As in India the people (health workers) used to come and also, some would insist us to get vaccination but here, no one has ever come to deliver such information." [Lumbini_Tilottama_IDI 3]

"No. We didn't ask and they also didn't explain to us about the importance of vaccines."[Lumbini_Tilottama_IDI 4]

Participants also said that the health workers played an important role in notifying communities about follow-up vaccination days. They said that the health workers followed up to confirm if the child had been vaccinated. However, counselling on the procedure and diseases against which the vaccines are used was not provided. Such aspects were further exaggerated in crowded service centres.

"The health care workers used to tell themselves about the routine immunization and also call us, as they had our number and ask if we had got the vaccine or not." [Lumbini_Rambha_IDI 4]

"Yes, the health workers do remind us of the next vaccination. They also say that the child's weight should be measured regularly. But at my home (in Parasi), they didn't explain it well." [Lumbini_Rambha_IDI 1]

"I haven't asked the health worker about my baby's vaccination. There will be crowd and babies shouting. I have never asked and they too don't say anything."[Lumbini_Tilottama_IDI 4]

"Yes, they would tell me about the next vaccination date for the baby. While I went for the vaccination of other kids, they would do that."[Gandaki_Baudikali_IDI 1]

a. Behaviour of Health Worker

The attitude and behaviour of the health workers played a vital role in health-seeking behaviour for routine child immunization. Participants expressed that, health workers spent their time talking with each other making their visitors wait for a long period.

"The behaviour of health care providers was not that good there. They used to make us wait. Because of many babies, they used to get nervous. So, we also got nervous because of them. Once, I went with my son, sisters came late and it was too hot too. They were talking inside but we had to wait outside." [Lumbini_Rambha_IDI 4]

Diagram showing the barriers and facilitators of Routine Child Immunization

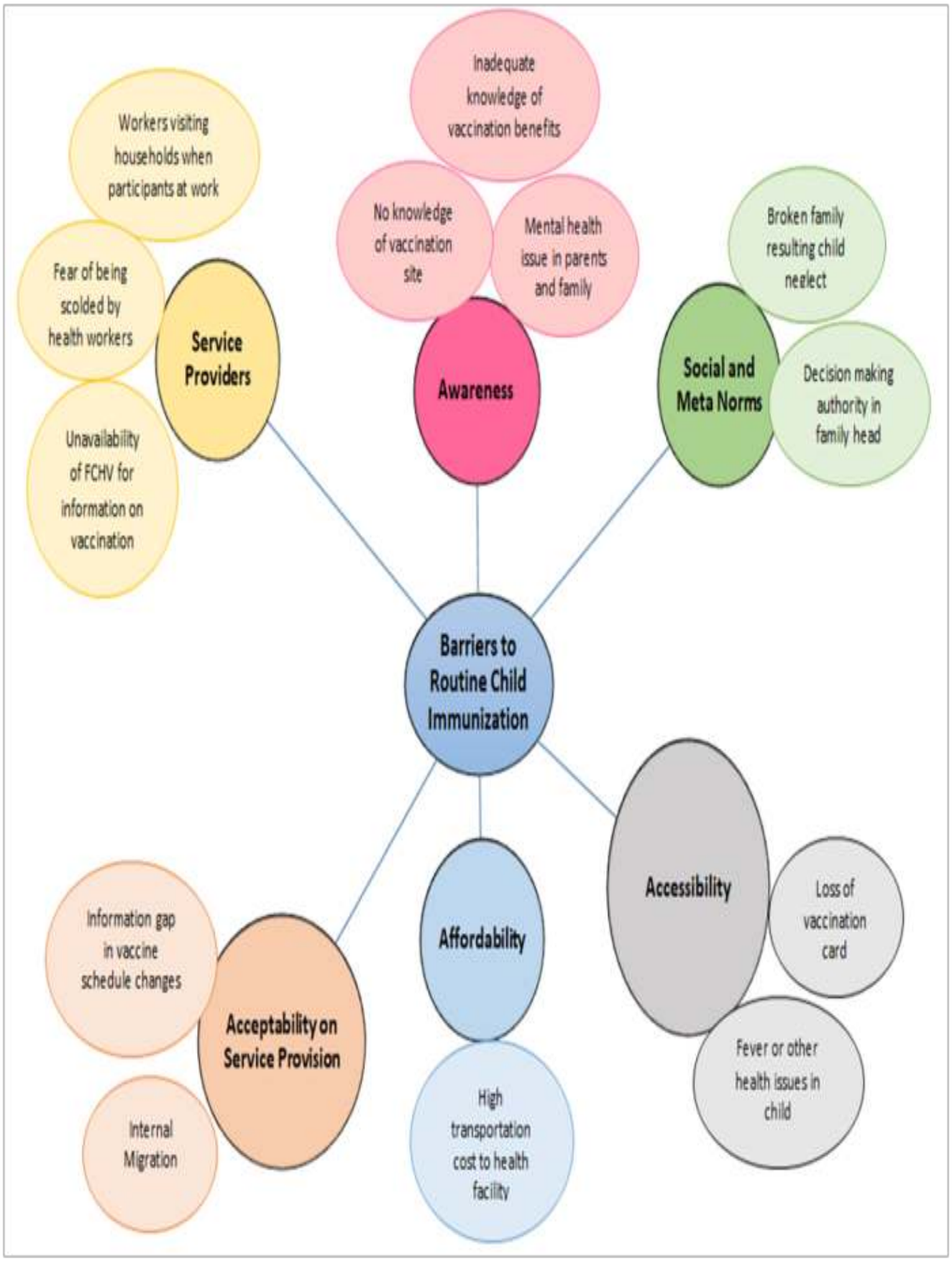

Figure 5: Barriers to Routine Child Immunization, Nepal

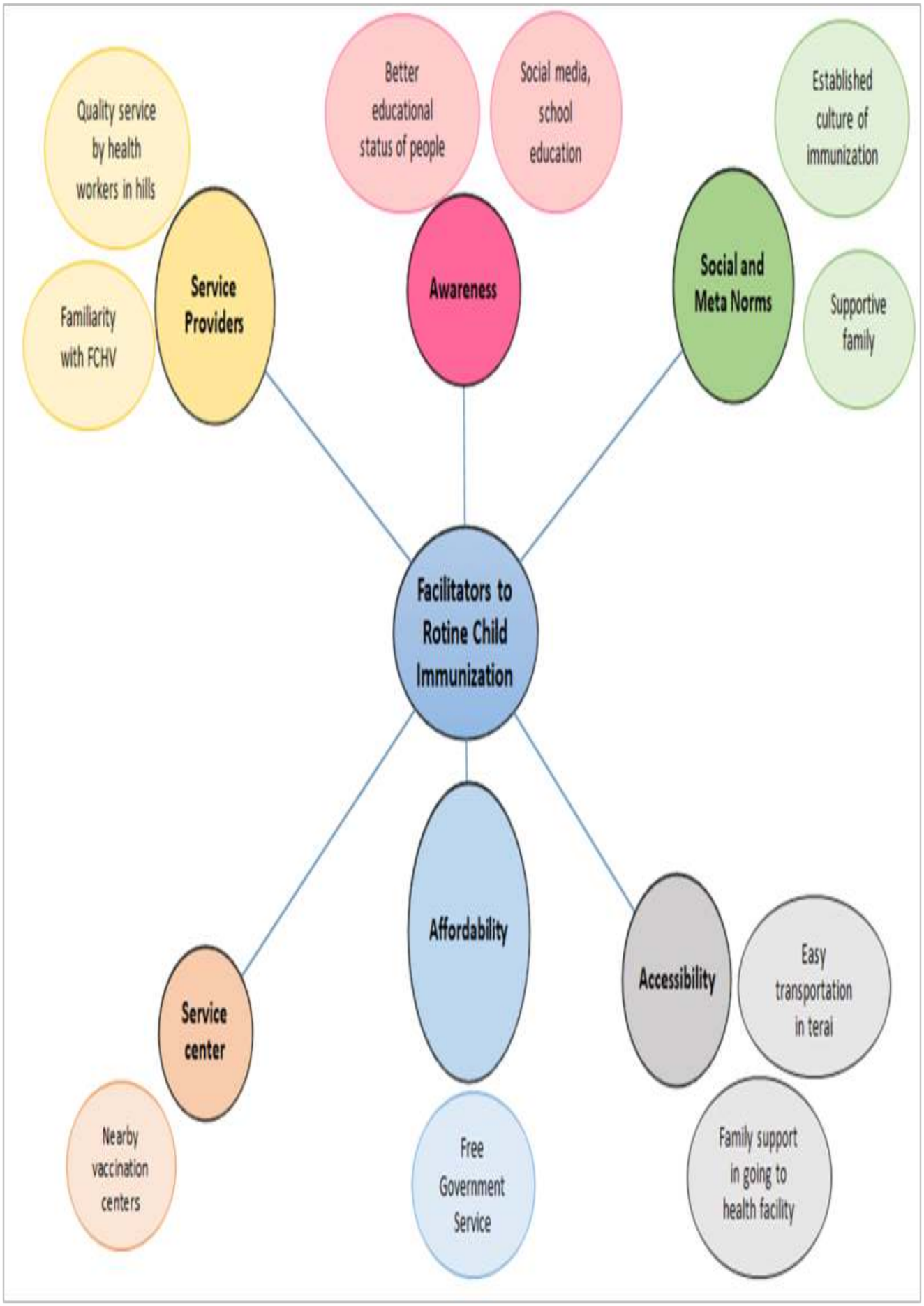

Figure 6: Facilitators to Routine Child Immunization, Nepal

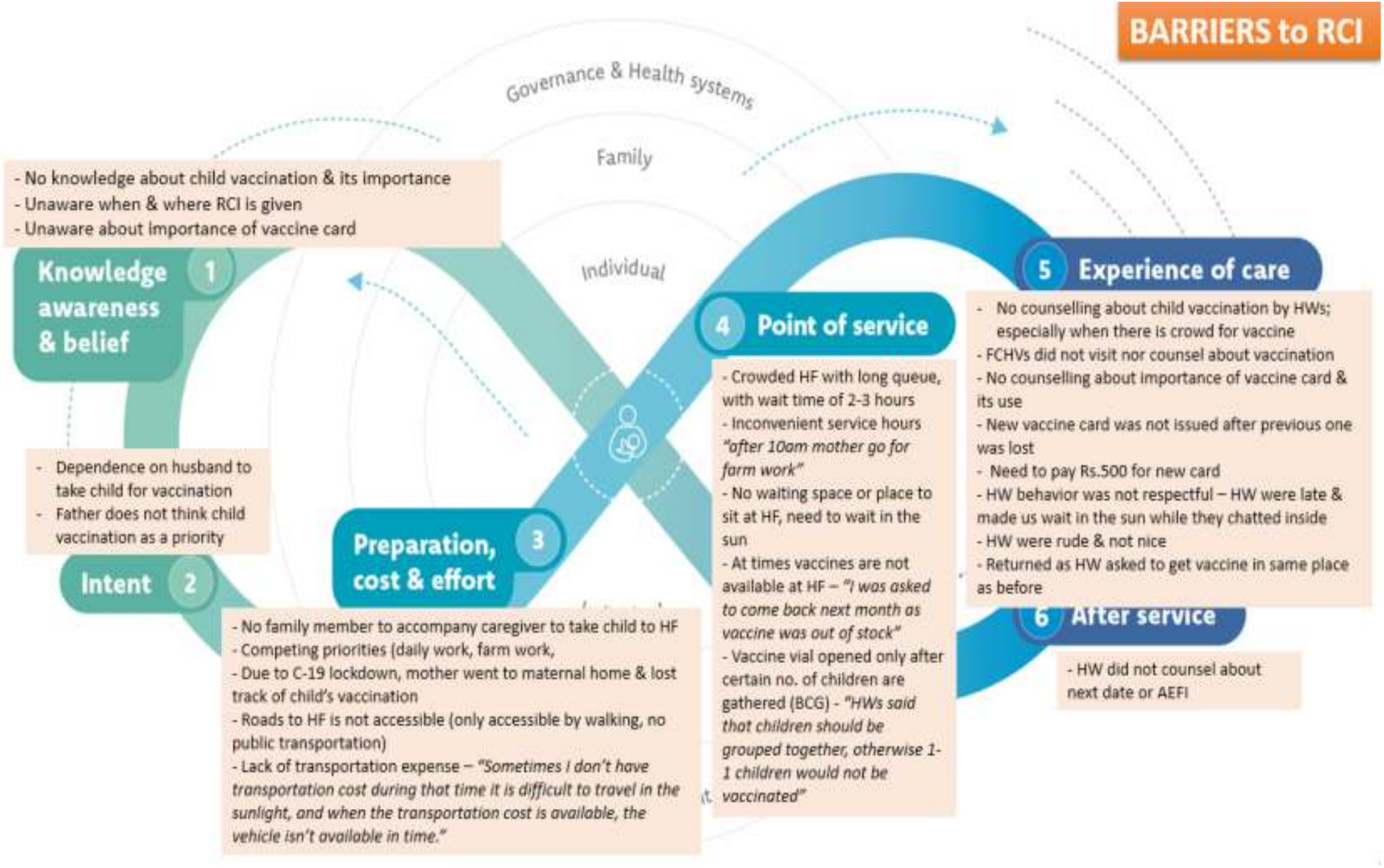

Figure 7: Journey to Health for Routine Child Immunization

Perception of stakeholders

Perception of stakeholders and health care providers on health-seeking behaviours on Routine Child Immunization

1. Awareness on Routine Child Immunization

A key informant reported that people are now better informed about health services and routine child immunization from public awareness programmes. They said that in addition to the knowledge that people already have in regard to routine child immunization, there was the mobilization of health workers and especially the FCHVs to inform the public about vaccination services.

"Also, even we health workers, health volunteers, inform about vaccines in the vaccination program, health awareness program, when we go to the community. Therefore, it should be said that the awareness about vaccination among people has increased positively. There is good understanding." [Gandaki__ Bungdikali_KII]

"Parents are not as ignorant as before. From mobilizing mothers' groups in the communities, to convincing the mothers of the golden 1000 days, especially to the youth, the programmes of public awareness programs are going on continuously." [Lumbini_Rambha_KII]

Key informants said the members of *Aama Samuha* (mothers group) were a means of communication to provide information to the villagers.

"This is not the new programme. This has been done since ages. We also provide information to the Aama Samuha and convey them to the village." [Lumbini_Tilottama_KII]

Some informants also talked about the need for awareness in the community about routine child immunization. But one key informant said there was no need for further awareness on routine child immunization in his area.

"We also want to add more vaccination related awareness in the community as we think the awareness still is not sufficient." [Sudurpaschim_Durgathali_KII]

"I think people are aware about the regular vaccination schedule so we don't need to create awareness programmes. Nowadays, we don't have to inform parents about the place where vaccination is done, when to visit for vaccination and against which disease it is for." [Sudurpaschim_Janaki_KII]

Key informant explained that the level of awareness has increased. Most women had good information on the importance of vaccines and also they did enquire on the time and date of vaccination.

"There is no such negative perception. Everyone understands that vaccination should be done. Now all consumers have a positive understanding of the vaccine. Now, mothers themselves ask when and where vaccination is being administered, they are interested." [Lumbini_Rambha_KII]

Previously, health workers had to visit the household to raise awareness on the vaccine and its benefits but nowadays, people are getting the information from various sources such as television and other social media. They further do inquiry to the health worker to get the real and actual information.

"At that time, we used to have to go to people's houses to raise awareness about the vaccine and its benefits to bring their children for vaccination. But now, if people see anything in the media they call me immediately asking what vaccine is this? People are way more aware regarding immunization." [Koshi Province_Belbari_KII]

In some of the study areas, it was also found that the vaccinators even reached the home of the clients to provide the vaccination services.

"We went to the home and vaccinated very old people and handicapped." [Lumbini_Tilottama_KII]

2. Family Support

Key participants said the importance of family support for the vaccination of the child as the newly married couples lacked information on the rearing and caring of the children.

"Family support plays a very important role in vaccination. Newly married couples do not know how to take care of their first child, so when they come for BCG, family members come. Lates, when they come for DPT, even though many mothers come alone, sometimes, the family members also come." [Lumbini_Rambha_KII]

3. Religious beliefs

A health worker claimed that there were no cultural restrictions in Hindu communities. But in Muslim areas, they had Namaz every Friday and they did not vaccinate their child until two hours after the prayers.

"There's nothing like that here. But among Muslims, they have Namaz on Friday and have to read some chants and thus they do not take vaccine for an hour or two after chanting. Later, they do take the vaccine." [Madhesh_Maulapur_KII]

4. Availability of the services

The key informant expressed that the BCG would not be provided immediately after birth in some cases considering the vaccine wastages. However, they explained about the approaches made to ensure uninterrupted supply of vaccines for routine child immunization.

"BCG comes in 20 doses…The wastage rate of BCG in our municipality is >90%. Earlier we used to administer BCG vaccination at one-month intervals, but now everyone talks about the rights.Because if the child is vaccinated as soon as possible, the child will also be protected. So, now, we administer BCG every month regardless of the wastage." [Lumbini_Rambha_KII]

"We have a store over here where we store vaccines. We always bring 15 per cent more every time so we do not lack the vaccine at anytime we are always ready to face the situation. We have to walk more in the past days but now people have to walk 10-15 minutes to reach the health post." [Lumbini_Tilottama_KII]

"Sometimes there might not be vaccines in the district but in that situation also we never faced such an issue. There might be a lack of 1-2 vaccines sometimes but never have to stop the session. I have worked here for 3 years but never faced such a situation." [Sudurpashim_Durgathali_KII]

The key informants also clarified that some areas in the terai would have crowds created by the service seekers for routine child immunization.

"There is a market area near Shankar Health Post and many more. What the issue there is, people visit more from nearby areas and they have to wait for a long period and also follow the line." [Lumbini_Tilottama_KII]

"We conduct vaccination clinics every month from 16th to 19th. The last day is the 19th at the health post. Earlier, we used to administer vaccination on the first day in the health institution, then we got instructions from above (health office) and now we conduct the vaccination in the institution on the last day on the 19th to make it uniform. If a child misses the vaccination clinic for some reason, you can come to the health post on the 19th and get vaccinated." [Lumbini_Rambha_KII]

"We have the FCHVs to get the vaccine to the missed once. We ask them to follow up such cases. If anyone was found to have missed the vaccine then we ask FCHV in a meeting about the reason in that case. Many people convey this to their neighborhood so that everyone can come to get the vaccine."

[Bagmati_Dakshinkali_KII]

"Our vaccine programmes have not stopped. It stopped only during Dashain and Tihar. During that time also, We made a feasible schedule because if we put one antigen, another antigen should be given after 28 days, so we maintain the gap. We give vaccination during Saturdays as well. There are two staffs who have been trained in vaccination. If they are not present due to any reasons, there are other two staffs." [Sudurpaschim_Janaki_KII]

The key informants mentioned about the different measures that they had taken and the household survey conducted to trace and vaccinate the missed cases of routine child immunization.

"We keep a record of vaccinated children in the vaccine register and we call them if they do not come for the next vaccination session and we complete the dose like that. As it is said that children can get vaccinated till 23 months. Thus everyone might not get vaccinated in 15 months and we can't declare them as incomplete vaccination, can we? When the child becomes 23 months old and still have not gotten vaccinated completely then we can tell them to have incomplete vaccination. " [Koshi Province _Belbari_KII]

"We went door to door and conducted a household survey, line listing of children, with the help of health workers, women health volunteers, etc. We have created an environment for vaccination by calling the child immediately." [Lumbini_Rambha_KII]

One of the key informants shared the challenges present in regard to human resources in conducting the vaccination programme for routine child immunization. He was the only staff member to carry out all the activities of the health post due to which he was overburdened.

"The scarcity of manpower is the big problem here. When I was in health post, I never got leave from my work...Now the health post is converted to municipal hospital and thus there is one vaccinator sister… We vaccinate 155-200 children on 10th of the month and I can't fill the details of everyone when I have to be busy vaccinating the children." [Koshi Province_Belbari_KII]

5. Affordability to services of Routine Child Immunization

Participants working as daily wage workers missed the vaccination of the child because they could not leave work. As this factor was expressed by two of the participants who worked in brick factories as labourers. A key informant said that there might be the problem of having to leave the work to the people and come for their child's vaccination. However, they had not observed people complaining about such experiences while coming for the vaccination.

"They have to leave their work, that's already a financial problem. Allowance is arranged for the health workers on that day. But not for the people. They come because it is important. They don't say that today we bear loss, we need compensation. They come with their understanding."[Gandaki_Bungdikali_KII]

"I have never found anyone saying, just spending one day on vaccination might create financial issues."[Lumbini_Tilottama_KII]

6. Accessibility of routine child services

Key informants expressed that in case of routine child immunization, the vaccines were taken to places nearby the households of people who were distantly located which had helped in ensuring the vaccination program in the country. However, the key informant also mentioned that there was an instance when vaccination had to be stopped because of natural disasters affecting the transportation.

"By locating the places with the number of children present, by setting up vaccination centres according to the need, by looking at the distance of the community, and accessing where it is easy for people to come, and if necessary, by moving the place and also by increasing the vaccination centres and health workers we have worked to make Routine Child Immunization accessible to everyone." [Gandaki_Bungdikali_KII]

"Geographical conditions have created problems in this place. This is a remote place of a well-developed district. For that reason, there is a situation where you have to cross the river to get the vaccine, and there are situations of landslides in monsoon and sometimes there is a situation where the vaccine is stopped because of transportation." [Gandaki_Bungdikali_KII]

"There is a little problem during the rainy season, but vehicles reach all vaccination centres at other times. Since all the vaccination centres are at most 1 hour away from the consumer's house, almost all the mothers walk to get vaccinated." [Lumbini_Rambha_KII]

One of the key informants mentioned that the challenges in arranging the people as per the dosage of vaccine in a vial could have been a factor for some people to miss the vaccine.

"We had to make sure there were 10 people in the line to not waste vaccines. But the difficulty was it was hard for that one person to find another 9 people in order to get the vaccine. So, for those people chances were high of not being vaccinated." [Sudurpaschim_Janaki_KII]

"The distance is not that long as there is only one village, Parsa. There are four areas in the village and the vaccine programme is conducted in each Tole. So, it takes two to four minutes to reach to the vaccine centre." [Madhesh_Maulapur_KII]

"It takes me about five minutes to reach the nearest vaccination center and also the road is in good condition." [Gandaki_Rishing_IDI 4]

7. Supportive management services

Key informants mentioned about the unavailability of the supportive management services such as water supply, road situation and waiting space in the vaccination centre.

"Water supply has yet to be delivered to some places; it is always a bit difficult there. I am not saying that all health institutions have maintained proper cleanliness and pure drinking water supply. Due to the geographical situation, roads have also been built recently, so we've now somehow managed the water connection to the ground but landslides sometimes damage it."[Gandaki_Bungdikali_KII]

"*Not everyone gets to sit while taking the vaccine. Only the vaccinator and the one who is receiving a vaccine get to sit in the chair. Others have to sit on the floor putting on a sack."*[Madhesh_Parsa_KII]

8. Counselling by the health workers

The key informant expressed that they had counseled the people who were unable to access the vaccination centre on the scheduled day because of their competing priority.

"Mainly during the month of Kartik when they have to work in the field, they sometimes ask what happens if we drop one vaccine. If they can be vaccinated, we say you can get vaccinated afterwards but if it can't be done then you'll have to come on the same day, when you will be free we will be waiting for you, or it

can be done till this time. We counsel them about it." [Sudurpaschim_Janaki_KII]

Key informants expressed about the different measures undertaken to counsel the parents on vaccination of their child. One of the key informants expressed that inadequacy of health workers was a factor that affected the counselling that they could provide to the service seekers.

"They are being taught about its importance in the Aama Samuha Baithak as well. While providing the vaccine as well the health service providers inform the parents/mother about the next date." [Sudurpaschim_Durgathali_KII]

Triangulation of desk review with qualitative findings on Routine child immunization

The GoN established a national target to fully immunize 90 per cent of children by 2020. In 2014, 85 per cent of children aged 12–23 months were fully immunized (i.e. had received all basic vaccines). However, full immunization coverage decreased to 78 per cent in 2016 and had further reduced to 70 per cent by 2019, well below the 2020 target and almost 15 percentage points below that for 2014.

Various factors are found to influence missed immunization among children in Nepal. Migration from rural to urban areas is an important factor. This involves people ending up in urban slums, which reduces their access to health care facilities, outreach clinics and FCHVs. This sequence of events eventually act as a barrier to awareness and accessibility to immunization services.

The study site was selected considering the HMIS data as of 9 June 2022 on low coverage of Routine Child Immunization (Annex 1). When the HMIS data on low coverage was verified with the stakeholders at the local level, there was mention of the discrepancy in the target provided by the higher level and the real target at the local level in regard to the number of children for routine child immunization.

The migratory population was also found to make significant differences in the target set and target achieved in regard to routine child immunization. In some cases, there was lack of recording and reporting of the migratory population. As a result, some missed immunizations were present in the Terai even after being declared a fully immunized district.

"In this ward we are provided with the target to immunize 72 children, but the total number of children is only 56. All of them are immunized according to our schedule. FCHVs are mobilized for searching the children. So, I think the target set by the government is higher than the actual number of children in the ward." [Koshi Province_Mangsebung_KII]

"According to the target given to us from above (Health Service Department), our coverage does not reach above 90 per cent. I think that no children in this Rambha Rural Municipality have missed regular vaccinations. We went door to door and conducted a household survey and did line listing of children.We have created an environment for vaccination by calling the child immediately. But there is no situation where any child has remained to be vaccinated."[Lumbini_Rambha_KII]

COVID-19 Vaccination

In this section, the findings of the study are presented based on the objectives of the study such as:

1) Underlying causes of health-seeking behaviours of people for COVID-19 vaccination
2) Perception of stakeholders and health care providers on health-seeking behaviours for COVID-19 Vaccination
3) Triangulation of the findings of desk review with the qualitative study on health-seeking behaviour for COVID-19 Vaccination

Underlying causes of health-seeking behaviours of people for COVID-19 vaccination

Major themes along with their sub-themes obtained after the analysis of data are presented in Table 5.

Table 5: Major themes of COVID-19 vaccination

SN	Major Themes	Sub-Themes
1.	Awareness on COVID-19 vaccination	a. Information on COVID-19 vaccination b. Source of information on COVID-19 vaccination c. Misinformation/distorted Information d. Importance/value of COVID-19 vaccination
2.	Personal intuition and experiences	a. Personal intuition b. Risk perception c. Belief in the conspiracy theory associated with COVID-19 vaccine d. Medical history e. Trust on vaccine effectiveness f. Documentation Issues g. Missed opportunity on vaccination
3.	Social and meta norms influencing COVID-19 vaccination	a. Decision-making dynamics b. Family culture
4.	Family support	
5.	Religious beliefs	
6.	Availability of services of COVID-19 vaccination	
7.	Accessibility to services of COVID-19 vaccination sites	a. Geography of the study side
8.	Affordability of COVID-19 vaccination services	a. Financial constraints b. Hindrance to daily activity c. Opportunity cost
9.	Supportive management services	
10.	Satisfaction of people on the service providers for COVID-19 vaccination	a. Counselling b. Behaviour of health worker

1. Awareness on COVID-19 vaccination

a. Information on COVID-19 vaccination

Population's general knowledge of the Corona virus vaccine is very important to improve public acceptance and decrease vaccine hesitancy in confronting the disease. Despite having the symptoms, most of the study participants were unaware of COVID-19. The study participants also stated that they are unaware of the household immunization programme because the vaccinators have not yet reached their location.

"I have no idea what corona is. When there is a high fever and a runny nose with a cough, they call it corona. I do not know if it is true or not as I am not a doctor. That's all I know." [Lumbini_Rambha_IDI 4]

"I don't know about the household vaccination program; vaccinators haven't come here." [Lumbini_Rambha_IDI 1]

Few study participants also mentioned that they had made the decision to get the vaccine despite being in conflict about its benefits and risks. However, they were convinced by the information provided by the mass media that they were protected against COVID-19.

"*Despite having a dilemma regarding its advantages and threats we got vaccinated. Later on, through the information from mass media we were assured that we would be protected against COVID-19. Based on information provided by the Ministry of Health, health workers and Nepal government, we got vaccinated.*" [Lumbini_Tilottama_IDI 4]

"*I did not get free during vaccination day. I went to the vaccination centre, but I did not have proper information about the vaccination schedule. Therefore, I did not get it. I was always busy with my work.*" [Karnali_Junichande_IDI 1]

Unvaccinated case of COVID-19 from Karnali Province

A 19 year-old lady from Barahatal was our participant. She had completed SEE and her husband had studied up to class 12. They were involved in agriculture and cattle rearing. There were nine members in her family.

She added that she had no knowledge on the COVID-19 vaccine. However, other members in her family had received COVID-19 vaccine because they had learned about prevention of COVID-19. She said that the vaccine programme is free of cost and was provided by the Nepal Government. She had not heard any bad things about COVID-19 vaccine. She also said that she had visited the vaccination centre two or three times when she was pregnant too but she returned without receiving the vaccine. The health worker suggested that she should not have the vaccination during pregnancy. The health worker said that it might have a negative impact on the baby. She had received information about COVID-19 from the FCHV during pregnancy. She did not get information about vaccination schedule after the baby was born. She added that the health worker said that there were no vaccine at vaccination centre and she did not know what should be done at that time. She had decided to receive a vaccine herself. Her mother-in-law had also counselled her about it and they went for vaccination together.

The health post was near her home and it took around half an hour to reach there. The health institution environment was clean.

b. Source of information on COVID-19 vaccination

The study participants relied on several sources in order to gain the information in regards to COVID-19. Their awareness of the COVID-19 vaccine was greatly influenced by the source of information. Similarly, majority of the study participants claimed to have obtained their knowledge through FCHVs and the health post. However, news of the COVID -19 immunizations was also amplified by social media platforms like mobile and radios. For other study participants, getting the information about the COVID-19 immunization also largely depended on their friends and neighbours. Nevertheless, the peon and chiraki also played as a major source of information for few of the study participants.

"I got to know about this (COVID-19 vaccine) from this place itself. The FCHV sister came and told me about this." [Madhesh_Parsa_IDI 2]

"Information first was shared from the local level; ward office. Secondly, my father is also a social activist so I came to know about it (COVID-19 vaccine) through him." [Bagmati_Dakshinkali_IDI 1]

"We randomly get the news…People (FCHV) say that …at this date and time you should go and people go for the vaccine…Here in our Gaupalika they create awareness, by communicating that, for this ward we will vaccinate on this day."[Lumbini_Rambha_IDI 4]

"We have mobile, radio; we get the information from those sources. People also share the information that they come across."[Gandaki_Baudikali_IDI 1)

"The information I got was when I was in Dailekh, my friends said let's get vaccinated, the health post was also near, so, we got vaccinated."[Karnali_Barahatal_IDI 4)

"*We have a peon (local village messenger) who has been here for three or four years. Throughout the year, whatever happens in the village be it a wedding or Bratabandha or deaths or any information from the Palika, he comes to every household and gives the information. He lives a little uphill and works all over this ward 6. It has been very easy because of him*."[Gandaki_Baudikali_IDI 1)

"There are "chiraki", they go from house to house and tell us that the second dose has arrived... And if 6 months have been completed, we could take the second dose."[Sudurpaschim_Kailali_IDI 4]

c. Misinformation/distorted Information

The study participants spoke about a wide range of emotive misinformation they had encountered regarding COVID-19, resulting in confusion, fear and mistrust. They had been mis-informed about the COVID-19, believing it was intended to decrease the population. A few study participants also said that receiving the COVID-19 immunization would require additional nutrition. A few participants believed that the COVID-19 vaccine was used to prevent pneumonia. Some participants also stated that pneumonia had been renamed as COVID-19.

"This started because America wanted to create problems for China. One professor took out this disease and gave it to China. While spreading it in China, it was spread in America as well. From there it started and spread all over the world..... One experienced doctor from WHO said that the vaccine against COVID-19 was made to kill hundreds of people. It is a slow poison to kill people and decrease the population. I didn't take COVID vaccine for this reason." [Lumbini_Tilottama_IDI 2]

"Fever and pneumonia were prevalent before as well, people lost their lives as well. It's pneumonia but they say it's COVID-19 and they don't let family members of patients visit them. They sell the heart, liver and eyes of those patients. Then, they bury or burn the dead bodies without even letting their family members see or touch them." [Lumbini_Tilottama_IDI 2]

"There is no benefit. It (COVID 19 Vaccine) does not provide nourishment. If we take vaccines, we have to take more nutrition. We are working people… I had not taken any such vaccines previously as well, thus I think they are not fruitful." [Gandaki_Rishing_IDI 3]

"We need additional nutrition after injecting the vaccine but home-produced wine is the chief nutrition for me. It gives strength. That's why I don't want such injections." [Gandaki_Rishing_IDI 3]

d. Importance/value of COVID-19 vaccination

Trusted information about the COVID-19 vaccination was needed. Misinformation and false claims, threatened to undermine the success of vaccines and put people's lives at risk. Most participants were aware of the significance of the COVID-19 immunization. They agreed that the COVID-19 immunization is advantageous since it protects the recipient against illness. In addition, some study participants stated that the immunization against COVID-19 aids to fight against as well as get rid of the COVID-19 disease. Some participants also believed that the purpose of the COVID-19 vaccination was to cure rather than prevent the disease.

"It is beneficial; those who are vaccinated say it is beneficial; it seems to protect them from diseases." [Madhesh_Parsa_IDI 1]

"Had the vaccine not worked, the disease that had spread and taken the form of pandemic would keep on increasing. Thus, the vaccine has definitely controlled the disease spread and it has done its work and it must be good." [Gandaki_Bungdikali_IDI 3]

"After getting vaccinated even if you get COVID-19, vaccination helps you to fight against and get rid of it."[Lumbini_Tilottama_IDI 4]

"The benefits of getting a corona vaccine is for disease prevention, but it is not for the cure."[Karnali_Barahatal_IDI 3]

"In general, this vaccine is made to increase the immunity power and will increase the capacity of we people to fight against the disease (COVID-19)." [Sudurpaschim_Durgathali_IDI 1]

Many participants asserted a direct link between the rate of COVID-19 vaccination and pain.

"The people of those countries where Pfizer vaccine is produced are also not vaccinated. Even now, people are suffering from the disease. The rate of vaccination is also high and suffering is also on peak."[Lumbini_Tilottama_IDI 1]

2. Personal intuition and experiences

a. Personal intuition

Despite awareness and understanding, personal intuition played a role in the person's refusal to receive the COVID-19 vaccine. Participants in the study revealed that their inner perceptions and intuition led them to believe that the vaccination was not useful, which is why they chose not to receive the vaccine.

"I asked with my inner self. And my inner instinct felt these are not beneficial for us. My inner instinct, inner self, my "Aatmaa" said not to take vaccines. There was no such discussion or consultation with my wife or son and daughters-in-law." [Gandaki_Rishing_IDI 3]

"No, we think that whatever happens, it is fine… As per our wish, we did not go for vaccination. One day, I have to die so I didn't want to vaccinate." [Gandaki_Rishing_IDI 1]

A few of the study participants reported that they had the fear of receiving the vaccine and had difficulty in going to the vaccination centre via bus as they had problem of motion sickness.

"No, I don't want to take the vaccine. I am scared of the injection and I don't want to get the vaccine injected in my body as i think it makes me weak." [Lumbini_Rambha_IDI 1]

Unvaccinated case of COVID-19 from Lumbini Province

The participant was a 68 years old and female. She lived with her son in a house. Another son lives in an adjacent house. She said that her husband left her and married some other woman. She also mentioned that the husband come occasionally and took care of her health treatment and medicines. When we asked her daughter-in-law about why she did not take the vaccine, she said that the mother-in-law is stubborn and does not believe in the vaccine despite their multiple requests.

She said that she has restricted mobility because of problems she has with her joints. She can just walk around her house and otherwise sits at home.

The road was accessible to four-wheelers and was made of red mud. In the rainy season, sections of the road was damaged by water. The nearest health post (HP) was Pipaldanda HP and it took 45 minutes to get there. Then it was another 20 minutes by bus to get to Lausney and a further 20-minute drive on to the health post. The area also had an outreach vaccination clinic, which was 30 minutes of steep downhill walking from the village. The FCHV lived a five-minute walk away.

In my opinion, I believe in God, even if a person has a desire to receive it, I don't want to receive the vaccine. Until now, I have not even had a headache due to Corona. Symptoms of Corona are light headedness, dizziness, but I didn't experience any of it." [Karnali_Barahataal_IDI 3]

"Over there, a sir has not been vaccinated either. I have made an excuse that I am taking medicine. I say that those who have been taking medicine should not get vaccinated." [Lumbini_Tilottama_IDI 1]

Unvaccinated case of COVID-19 from Lumbini Province

The participant was a 68 years aged retired teacher, living with his wife and son's family.

He said that he was a hardcore Hindu and would be agitated when we talked about the importance of vaccine against COVID-19. He did not believe in the need for the vaccine, had a very firm belief that the vaccine was unnecessary, and just made a mockery of the vaccine. While he and his wife were not vaccinated, his son and his family had been vaccinated. There was also an instance when the son contracted COVID-19, but after that as well, the participant did not feel like taking the vaccine. The participant's son expressed that he had tried counselling his father to get the vaccine but said that as a son he could not force his father to get himself vaccinated.

It was about 300 metres from Manglapur, near the Siddhartha Highway. Road access was good by auto. The nearest health centre was about five kilometres away, but there were many private clinics as their house was only 300 metresfrom the Siddhartha Highway.

b. Risk Perception of COVID-19

People's perceptions vary as much as their personalities do. Some study participants believed, the COVID-19 vaccine carries risk. Because they believed that the COVID-19 vaccine would weaken them, most participants declined the vaccine. Similar to this, several participants believed that receiving the COVID-19 immunization would result in headaches, fever, and even paralysis. However, very few study participants believed that the COVID-19 immunization could be harmful to their innocent babies.

"Most people had good reactions, but some come down with fever and headache after receiving the vaccine. I think that this vaccine is not suitable as nothing is sure. Later, I decided that COVID-19 was just a fear, not a serious disease so I can be prevented if I maintain the proper hygiene." [Bagmati_ Dakshinkali_IDI_2]

Unvaccinated case of COVID-19 from Bagmati

A middle aged (36 years) from shared a home with his wife and two young sons. His older son was five years old, and the younger was three. His wife used to look after their children while he took care of the mobile shop.

Experiences on COVID-19 vaccination

He was aware of the COVID-19 vaccine and its significance during the COVID-19 pandemic. He also knew that many people in the community were afraid of receiving the vaccine, while others were very interested in receiving it. However, he believed that the COVID-19 vaccination was not sure and certain. The vaccination was not only enough in the first dose, but it also required a second dose and a booster dose, which triggered him. Going to receive the vaccine was similar to transmission of COVID-19 for him, because of the large crowd and long line waiting to get the vaccine. Instead of staying in the line with the risk of catching the disease, he thought of listening to the experiences of the near ones and administering the vaccine. Most people had good reactions, but some came down with fever and headache after receiving the vaccine. He thought that this vaccine was not suitable as nothing was sure. Later, he decided that COVID-19 was just a fear, not a serious disease. All he could think about was taking good care of the body. If a fever develops, proper care and *besaar pani* are required; otherwise, he believes we can survive. That is why he believed the COVID-19 vaccine was unnecessary for him because he had gone nine months without it. He and his wife have not been vaccinated. He even stated that: "if we must die, we will die one day, whether from COVID-19 or something else." For him the vaccine was just an experiment or trial. Some time before in his school days, he along with his friends had taken the medicine against tapeworm. Then, all of them vomited. Later, he came to know that it was just an experiment. Due to the same past experience, he is thinking the current vaccination could also to be a trial.

"I heard it affects babies, inside the womb so I didn't get the vaccine." [Lumbini_Tilottama_IDI 3]

"I have seen some people having headache and fever after getting the covid vaccine but not the paralysis." [Bagmati_Dakshinkali_IDI 1]

"I saw the ones who got injected with COVID-19 vaccine die while some of them got sick. So I don't think it's very useful." [Lumbini_Tilottama_IDI 2]

"The villagers said that the people who take medicine should not go to get the vaccine." [Lumbini_Rambha_IDI 2]

"After giving the first dose to Buwa (Father), he got severely sick. He was weak from earlier. He had fever for 3 days and then they told me to not bring him again. And we also did not take him again (for the vaccine) when he was not called." [Gandaki_Baudikali_IDI 1]

Unvaccinated case of COVID-19 from Lumbini Province

A young female (21 years) and mother to a nine-month old baby. She lives with her in-laws and husband in a single storey house in a place called Gorkatta, four kilometres west of Manigram Chowk. It is an urban slum with a road, water supply and health services. Access was good on gravelled motorable roads that were suitable for autorickshaw. The health centre was about one kilometre from there and the nearest FCHVs house was 500m away. She had studied to bachelor level and was pregnant while the vaccination campaign was being conducted in her area. Her family had taken the vaccine and she too had gone to take the vaccine. While she was waiting in a line for the vaccine, she considered changing her mind feeling the risk of vaccination because she was pregnant. So, she returned home without taking the vaccine. She had yet not been vaccinated at the time of the interview, because she had lost track of getting the vaccine.

c. Belief in the conspiracy theory associated with COVID-19 vaccine

Some participants regarded the conspiracy theory around COVID- 19 to be true. On one hand, there were the participants who felt that the medication for COVID-19 was created by ayurvedic physicians, but the government did not share their belief and imported the medications from other nations. They thought it was more about getting rich and getting the commission than it was about the general well being of the population. Other participants believed that we must embrace Eastern philosophy if we want to avoid catching common diseases.

"At first, the vaccination programme was targeted for the older people but most of the people of this village were not motivated to get vaccination. There was the rumour in the village that this vaccination was targeted to the older people to kill them as the government was not able to afford the expenses that are needed to be made to the older population. Therefore, the government targeted the older people. Thus, most of the older people of this village rejected the vaccine." [Koshi Province_Mangsebung_IDI 2]

"Ayurvedic doctors produced medicines for COVID-19 but the government did not believe and made any use of it and they brought medicines from foreign countries, I think it's because they want to earn money and take commission but it isn't for the welfare of the public. The medications brought from foreign countries aren't secured." [Lumbini_Tilottama_IDI 2]

"We do not know about which chemicals are used in the vaccine. The virus can come from the chemical used. As the vaccine is trying to stop that one virus, another more powerful virus can come…In order to avoid common diseases, we should instead embrace Eastern philosophy." [Lumbini_Tilottama_IDI 1]

d. Medical history/health Issues

Most participants reported that their medical histories/ health issues were the main factor in their decision not to receive the COVID-19 immunization. The majority of participants stated that no one had ever persuaded them to get the COVID-19 immunization because they had diabetes. A few study participants also mentioned that they were told not to get the COVID-19 immunization because they took medication. Some participants agreed that it was not necessary for someone who was already handicapped to be vaccinated.

"I am a patient of diabetes and high blood pressure. No one ever tried to convince me nor did anyone give me knowledge regarding COVID-19 vaccine."[Sudurpaschim_janaki_IDI 1]

"No, I don't want to take the vaccine… Also, I did not take the vaccine because I cannot travel via bus, I vomit badly." [Lumbini_Rambha_IDI 1]

"I heard that vaccination makes people weak. I already felt weak due to my disease of sugar and pressure so I didn't vaccinate myself." [Lumbini_Rambha_IDI 1]

Unvaccinated case story of COVID-19 from Sudurpashim Province

The participant is a 51-year-old male, living with his mother, wife and children. He had studied up-to grade 5 and is working in India. He spends much of his time under the influence of alcohol.

He said that he was suffering from diabetes and high blood pressure and claimed that he had not been asked whether-or-not to take the vaccine, considering his illness. He also believed that he did not require to take the vaccine, as he was already ill. While at the interview, the participant appeared to be careless concerning his health.

The road to his house was gravelled and accessible to four wheelers. Auto was the major mode of transportation in the area. The area had scanty houses where both mud houses and concrete houses were observed. The nearest health facility was 20 minutes' walk away and the FCHV lived one kilometre from the participant's house.

"I don't know about the COVID-19 vaccine. I generally feel weak due to pressure and sugar. I also took medicine for pressure and sugar so I didn't take the vaccine." [Lumbini_Rambha_IDI 1]

"My husband said you should vaccinate but I didn't because of my weakness." [Lumbini_Rambha_IDI 1]

"We have not asked for his decision. We thought that even if he doesn't get vaccinated nothing should happen to him as he is handicapped." [Gandaki_Bungdikali_IDI 2]

"My husband said that the people taking medicines should not take the vaccine…He said that I have been taking a lot of medicine and that I am weak as well so I should not take the vaccine." [Lumbini_Rambha_IDI 2]

e. Trust in vaccine effectiveness

Most participants said that they had full trust in the vaccine regarding its effectiveness, that is why they decided to be vaccinated. They also said that the vaccine was good after the administration.

"Earlier, they said that the Corona vaccine will cause a bigger disease. But it is good after vaccine administration." [Lumbini_Rambha_IDI 1]

f. Documentation issues

Instead of having a strong desire to receive the COVID-19 vaccine, most participants encountered documentation problems. They said that in order for an individual to receive the vaccination, citizenship was a must, and that even now, even for those who have access to citizenship, the vaccination is not yet available.

"It would have been great if I could to get the vaccine in the absence of a citizenship certificate. If I had got the opportunity of COVID-19 vaccine then, I would not be wandering like this till date." [Karnali_ Barahatal_IDI 2]

Unvaccinated case story of COVID-19 from Karnali Province

A 21-year-old female from Barahatal Rural Municipality missed receiving a COVID-19 vaccine at vaccination time. She was married and had completed education to Grade 9 from a government school. Normally, she works as a farmer as well as an informal labourer. She knew about COVID-19 and its vaccines. She was not afraid of the vaccine's impact. She had heard about vaccination in Surkhet. At the time of the vaccination, she was in Kathmandu and she had gone to the vaccination centre in Kathmandu with an identification card. At the vaccination centre while the health worker had asked her about the identification card, she could not show it. Therefore, the health worker refused to vaccinate her. After that, she did not go again to the health facility for vaccination. She missed the COVID-19 vaccine forever.

Her home was in the rural area of Barahataal Municipality. Her house was a two-storied building made of stone held together by mud. An agriculture school was a 30-minute walk on a motorable gravelled road that was accessible to bus, jeep and bikes. Buses and jeeps operated only once a day. The nearest FCHV lived 25-minute walk away.

"When the vaccine was available, at that time I did not have proof, I did not have citizenship, now I have citizenship but the vaccine is not available."[Sudurpaschim_janaki_IDI 3]

One participant said that they were in different places for work, so they missed the vaccination programme. When he went to get the vaccination, he was asked for the citizenship card. As he did not have the citizenship card at that time, he was deprived of vaccination.

Unvaccinated case of COVID-19 from Koshi Province

A 33-year-old man called Bir Kumar Limbu (Name changed) lives at the Gajurmukhi, Ilam. He was employed. He said that due to the fear of COVID-19 he stayed in his room. He was very much afraid of COVID-19 because he thought he would suffer and die. He did not have adequate information about the vaccination. In the initial phase, he was afraid of the vaccination but later when he wanted to receive the vaccine, he faced documentation issues as due to his work, he had gone to Kathmandu and was unable to receive the vaccine.

"At the time of vaccination I was in Kathmandu. At first, I had visited a vaccination centre to receive the vaccine but they (health worker) asked me for the citizen card. I didn't have it at that time. So, they did not give me COVID-19 vaccine." [Madhesh_Maulapur _IDI 2]

Unvaccinated case story of COVID-19 from Madhesh Province

A 25 year-old male from Maulapur has not received the COVID-19 vaccine. He has been married for five years and completed class 9 at school. His main source of income is farming. He has no job, but earns around 10 to 12 lakh from his farm.

He said that COVID-19 vaccine is used to save from COVID-19 infection and the government is providing it free of cost. He can receive it free of cost, but he has not received it. He said that people suffered from fever after being vaccinated. He was in Kathmandu at the first wave of COVID-19 and he had heard about COVID-19 there. For example, at first COVID-19 vaccines were given to young people by the Nepal government. Old people had not been vaccinated because they might be suffering from fever. However, he has not received any dose of COVID-19 vaccine. He has not met a vaccinator either. He said that when a vaccinator came to the village, he had already gone to the farm.

He said that at that time the ID card was compulsory for vaccination and vaccinators checked ID during vaccination.

He wanted to get the COVID-19 vaccine and there were no restrictions against COVID-19 in his community. The vaccination centre is near his home – just a four-minute walk away. He would lose Rs. 500 rupees if he went to the vaccination centre for vaccination because that is what he can earn per day.

g. Missed opportunity on vaccination

The participants said that because of the timing of the vaccination, they remained unvaccinated. The vaccinators had come to vaccinate at around 10:00 AM to 11:00 AM, which was when they were busy on their farms.

"It is government work and vaccinators come after 10:00 AM to 11:00 AM. At that time, all people would have already gone to the farm and people missed to receive the vaccine. People would be on farms and health workers in vaccination centres. So, they would not meet each other." [Madhesh_Maulapur_IDI 1]

"I was pregnant at that time, my family members did not allow me to get the COVID-19 vaccine so I remained unvaccinated." [Province 1_Mangshebung_IDI 2]

"One aunty told me about the uncertainty of encountering any health complications during pregnancy. She suggested that I should get a vaccine after childbirth. Later, I missed the vaccination." [Lumbini_Tilottama_IDI 3]

Study participants missed their opportunity to vaccinate because of being handicapped. They could neither go to the health facility nor the health service provider had searched for them to vaccinate them.

"The reason (for no vaccination) is that he is handicapped. Neither can we assist him to go for vaccination nor the service providers come themselves to vaccinate from that place. We have also not taken him for vaccination." [Gandaki_Bungdikali_Barrier_2]

3. Social and meta-norms influencing COVID-19 Vaccination

a. Decision making dynamics

Most participants admitted that they had chosen not to get vaccinated on their own. They claimed that no one in their family or circle of friends had forced them to skip the dose. Similar to this, some study participants chose not to get the vaccine after seeing how other people responded to the vaccine.

"Nobody in the family made the decision for me to not take the vaccine. It was my decision."[Lumbini_Rambha_IDI 1]

"I heard about the vaccine and I myself made the decision to not take the vaccine." [Lumbini_Tilottama_

IDI 2]

"Yes, I made my own decision to not get the vaccine. I never forced the rest of my family members to follow my decision."[Lumbini_Tilottama_IDI 1]

"People who took covid vaccine started becoming severely ill. Some had fever, some suffered headaches, sometimes showed symptoms of diarrhoea and vomiting, and so on. Then I thought that the vaccine causes problems and decided to not take it."[Karnali_Barahataal_IDI 1]

"Everyone in my family got vaccinated. I never told my younger one not to. But I am not interested and I made my decision."[Lumbini_Tilottama_IDI 1]

"Many people came to us and counselled about the vaccine. They said that we must take the vaccine. But we did not have any desire to take the vaccine. Many asked me to take it but I said I will not take the vaccine."[Gandaki_Rishing_IDI 3]

Few study participants were motivated in receiving the vaccine as they observed the villagers receiving the vaccine without any hesitancy and peon along with the neighbours suggested that they receive the vaccine.

"Everyone in the village says that the vaccine should be taken thinking that it should do well. We took the vaccine after the peon mentioned it and after discussing it with the neighbours." [Gandaki_Baudikali_ IDI 1]

4. Family Support

The participants were motivated by their family members, which is why they went to get the COVID-19 vaccination. Some of the study participants claimed that their husband supported them in reaching the vaccination centre while some of the study participants noted their father and sister for motivating in receiving the COVID-19 vaccination. Some families had no one to take care of their babies when they were not at home. That is why, they stayed at home and didn't go for the vaccination.

"I have my Mother-in-law to take care of the home and children when I need to go to the health facility." [Sudurpaschim_Janaki_IDI 3]

"Yes, my husband had helped me with the COVID-19 vaccine. He had brought me to the vaccination centre for the vaccine." [Madhesh_Parsa_IDI 4]

"I didn't get it because there are two small children. My father-in-law is at his home. And I was all alone." [Sudurpaschim_Durgathali_IDI 1]

"Everyone in our house was self-aware and our father also motivated us and told us to receive the COVID-19 vaccine at the exact date. One of our sisters also works in the health sector she motivated to receive the COVID-19 vaccine." [Bagmati_Dakshinkali_IDI 1]

"My wife chose not to go for the vaccine twice. I convinced my wife saying that the government has provided the vaccine free of cost, had there been a situation where the vaccine should be purchased, there could have been a situation where we would have to pay Rs.10,000 as well. After that, she went to get the vaccine." [Gandaki_Bungdikali_IDI 3]

5. Religious beliefs

Some participants were constrained by their religious beliefs. They also mentioned that an epidemic would soon arrive, much like the dengue virus, which appeared initially and briefly shook society. It is stated according to their religious belief that after this corona passes; a new, unidentified sickness of a similar nature would appear.

"According to the Bible, it is the result of people's sins. The lord says that" I will send them the consequences

of their sins. That epidemic will come, like the dengue disease that came first, it caused a little shake." It is said, "as soon as this corona ends, another disease will come, we don't know of what kind it will be." [Karnali_Barahataal_IDI 3]

Unvaccinated case story of COVID-19 from Karnali Province

A 49-year-old male who had not attended school but learned to read and write from his children was a study participant. He follows Christianity and used to study the Bible. There are eight members in his family, but only six live with him in Barahatal. He was a farmer and his house was in a separate area of Barahatal. He said that he did know about the COVID-19 vaccine. He added that he read the newspaper and knew that there was a virus called Corona 1,800 years ago, and the thing that happened 1,800 years ago was popular now. The benefit of getting Corona vaccine now is for well-being and prevention, but it is not a cure. Some people have become sick after receiving it, but now it is only prevention, it is not a matter of complete well-being. He also added that he had not paid for this vaccine. He also further added that the vaccine came from outside Nepal. It was sent from outside for trials in animals and birds, not in humans, so some diseases are spreading. Now, even if he received the vaccine he would contract the disease no matter what. "*It will come no matter whether the vaccine is received or not. He added that it is not because I want to get vaccinated, the disease will spread no matter whether the vaccine was received or not."*

He expressed that till then, he had not even had a headache due to COVID-19. Its symptoms are light-headedness and dizziness, but he did not feel it. So, he did not get vaccinated. But other members of his family had decided to get vaccinated.

The health institution was far from his home and it took 45 minutes to reach there. The physical structure of the health institution was not good before, but it is satisfactory now adays.

6. Availability of services of COVID-19 vaccination

The participants said that there were challenges on adequate vaccine availability at some time. Such instances resulted in people needing to visit the vaccination centre multiple times. Some of the study participants shared that they had to return as the vaccine was not adequately available in their place. In addition, on the other side the study participants did not receive the vaccine because the vaccine was delivered late at their place.

"Yes, some people had to come back because the vaccine was not adequately available in the vaccination center."[Lumbini_Rambha_IDI 4]

"Many of them went to get vaccinated. They did not get the vaccine, as it was not adequately supplied so they were called 3-4 times again. Some people didn't get the vaccine even after that." [Lumbini_Tilottama_IDI 2]

"In our place, the vaccine came late while everyone had already taken the vaccine in cities, maybe because this is a village." [Gandaki_Bungdikali_IDI 4]

"I went to the nearby wards. The place where many people go to get the vaccine, I went to that place. I went to all the places that I could. Sometimes, the vaccine would be completely consumed and sometimes some other issues. I went 3-4 times but could not get vaccinated." [Gandaki_Rishing_IDI 2]

"I had a desire to take a vaccine. I had come home and gone to the vaccination centre. That time, they said "vaccines are finished" and I returned to my home." [Karnali_Junichande_IDI 1]

"The vaccine was made available at the places. I do not know whether it's my fate or is it because of me; whenever I went to receive the vaccine I had to return as the vaccine was insufficient. Only ten people used to receive the vaccine at some places and the vaccine was not available at some places." [Sudurpaschim_Durgathali_IDI 2]

"I was in India for work at vaccination time and I came here a few months ago. I want to take the COVID vaccine but still I have not gotten it. I did not get it because there is no sufficient supply of vaccine at the vaccination centre. Many people have returned from the vaccination centre after receiving a vaccine." [Madheh_Parsa_IDI 1]

Unvaccinated case story of COVID-19 from Madhesh Province

A 22-year-old man married three years ago. He is a Hindu. He completed class 5 from Shree Rajdevi Secondary School, a government school. He has a small wood business making furniture and is self-employed. He earns Rs 15,000 per month. There are nine members in his family including his father, mother and others.

During the first wave of COVID-19, he was in Tamil Nadu, India. He had heard that COVID-19 vaccine was provided free of cost by the Government of Nepal. He added that the vaccine protects from COVID-19 infection and prevents the common cold. He also heard that COVID-19 vaccine caused fever, common cold and few people died after having the COVID-19 vaccine. According to him, COVID-19 vaccine was provided to young people at first, then to old people and now to children. According to him, people could not received vaccines because there was not enough supply of vaccines in the vaccination centre. Sometimes, people returned from the vaccination centre without receiving a vaccine due to the huge crowd of people. In this way, people missed vaccine. In rural areas, people are go to the farm in the early morning, some people have go to other places for their work, also few could not reach to the vaccination center. Therefore, many people missed their vaccinations.

He suggested that the vaccinators should inform people for vaccination at least two days prior to vaccination day. Local leaders should also inform people about COVID-19 vaccination day, time and venue in their tole or village.

According to him, he was in India for his work. He is interested in taking a vaccine but he has not met a vaccinator in his village yet. In his family, everybody decides to take the vaccine themselves. He suggested that at first, people should take vaccines at their workplace. If people return home, the government should give a vaccine to them immediately.

7. Accessibility to services of COVID-19 vaccination Sites

a. Geography of the study site

The geography of the country was found to be one of the barriers in health-seeking behaviour. The road condition is better in the Terai region than in the hills and mountainous region. People living in the Terai can reach health facilities within 30 minutes walking distance from their home. However, in the mountainous region, people had to spend longer time, from one and half hours to even the whole day to reach the health facility through rural roads and earthen bumpy roadways. In most of the rural areas, motorable earthen roads were only recently constructed.

"It is a hilly region and it would take me long, almost the whole day to reach the vaccination centre." [Karnali_Barahataal _IDI 1]

"It takes almost two hours for me to reach the vaccination centre by walking. The roads to the vaccination centre are very rough and the vehicles are not available in the needed time, so I have to walk to reach the vaccination centre". [Koshi Province_Mangshebung_IDI 2]

"For people in places like Naram and Dedhgaun, it is difficult and takes time to come to the health post but still they come to get the vaccine." [Gandaki_Bungdikali_IDI 2]

One participant expressed her sadness at not being able to take her bedridden husband for vaccination because of the difficulty in carrying him to a distant vaccination centre. Another participant mentioned the challenge that she faces travelling by bus because of the problem of motion sickness.

"The vaccination centre is far away from here. We have to walk about two hours and it will take more

time for those who cannot walk properly. Another problem is, he cannot walk and we have no people to take him." [Lumbini_Rambha_IDI 1]

"It used to take almost one and half hours to reach the vaccination centre on foot. There is no access to vehicles. We were on top of the hill and we had to come down, cross the river with the help of a boater, then again had to climb up to the place called Gamgadi where there was one hospital." [Karnali_Barahataal_IDI 1]

"The health post was nearby and when I went to the vaccination centre I got the service on time. That is why I received the service at time." [Sudurpaschhim_Janaki_IDI 1]

Different modes of the vehicles such as bus, bike autos, etc were found to be used by the respondents to reach the vaccination site.

"Yes we have to take a bus to reach the vaccination centre as I cannot walk and in the bus as well I vomit a lot so cannot travel." [Lumbini_Rambha_IDI 2]

"Some people have hired an auto and spent money in travel to get to the health post for vaccination. Some people also go on their bikes." [Gandaki_Bungdikali_IDI 2]

8. Affordability to services of COVID-19 vaccination

a. Financial constraint

Participants said that there were no costs involved in vaccination when the health facility was located nearby.

"Vaccines are available freely, so we do not have to pay for it, so we did not have to face such economic difficulty until now." [Koshi Province_Morang_IDI 4]

"There was no such financial problem as there was a health institution nearby in our area." [Sudurpaschim_Janaki_IDI 4]

"The health facility is near from here, so there are no such problems or financial obstacles to reach to the health institution." [Sudurpaschim_Janaki_IDI 1]

While some participants believed that a certain amount of spending for health was acceptable and not a problem.

"For the sake of health, some amount of money spent for own health does not do any harm." [Lumbini_Tilottama_IDI 4]

One participant said that her financial difficulty and the high cost of hiring a vehicle resulted in the unvaccinated status of her bed-ridden husband.

"We were not able to take him to the health post. We could not afford the vehicle charge. It will cost about over Rs. 5,000 to get there." [Lumbini_Rambha_IDI 1]

b. Hindrance to daily activity

Some of the participants mentioned that their daily activity was hampered if they went for vaccination. They further explained that they could not spend the whole day on vaccination because they had some other priority such as constructing the household.

"The COVID-19 vaccine was brought and everyone was getting it. I was also about to go to get vaccinated when my husband said we won't go today because he needed to construct a house and if we got the vaccine, we would get sick. Who will then build the home?...I forced him and we went to get vaccinated. I was still afraid when I was on my way to get vaccinated thinking about what would happen to me."

[Lumbini_Rambha_IDI 4]

"I have not received COVID-19 vaccine because I am a labour class person. I have to go to the farm early in the morning. I am not available at home on vaccination day and the vaccinators come at daytime (10 AM to 4 PM), while I have already gone to work outside from our home. So, I did not get information about vaccination and did not get a chance to receive COVID-19 vaccine." [Madhesh_Maulapur_IDI 1]

Unvaccinated case story of COVID-19 from Madhesh Province

A 55 year-old man from Maulapur Municipality had not received his COVID-19 vaccine. He works as a labourer and also sells Puja Samagri. There is a vaccination centre on the boundary of Shiv Temple. He heard that the COVID-19 vaccine is safe. He also added that many people suffered from fever after COVID-19 vaccination. Some people were cured from fever within one day. Last year, he suffered from a fever for the first time in 30 years. However, he did not receive a COVID-19 vaccine. He said that he did not know about the schedule of COVID-19 vaccine. But, he thought that it had been given three times. At first, it was given to old people, after that it was provided to young people and now it is provided to children.

He explained that he did not receive COVID-19 vaccine because he was a labour and needs to go for regular work. Further, he added that the vaccinators come at daytime and could not be able to visist them as he had already been to work. According to him, vaccinators need to come to the village to vaccinate them. He further added that, if health workers informed one day before in the evening or morning, he could manage the time for vaccination.

"I knew that the vaccine should be taken for own health. When there was vaccination session here in my place. I had to work for living in Dolpa. There was also vaccination session in Dolpa but it was far from my station. I had to leave at least one day of work and lose payment as well. That's why, I could not manage my time for the vaccine as I was busy working." [Karnali_Barahataal_IDI 1]

Unvaccinated case story of COVID-19 from Karnali Province

This is about a 46-year-old year male from Barahatal. He completed school to class 9 and works as a labourer. There are 13 members in his family. He did not know about the COVID-19 vaccine, but has heard that it may save from COVID-19 infection. After he had decided to receive a COVID-19 vaccine from the vaccination centre, he was not free on vaccination day and missed getting it. After that, he himself made a decision to not go there for a vaccine and made a concept that COVID-19 would not harm him in future. He has still not been vaccinated. He had tried at first, but he did not manage time and he gave up.

He further explained that he works as a labourer and would not earn the Rs.1,000 for the day's work if he went for vaccination. There was not any restriction against COVID-19 by any cultural and religious leader or perception.

"Fever will appear and we felt weak after vaccination. And I already feel weak and dizzy all the time due to pressure. I also need to look after the farm and raise goats; my son does not do anything. My son and daughter don't have income so I have to do all the work and I didn't vaccinate." [Lumbini_Rambha_IDI 1]

c. Opportunity cost

Participants said that they lost their daily income while going for the vaccination. Financial constraints and missed opportunity to the income generating activities while going for vaccination had affected the

health-seeking behaviour of the people. Especially for the participants who worked on a daily basis, their earning was hampered when they spent their time on vaccination.

"It takes hours to reach there; some have to carry their children as well. They might have financial problems as well while working or going to other places. Those who are involved in agriculture will have whole day wastage. We also feel like we had work at home while going there at a distance of 10 minutes, but for them it is wasted for a whole day." [Sudurpaschim_Durgathali_IDI 1]

"For one day, we get Rs.500- Rs.600, if we go to work at a farm or anywhere. So, we have to loose that income for one dose of vaccine." [Karnali_Junichande_IDI 1]

"I used to earn like Rs.1,000 to Rs.1,200 in a day. If I went for vaccination, then it would be missed." [Karnali_Barahataal_IDI 1]

"Since I remained busy with my work and couldn't make time to receive the COVID-19 vaccine...That day I had no earnings. For 3-4 days, I went to the vaccination centre by leaving my work but could not receive the vaccine which made it difficult for me." [Sudurpaschim_Durgathali_IDI 2]

"Those who are involved in agriculture will have a whole day wasted. We feel like we have work at home while going there at a distance of 10 minutes, but for them it is a waste of a whole day. So, people might have missed the RCI, or COVID vaccine like us, since they couldn't go there." [Sudurpaschim_Durgathali_IDI 1]

Participants mentioned there was a challenge when one had to visit the vaccination centre multiple times to get the vaccine leaving behind their work. And in some instances, there were those people who invested money to hire the vehicles on reservation to go for the vaccine.

"I needed to go to work as well and had to be on line also. I had to take leave at work to go to be in line for the COVID-19 vaccine and had to loose the day's work and the money as well. I did give my time but still did not get the vaccine." [Gandaki_Rishing_IDI 1]

9. Supportive management services

Most participants appreciated the categorization of people for vaccination. They said that it was easy when the people of vulnerable categories did not need to wait in long lines.

"It's good that our seniors/old-aged parents got vaccinated first and then we had the access to the vaccine. That was awesome." [Gandaki_Rishing_IDI 4]

"They called aged people and vaccinated them first and normal and young people were asked to stay in line." [Lumbini_Rambha_IDI 4]

"The group division was good. It was easy when my family members went for the vaccine." [Lumbini_Rambha_IDI 1]

"Every ward has its own health post. Therefore, it was enough. We had to wait for just around 15 to 20 minutes." [Lumbini_Tilottama_IDI 4]

A participant who had not taken the vaccine said that he had heard and observed that the untargeted people going for the vaccination was an issue. Service providers provided the vaccine to the people out of their personal preference.

"The place was crowded. Many of them did not get the vaccine. They brought their own people and got them vaccinated and told us that the vaccine is finished." [Lumbini_Tilottama_IDI 2]

Regarding the waiting time, most participants explained that they had to wait for a long period to receive the vaccine due to the crowd in the vaccination centre. Even the participants had to return home because

of the consumption of all the vaccines available in the vaccination centre. In such cases, the participants were informed regarding the vaccine availability for the next date.

"It was overcrowded. I stood in the queue, felt bored and returned. No one has told me anything, nor did I ask. If it was not overcrowded, I would have gotten the vaccine." [Lumbini_Tilottama_IDI 3]

"I didn't wait much. I received the vaccine faster. In the case of my neighbours, they had to wait for about the whole day as well. Even after waiting for the whole day, some were deprived of the COVID-19 vaccines. There is no arrangement of the refrigerator here. That is why if ten dosages are provided then we require ten people anyhow. If only 2-3 people are available, then the vaccine vial were not opened." [Sudurpaschhim_Durgathali_IDI 1]

"Sometimes the vaccine was insufficient, sometimes there used to be a crowd and sometimes I used to be busy at my work." [Sudurpaschim_Durgathali_IDI 2]

"There would be long lines and the vaccines would be consumed. I would then go to another place and there too the vaccine would have been finished." [Gandaki_Rishing_IDI 2]

In most of the health facilities, the environmental condition was found to be satisfactory, however, in the health facilities there was not the adequate space to sit around, also there was not proper drinking water facility. People had to stand for long hours in the road outside either on a sunny day or on a rainy day to receive the vaccine.

"We had to wait for three to four hours in the queue to receive the vaccine. There is no provision of benches to sit on. We had to stand in the road for hours, be it on a sunny day or on a rainy day." [Bagmati_Dakshinkali_IDI 1]

Some of the participants appreciated the sanitation of the vaccination centre. However, other facilities of the vaccination centre were not satisfactory.

"I have found that the environment around the health institution was satisfactory." [Madhesh_Maulapur_IDI 2]

"There are places to sit there, but it is not sufficient. There are 3 rooms. If there were a lot of patients, there would be no place to stay." [Sudurpaschim_Durgathali_IDI 1]

"The drinking water facility and the toilet sanitation are not maintained properly in the health post." [Sudurpaschim_Durgathali_IDI 4]

"Provision of either on-residence vaccination or facility of transportation was made for differently abled people." [Lumbini_Tilottama_IDI 4]

The participants said that the health facility was not well facilitated as per the infrastructural components. Unavailability of waiting room and insufficient space resulted in them waiting outdoors and in the sun.

"No, you have to sit outside. There is a hall; the reception hall is small where only 2-4 people can fit. Others had to wait outside, there was no such facility. There is a problem; we have to stay under the sunlight." [Sudurpaschim_Janaki_IDI 3]

Unvaccinated case story of COVID-19 from Sudurpaschim Province

The participant is a 23-year-old married woman with two children. She lives with her in-laws, husband and children. She studied to grade 11 and looks after the house and family.

While in the interview, she said that she had been to the health post for vaccination but she was made to wait in the line for a long time. After that, she felt agitated with her loss of working time while waiting for the vaccine and finally decided to not take the vaccine.

The road to her house was not gravelled but was accessible to four-wheelers. Jeep was the only mode of transportation in Durgathali R.M. Only mud houses were observed in the area. The nearest health centre was around one kilometre away and the FCHV's house was around two kilometres away.

10. Satisfaction of people on the service providers for COVID-19 Vaccination

a. Counselling

Participants who had not taken the vaccine expressed that they were not informed about the vaccination program. The participants who took the vaccine said that they were provided with the counselling on the vaccinations. However, the counselling was not done adequately.

"No, the FCHV near my house did not tell me to get the vaccine...I did not consult at the health facility about the appropriateness of getting the vaccine in my case." [Lumbini_Palpa_IDI 2]

"I did not ask anyone about my health problems and if I should take the vaccine." [Lumbini_Palpa_IDI 3]

Participants also expressed that they were counselled properly on the importance of vaccination, side effects of vaccinations along with the indications and contraindications of the vaccine.

"I was staying there and wondered if I would have to get operated on because of the pain after the injection. Then the doctor said if anything happens call us and gave us their phone number. They said it would be okay and I returned. Nothing happened after that." [Lumbini_Rambha_IDI 4]

"No, the FCHV near my house did not tell me to get the vaccine...I did not consult at the health facility about the appropriateness of getting the vaccine in my case." [Lumbini_Rambha_IDI 2]

"They didn't inform us anything about the vaccine beforehand. They just asked us to be ready by taking the clothes off to get vaccinated." [Lumbini_Rambha_IDI 4]

"The FCHVs would come sometimes and tell us that the vaccination is planned on a certain day and time and also tell us that we should go take the vaccine." [Gandaki_Bungdikali_IDI 1]

"Our FCHV also used to inform us regarding vaccines and encourage us to take it." [Karnali_JunichadeRM_IDI 4]

"No, they didn't tell me, if I could take the vaccine after my delivery. No, they didn't counsel me to come after delivery." [Karnali_Junichande_IDI 2]

"They provide the counselling on how much they know and they can. As every woman here is not educated, that is why they mark the date and call the women on the date and inform them on time to make them aware. As the women cannot properly read the vaccination card." [Sudurpaschim_Durgathali_IDI 4]

b. Behaviour of Health Worker

In general, the attitude and behaviours of the health workers to their clients was found to be good and the

participants were satisfied with the services provided to them.

"Health care workers were fine at the time of the service delivery. Everyone was aware about the risk of covid that is why they were aware and had done good behaviour. As we were unable to predict that we could be alive or not because of covid but they provided us service even at such time." [Sudurpashhim_Durgathali_IDI 1]

"Their behaviour is very good. They provide us with a very informative message. They inform us about the importance of vaccines and about where the vaccination is being given, about the tole and the duration for the vaccination. Also they used to share health related information." [Bagmati_Dakshinkali_IDI 4]

Diagram showing major barriers and facilitators of COVID-19 vaccination

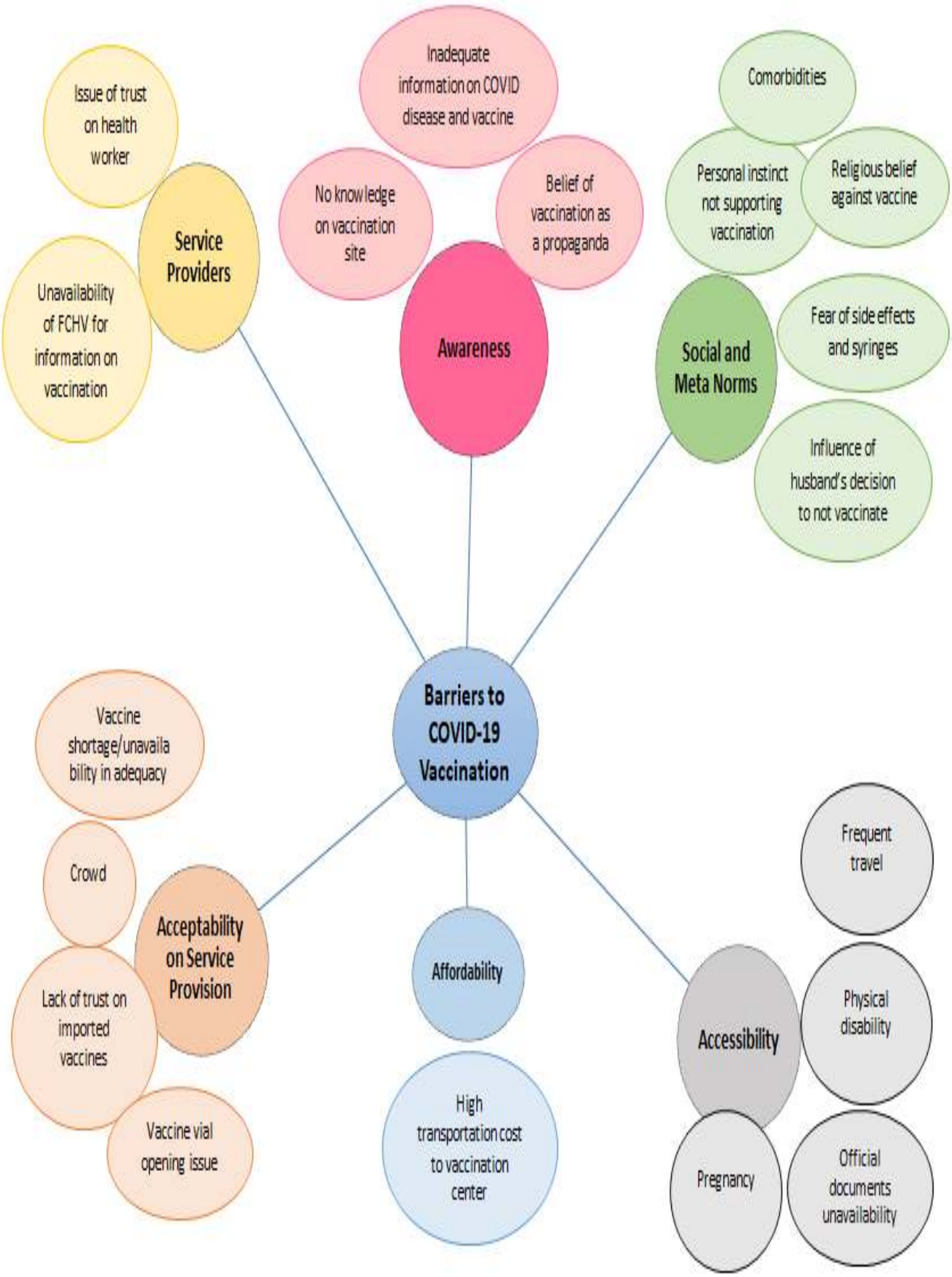

Figure 8: Barriers to COVID-19 vaccination

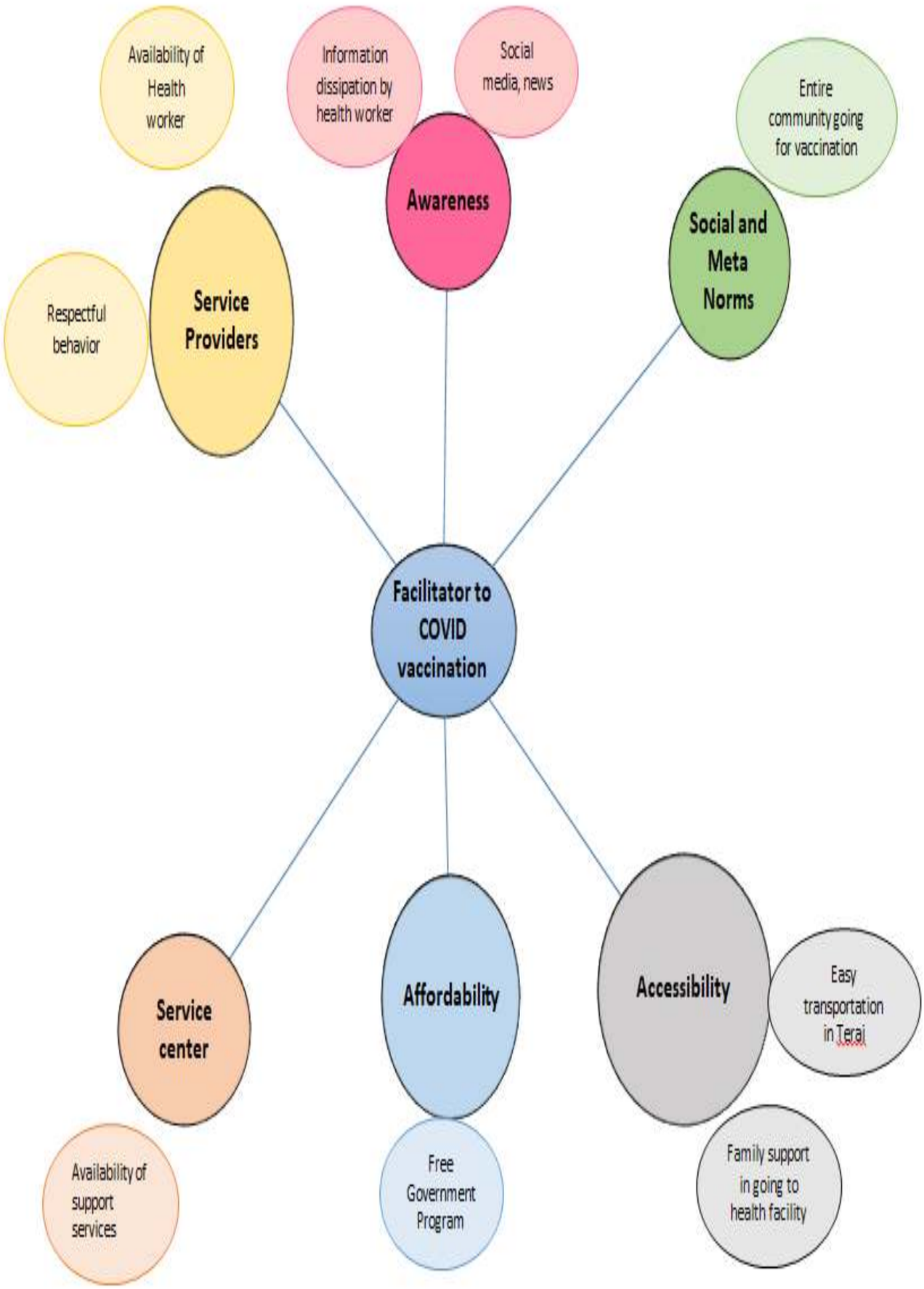

Figure 9: Facilitators to COVID-19 vaccination

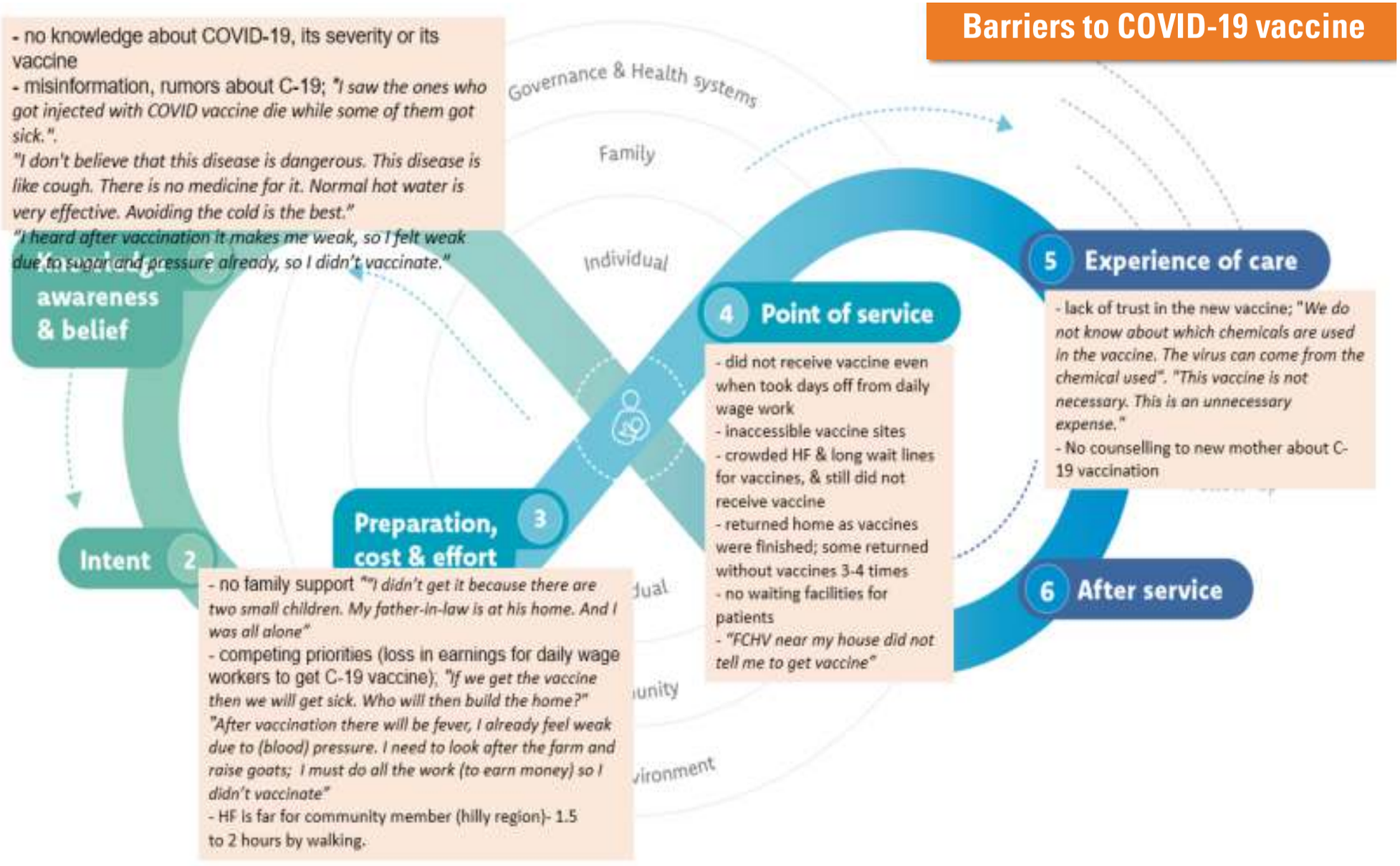

Figure 10: Journey to health to COVID-19 Vaccinatiion

Perceptions of stakeholders

Perceptions of stakeholders and health care providers on health-seeking behaviour on COVID-19 vaccination

1. Awareness of COVID-19 vaccination

Health workers working in respective municipalities were aware of the importance of the vaccine and how the vaccine works and provides immunity to the human body. In some local levels, health workers conveyed the message on the vaccination date through miking, and posting the information on social media such as Facebook. Also the health workers were involved in awareness raising activities through the mechanism of different mass media such as FM, radio etc.

"Immunity is gained. It provides antibodies against COVID-19 and the only thing that protects from the disease is vaccine. There is no other option than a vaccine and if a virus is contracted it doesn't have any specific medicine so mainly we want them to take the vaccine to prevent from COVID-19 and are providing awareness through different mediums." [Madhesh_Maulapur_KII]

"We did it through the management team of the health post and community leaders as well as FCHV. We also kept in our Facebook with the dates of vaccination, 1st dose, and 2nd dose and to this age group." [Lumbini_Tilottama_KII]

"After the government brings the vaccine to the public, we share the information by using social media like Facebook, which has benefited young people who use them. Even for the people who do not look at it, there are FCHVs in all 9 wards/tole. In our Rambha village, we have 24 nutrition facilitator. Through the nutrition facilitator, we share the date and time of COVID-19 vaccination programme with the public." [Lumbini_Rambha_KII]

"We are providing different awareness via the radio, FMs and to each health care worker to create awareness among the general public." [Sudurpaschim_Durgathal_KII]

2. Social and meta-norms influencing COVID-19 vaccination

a. Social beliefs and values

Participants reported that there were no particular social or meta norms that affected COVID-19 immunization.

"In this society, women are totally subjected to the will of their husbands. They accept their husbands' requests for services and decline them if they do not. Because of this, some of the women in this group can't be informed or persuaded until and unless they realize themselves." [Province 1__Mangsebung_KII]

b. Decision-making dynamics

Most participants were independent and could make their own decisions. Some married women stated that they were dependent on the husband's decision in receiving the COVID-19 service.

"We don't have such a case, it may be present in Muslim community, but in our community there aren't any Muslims. It is very less in our municipality. There is no issue of not taking vaccines due to religious factors here." [Madhesh_Maulapur_KII]

3. Religious beliefs

Key informants explained that most of the villagers followed the same religion in the village. There is no such barrier to vaccinating because of the religion rather their health is more important to them.

Participants further expressed that while these kinds of norms might be common among Muslim groups, they do not exist in their society or community. Muslims were not given vaccine immediately after a chant on Friday. So some of them had missed a vaccine.

"No, such people do not exist. In this village, we all are from the same religion. As everyone is concerned about their health, that is why no religious value mattered." [Madhesh_Parsa_KII]

"We don't have such a case, it may be present in Muslim community, but in our community there aren't any Muslims. It is very less in our municipality. There is no issue of not taking vaccines due to religious factors here." [Madhesh_Maulapur_KII]

4. Availability of services of COVID-19 vaccine

In order to make the vaccine available to the people, health workers practiced writing the detailed information of the missed cases so that they could provide the vaccination services to them when the vaccine became available at the service centre.

"Now, if 1/2 of the people say that they missed the vaccine right now we can't provide them the vaccine. We collect the data on missed vaccines and if we feel the need to conduct a vaccination program then we launch the program at Gaupalika…At the district government hospital, people who missed the vaccine and who had to go abroad only got the vaccine." [Lumbini__Rambha_KII]

"If people come and there is no vaccine, we note their name, address and phone number, we then contact Nagarpalika after that we call them and vaccinate." [Lumbini_Tilottama_KII]

A key informant of the Madhesh Province explained that they were unable to vaccinate all the people because of insufficient doses of the vaccine in the vaccination centre.

"Vaccines were also less. Only 25-30 doses were left but people were 60-70. We told them that we can only vaccinate 20-25 people and they asked us why we didn't bring sufficient vaccines." [Madhesh_Maulapur_KII]

"The expiry date was also only six months for the vaccine Covishield. No one had to return without taking a vaccine. People, rather, are returning empty handed in case of a booster, these days." [Madhesh_Parsa_KII]

Key informant of the Sudurpaschim Province explained that in some cases the local health facility itself did not receive the adequate doses of vaccine while in other cases, even if the vaccine was available, villagers remained unaware of the vaccination date and time.

"It is lacking in the chain of command system and the information system. There are three tiers of government. Sometimes we do not receive the vaccine on time. Even if the vaccine is received in time they are not aware about the vaccination on time." [Sudurpaschim_Durgathal_KII]

5. Access to COVID-19 vaccination service centre

Key informant mentioned that the vaccination centres were located at different places of the municipality; like school, temple, private home and health post. Most of the vaccination centres were within a maximum 30 minutes walking distance. The nearest vaccination centre was within 5 minutes walking distance, therefore he mentioned that the roadway was not the issue.

"Road issues won't arise because vaccination centres are located in villages. It takes no more than 3, 4, or 5 minutes to get there from the village." [Madhesh_Maulapur_KII]

The key informants mentioned that they had made the possible approaches to make the vaccination easily

accessible to the people of the area by providing information a few days prior and also setting vaccination centres at multiple sites. However, a participant outlined that the vaccination centres were somewhat distantly located and there were issues in availability of vehicles for the transportation.

"We do inform people about the vaccination date and place three or four days in advance. Thus, when informed earlier, they manage their work and come to vaccinate with one or two people at a time while they might be working in a group in the field and as the entire group cannot come to vaccinate together." [Gandaki_Bungdikal_KII]

"For the people who are 60 years old and above, we went to the place that is near and easily accessible to them. And for the kids, we gave them at the school itself. The youths come here themselves and we also conducted several mobile camps." [Gandaki_Bungdikali_KII]

"It takes about two hours to reach here from the farthest settlement." [Karnali_Junichande_KII]

"We mostly launched the session from the health post. For teachers, we launched the session in Tahun PHC and the Pipaldanda Health Post. For school children, we launched programmes in the respective schools. In some tole, we even reached the people's homes for vaccination." [Lumbini_Rambha_KII]

"If they had to walk, it would take a maximum of two hours to two and half an hour, but some people came by reserving a car, they came in jeeps, and they even take a bus." [Lumbini_Rambha_KII]

"Every ward has a vaccination camp and posts. And it is very near and in the places where people can easily reach. It won't even take 30 minutes walking to reach the camp." [Sudurpaschim_Kailali_KII]

Key informant also outlined that the geography did pose problem in some areas in the hilly region but it was not a problem in the Terai.

"At some places due to the geographical constraints it is difficult to reach the vaccination centres while some of the vaccination centres are nearby as well." [Sudurpaschim_Durgathali_KII]

"There is no such thing as difficulties to reach there. Everyone can reach there. It's the Terai." [Sudurpaschim_Janaki_KII]

"Some women had three to five children and her guardians were not available at vaccination time at home; and also had cattle. It has been observed that they won't leave the work, if they are preoccupied with their work." [Madhesh_Maulapur_KII]

6. Affordability to services of COVID-19 vaccination

According to the key informant, participants were not paid for COVID-19 vaccine. However, they lost their family income when they went to the vaccination centre.

"There are marginalized poor people, while the vaccination centres are not far, but they face disturbance in work. If they are working as a labourer or working in another farm then while going to take the vaccine, they have a gap of two to four hours." [Madhesh_Maulapur_KII]

"Vaccination is available free of charge, there is no public transport, they must walk, so there is no charge." [Karnali_Junichande_KII]

"Yes, that also can be one of the reasons. It happens in the family who are dependent on their daily food based on daily earnings. Therefore, his priority will be for the earnings rather than the vaccination." [Sudurpaschim_Durgathal_KII]

7. Supportive management services for COVID-19 vaccination

Key informants mentioned that the challenges in arranging the people as per the dosage of vaccine in a vial could have been a factor for some people to miss the vaccine.

"We had to make sure there were 10 people in the line to not waste vaccines. But the difficulty was, it was hard for that one person to find another nine people in order to get the vaccine. So, for those people chances were high of not being vaccinated." [Sudurpaschim_Janaki_KII]

"The vaccination centre is not fixed. We provide it sometimes through the home of FCHV or village leader's residence as they have balconies, or a room; otherwise, we administer vaccination close to a tree or in a shaded place. The vaccination centre is not fixed. Sometimes in FCHVs home, or someone else's, we borrow a table and chair and give the vaccination." [Madhesh_Maulapur_KII]

8. Counselling on COVID-19 vaccination

Health worker claimed that they had sent an FCHV door-to-door to publicize vaccination. They also counselled people at the health centre.

"There is negative thought but we meet them from time to time through FCHV and they are taking the vaccine." [Madhesh_Maulapur_KII]

"When people took the medicine and had fever, they used to come here to complain saying the vaccine has caused fever. Later, we made them understand and they inspired others to take the vaccine." [Madhesh_Parsa_KII]

"Yeah, the health workers do conduct the awareness programme. They go to each adult group (Aama Samuha) and inform them about different kinds of vaccines. We have health posts as well who go to those groups and convince them. They come once a month here in the health organization to do the reporting. They are given the topic to discuss to the public and they go to the public and explain them properly." [Sudurpaschim_Kailali_KII]

Vaccinators even reached the home of the clients to provide the vaccination services.

"We went to the home and vaccinated very old people and handicapped." [Lumbini_Tilottama_KII]

Triangulation of desk review with qualitative findings on COVID-19

Studies showed that most people of age 18 to 85 years in Nepal agreed that COVID-19 vaccines are safe and risk-free and that they will be effective in the fight against this pandemic. Even among participants who had not yet been vaccinated, acceptance was high (93.3 per cent).

In general, people in Nepal showed acceptance of the vaccine. The prioritization and age categorization developed by the government was also taken as a convenient way to conduct the vaccine roll out program at the time of vaccine inadequacy. However, the study found that large crowds at the vaccination site, pregnancy and breast feeding status of women, personal choices were important factors in the choice to remain unvaccinated. Vaccination was also found to be a challenge among the migratory population. However, there was not a high disparity in the national data on COVID-19 vaccine coverage and the locally available data.

Conclusion

This study has documented underlying factors of health-seeking behaviour, stakeholders' perceptions of health-seeking behaviour, on institutional delivery, COVID-19 vaccination and routine child immunization along with the triangulation of the information of the desk review and secondary data from IHMIS with qualitative findings. The facilitators and barriers to health-seeking behaviour were explored. The facilitators were identified from participants who had gone through institutional delivery, the caretakers and the mothers whose babies were fully vaccinated, and participants who were vaccinated against COVID-19. While the barriers to the services were explored among people having home delivery, mothers or caretakers of babies that had not been vaccinated (zero vaccination or incompletely vaccinated) and those who were not vaccinated against COVID-19.

Institutional delivery

Better educational status, being informed about the importance of institutional delivery, family support to institutional delivery (i.e. a supportive husband and mother-in-law), accessibility to the health facility, especially in the Terai region, free delivery services including the incentives in the form of transportation services along with other benefit packages supported by the respective municipality, availability of birthing centres in peripheral centres, availability of equipment in the heath facility (such as USG services), availability of an adequate number of competent service providers at the health facility, and good interpersonal relationships with service providers are the major facilitating factors that influenced health-seeking behaviour to institutional delivery.

However, several barriers influenced the health-seeking behaviour. Inadequate information among communities about the free availability of institutional delivery along with the provision of incentives for those who go to the institution for delivery was one barrier. Also, inadequacy of service providers and limited number of birthing centres played vital roles in influencing home delivery. The seasonal disruption of roads, especially in the monsoon, due to landslides was another important factor that resulted in home delivery. The high cost of travel in such areas was also observed. Even when the women wanted institutional delivery and the family supported that, they were unable to get the services in such circumstances. Even where the service were available, quality services and privacy, made people prefer to stay at home and deliver there. The personal behaviour of some people, such as a shy nature, also encouraged them to have home delivery. Due to the COVID-19 pandemic effect, also people choose to have home delivery considering the risk of infection at health facilities. Despite having free institutional services, other expenses, on food and clothes, acted as a barrier. In some communities, people simply felt more comfortable delivering at home with a traditional untrained birth attendant.

Health care providers conducted several awareness raising activities in communities by 'miking' along with the use of social media. Frequent counselling services were provided to participants on the importance of ANC and institutional delivery. However, the unavailability of sufficient human resources to operate the health centres' routine activities, and unavailability of the essential instruments and equipment, was major challenges faced even by the service provider.

Regarding the triangulation of the information, a convergent finding was obtained from both the desk review and the primary information obtained from the qualitative process. From the desk review, various factors were found to play role in having home deliveries. These include long distance to health facility, poor access to information, low educational status of women, and minimal decision-making power of women both within the family and in the wider community had potential to impact institutional delivery.

Even today, people trust the communities' untrained traditional birth attendants and rely on them. Because of the challenging geography, many people are still deprived of the services. There are the information gaps about delivery sites and free availability of the services. However, social media was found to be a readily accepted means to disseminate information. Because of the shortage of health care providers, much responsibility fall on individual health workers to run the health facility. The government needs to give this situation its immediate attention, particularly in rural areas.

The study findings show that receiving ANC is the strongest facilitator of institutional delivery. Attending ANC and maintaining frequent visit as per the recommended protocol will have a positive impact on pregnant mothers to give birth at health institutions. From the programmatic point of view, the findings suggest that it is possible to promote institutional delivery by expanding ANC coverage and associated counselling.

Routine Child Immunization

Information dissemination by the health care provider, access to information through social media and news, better educational status, free availability of services, quality services, family support in visiting to the health facility, easy availability of transportation in the Terai areas, full immunization coverage campaigns conducted by the nation and the local governments, vaccination service sites in different location of the municipalities to get to hard-to-reach populations were the major facilitators in health-seeking behaviour to routine child immunization.

However, there were several barriers to routine child immunization. Inadequate knowledge of the benefits of immunization, broken family and mental health status of parents were found to result in some children missing their vaccination. Loss of the vaccination card, children with health problems such as fever and other health issues at the time of vaccination, movement of people from one place to another, especially movement of women to their native home during the time of vaccination, fear of being scolded by health workers, difficulty in managing the time during the time of the vaccination due to the household chores, and work in the fields were the influencing factors to missed routine child immunization.

Health workers perceived that people's awareness levels had increased with time. The religious belief of avoiding the vaccine until two hours after reading Namaz persisted in some Muslim communities. The trend of returning the care-takers/mothers without vaccinating their babies due to the risk of high vaccine wastage rate also deprived some babies of vaccination.

In the case of routine child immunization services, a divergent finding has been found among desk review and the primary information. From the desk review, it was found that 70 per cent of the children were immunized by 2019 while in the community most of the children were vaccinated. Most communities celebrated the full immunization coverage campaigns.

Not providing the vaccination services to clients visiting the vaccination centre on the risk of vaccine wastage was among the major challenges that need to be overcome. Identification of missed cases of the routine child immunization even in the fully immunized municipalities showed the need of the municipalities to search the missed cases actively and revisit their full immunization status and strategy.

COVID-19 Vaccination

Use of social media, higher educational level of the people, vaccine availability, adequate knowledge and information on the importance of COVID-19 vaccine, free availability of the vaccines, trust in the vaccines' effectiveness, counselling by health care providers on the vaccine importance, community engagement, and support from family members were the major enabling factor that motivated people to get their COVID-19 vaccination.

Despite the efforts made by the government and other concerned bodies, some people were unvaccinated.

Not giving priority to vaccination, personal intuition, lack of awareness of the importance of vaccination was found as the barriers to health-seeking behaviour related to COVID-19. Widespread misinformation on social media about the COVID-19 vaccine, physical disability and challenging travel to vaccine centres, religious beliefs, economic challenges, opportunity cost, long waiting time, documentation issues such as unavailability of the citizenship certificate, unavailability of services at health facility, and vaccine hesitancy also resulted in people remaining unvaccinated. Conspiracy theories related to COVID-19 vaccination such as: COVID-19 vaccine was to kill the elder population of the nation and community rumours that COVID-19 vaccine would make the couple infertile, and that the COVID-19 vaccine would turn the people into transgender acted as barriers to COVID-19 vaccination. The findings also showed that a higher level of formal education does not mean a higher level of vaccine acceptance.

Health workers perceived no specific social and meta norms in the community on COVID-19 vaccination. There was the system of conveying the message to the people by 'miking' and using social media from health facilities. There were the religious beliefs among some Muslims to not be vaccinated after Friday prayers.

From the triangulation, a convergent finding was found from the desk review and primary information collection through qualitative research in which most people had accepted the vaccine.

Recommendations

Institutional delivery

- The findings of this study provide local evidence that help policy makers and implementers to develop strategies to improve institutional delivery. Thus, context-specific microplanning in the provision of incentives based on the distance of household from the health facility would facilitate institutional delivery.
- The school curriculum should include teaching of danger signs and symptoms during pregnancy and delivery, and the importance of institutional delivery for the health and well-being of mother and child.
- The study findings suggest that a free delivery service is a necessary strategy. In communities where home births are common, an effective strategy should be developed at the local level that should cover the benefit package in a culturally acceptable manner to encourage more people to give birth in their health facility.
- Ultrasound is a part of routine ANC and a tool for risk screening. Provision of training to health workers on basic USG skills and availability of such facility at the health posts would help early detection of the situation of children and develop proper referral mechanism for the preparedness plan of delivery.
- One reason for not visiting the health facility for delivery is a lack of medical doctor. Making provision for doctors at least once, a month in area that have no doctors for ANC, check-ups would facilitate institutional delivery.
- Pregnant mothers feel more comfortable with health workers that have good interpersonal communication in local language in a culturally sensitive manner. Thus, provision of local health workforce in the local health facility helps people to feel more comfortable and at ease when seeking care.
- Health education programmes to increase community awareness of safe delivery services may increase demand for maternal health services, and ultimately increase the institutional delivery.
- Although the distance to a health facility plays a role in institutional delivery, it may not be necessary to build new health facilities for purpose of encouraging institutional delivery. A focus on expanding the availability and quality of services at existing facilities would encourage institutional delivery. Thus, addressing infrastructure issues will increase the number of mothers giving birth at health institutions. For example, making provision for waiting homes for pregnant women would help reduce the cost of a hospital stay before delivery.

Routine Child immunization

- It is crucial to spread awareness on the importance of immunization, and parents and caregivers should have information about the immunization calendar. They should know when and where to bring their children for vaccination. They should also know that missing routine immunization can be life threatening for infants, and routine immunization is one of the most effective and cost-effective ways to protect children's lives and futures. The mothers' group and FCHVs should be continuously encouraged to promote the importance of routine immunization.

- Local government should keep records of broken families to ensure vaccination of estranged children.
- Digital immunization records are more secure and make it easier to keep track of immunization status. Digitalization of the vaccination card would enable people to get their child vaccinated even after the loss of a card; or vaccinate at different places.
- There should be awareness generation that vaccination is a child's right so that parents are not afraid to demand the required vaccine for their child.
- Protecting the most vulnerable from health risks is critical for everyone's safety. A special vaccination mechanism should be developed and implemented to ensure that people on the move, migrants in irregular situation, and hard-to-reach children have proper access to immunization.
- Use of means of communication (e.g. phone calls, text message) to inform people about the changes in vaccination day should be increased by the health facility.
- Rural municipalities should keep records of the vaccination status of all children and a special mechanism should be developed for those children who miss vaccination.

COVID-19 immunization

- The study findings show that even some educated people are hesitant to take the vaccine. It is critical to give appropriate information about the need and importance of COVID-19 vaccine through local social media, engagement with local communities, political and religious leaders and those that the priority groups trust.
- Use of social media in delivering the right information to combat the myths and misinformation in the community
- Provision of household visits to those not coming to health facility despite multiple calls. Especially tracing the pregnant women who missed vaccination during gestation period should be done and their vaccination should be ensured.
- Identification of target populations to be vaccinated and ensuring the required vaccine and doses for the group. Microplanning is needed to ensure that the people on the move, migrants in irregular situations, and hard-to-reach people have proper access to COVID-19 vaccination.
- Intersectoral collaboration is key for COVID-19 vaccine coverage. There should be proper collaboration between local government authorities, community leaders, and health workers.
- Easy access to the vaccine is crucial. To increase the demand for COVID-19 vaccination, it is important to make it easy for people to get vaccinated. This can be done with the COVID-19 vaccine being available in all government and private health facilities.

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ANNEX

Annex 1: List of lowest performance of Palika on DPT3 coverage, Institutional delivery and COVID-19 Vaccine, HMIS, DoHS, 09/June/2022, Nepal

Province Name	DPT3		Institutional delivery		COVID-19 Vaccine		SELECTED PALIKA √
	Palika Name	%	Palika Name	%	Palika	%	Mangsebung RM Belbari M
Province one	Phaktanlung RM	41.9	Gauradaha M	0	PathariShanishchare M	35.84	
	Menchhayayem RM	46.8	Miklajung RM	0	Katahari RM	42.23	
	Mai Jogmai RM	47.8	Ramdhuni M	0	Mai M	43.34	
	Khumbu Pasanglhamu RM	50.5	Kamal RM	0.09	Falgunanda RM	43.81	
	Dharan Sub-Metropolitan City	55.2	PathariShanishchare M	0.74	Shadananda M	47.34	
	Sirijanga RM	55.5	Haldibari RM	0.96	Tapli RM	52.17	
	Falelung RM	55.7	Shivasatakshi M	1	Urlabari M	52.47	
	Suryodaya M	56.4	Kanepokhari RM	1.1	Udayapurgadhi RM	53.77	
	Mangsebung RM √	57.8	Jhapa RM	1.3	Ramdhuni M	54.77	
	Myanglung M	58	Belbari M √	1.3	Mai Jogmai RM	55.20	
Madhesh	Thori RM	57.3	Rajgadh RM	0	Brindaban M	38.38	Parsa RM Maulapur M
	Parsa RM √	63.6	Bishnupur RM	0	Maulapur M √	42.12	
	Haripurwa M	66.2	LaxmipurPatari RM	0	Bindabasini RM	46.93	
	Lalbandi M	68.4	Bateshwor RM	0	Parsagadhi M	51.21	
	Maulapur M √	70.6	Kamala M	0	PakahaMainpur RM	51.23	
	Malangawa M	71.5	Dhanauji RM	0	Bhagawanpur RM	51.53	
	Balara M	73	MukhiyapattiMusaharmiya RM	0	DewahiGonahi M	51.83	
	Prasauni RM	73.4	Sonama RM	0	Mahadewa RM	52.71	
	Bagmati M	74.9	Aurahi M	0	Katahariya M	53.21	
	Chandranagar RM	76.3	Mahottari RM	0	Chandrapur M	53.72	
			Parsa RM √	0			
			Brahmapuri RM	0			
			Kaudena RM	0			
			Parawanipur RM	0			
			Bishrampur RM	0			
			Bindabasini RM	0			

Bagmati Province	Sunapati RM	41.2	Suryabinayak M	0.16	Ichchha Kamana RM	22.34	Kathmandu MC (Slum) Dakshinkali M Khaniyabas M
	Kathmandu Metropolitan City √	41.5	Dakshinkali M √	0.75	Sunapati RM	36.20	
	Khandadevi RM	51	Changunarayan M	1.4	Chauri Deurali RM	39.98	
	Dakshinkali M √	54.9	Tarakeshwor M	1.5	Mahabharat RM	42.72	
	Netrawati RM	55.8	Nagarjun M	2.4	Bagmati RM	45.92	
	Suryabinayak M	56	Chandragiri M	2.4	Shivapuri RM	47.68	
	Doramba RM	57.1	Khairahani M	2.7	Phikkal RM	47.72	
	Khaniyabas RM √	59.1	Panchakanya RM	4.5	Belkotgadhi M	50.85	
	Changunarayan M	59.4	Budhanilkhantha M	6.6	Indrasarowar RM	52.25	
	Baiteshwor RM	59.8	Suryagadhi RM	7	Khaniyabas RM √	53.03	
Gandaki Province	Naraphu RM	12.5	Naraphu RM	0	Bulingtar RM	47.40	Rhising RM Bungdikali RM
	Chame RM	31.8	Lomanthang RM	0	Bungdikali RM √	59.69	
	Neshang RM	35.1	Neshang RM	2.6	Kathekhola RM	62.00	
	BahragaunMuktikshetra RM	40.5	Phedikhola RM	2.8	Naraphu RM	62.80	
	Nashong RM	40.6	Sundarbazar M	3.7	Mahashila RM	62.98	
	Madi RM	46.8	Ghiring RM	4.2	Rhishing RM √	64.72	
	Rhishing RM √	48.7	Rupa RM	5.5	Ghiring RM	64.92	
	Bareng RM	51.6	Bhirkot M	5.7	Raghuganga RM	66.91	
	Bungdikali RM √	52.3	Rhishing RM √	7.9	Bareng RM	67.03	
	Annapurna RM	52.7	Dordi RM	8.2	Nisikhola RM	68.62	
LUMBANI PROVINCE	Tansen M	60.6	Om Satiya RM	3.9	Narainapur RM	53.39	Tilottama M Baganaskali RM
	Mallarani RM	62	Baganaskali RM	6	Chhatradev RM	53.41	
	Ribdikot RM	63.5	Sunawal M	7.8	Rapti Sonari RM	58.10	
	Sandhikharka M	64	Tilottama M √	8.9	PuthaUttanganga RM	60.77	
	Mathagadhi RM	65.3	Panini RM	9.8	Krishnanagar M	64.75	
	Dangisharan RM	70.6	Mayadevi RM	12.8	Kali Gandaki RM	65.12	
	Shitaganga M	70.8	Tinau RM	13	Bangalachuli RM	67.46	
	Rambha RM √	71.1	Rambha RM √	14.3	Maharajganj M	67.63	
	Tilottama M √	71.3	Gulmi Durbar RM	14.5	Baijanath RM	68.89	
	Satyawoti RM	73.4	Bardaghat M	14.6	Bijayanagar RM	69.51	

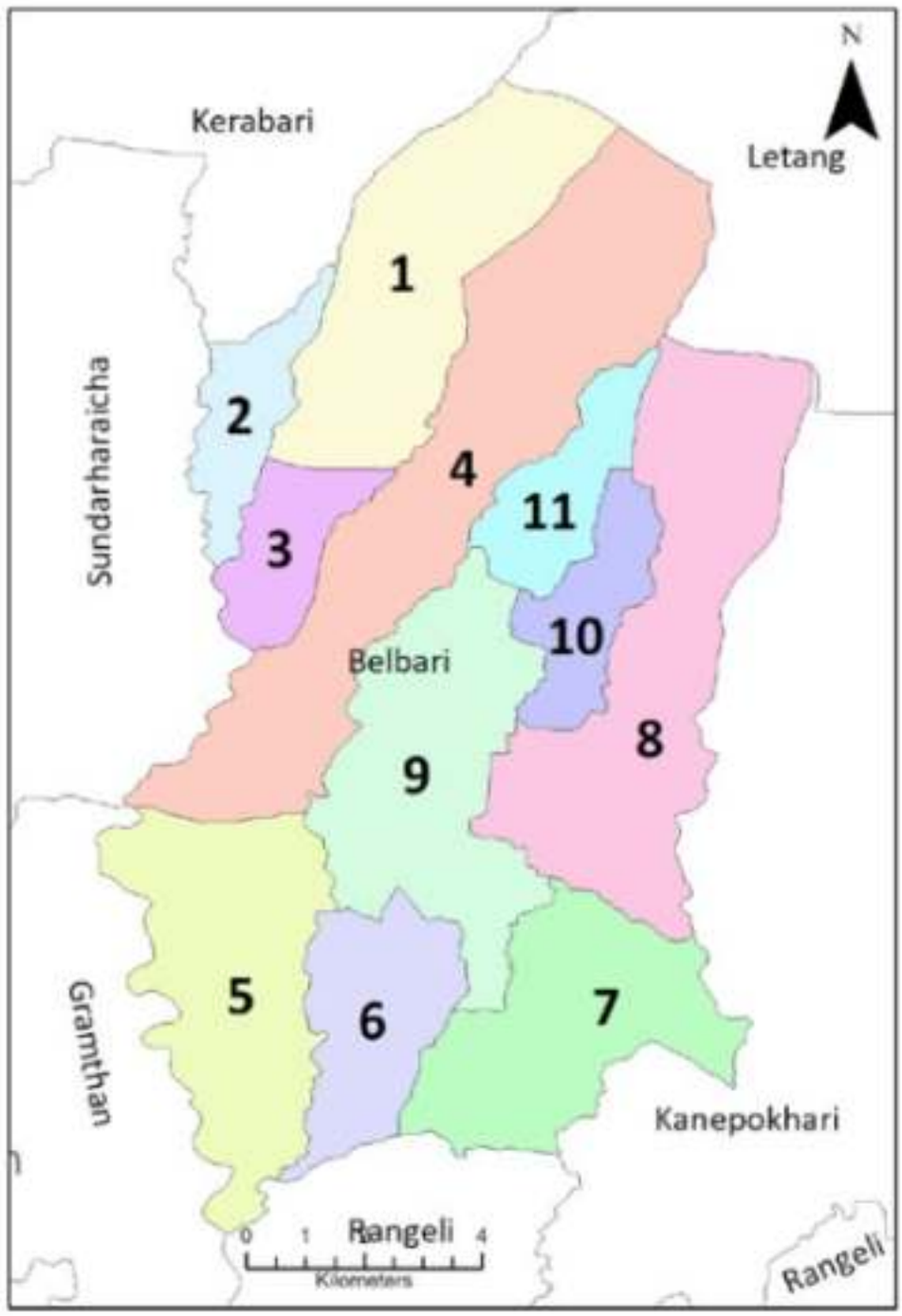
Karnali Province	Shey Phoksundo RM	31.1	Dolpo Buddha RM	0	Dolpo Buddha RM	42.56	Junichande RM Barahatal RM
	Namkha RM	63.1	Shey Phoksundo RM	2.6	Simkot RM	44.45	
	Dolpo Buddha RM	63.3	Namkha RM	5.7	ChharkaTangsong RM	45.08	
	Lekabeshi M	68.8	ChharkaTangsong RM	11.4	Bhagawatimai RM	46.54	
	Mahawai RM	73.4	Shivalaya RM	14.9	Tatopani RM	48.44	
	Musikot M	75.8	Kumakh Malika RM	32	Kaike RM	48.49	
	Jagadulla RM	76.9	Junichande RM √	33.5	Chankheli RM	48.62	
	Barahatal RM √	80.5	Patarasi RM	34.1	Junichande RM √	49.20	
	Kalimati RM	82.4	Kaike RM	36	Sarkegad RM	51.05	
	Shivalaya RM	83.2	Barahatal RM √	36.2	Tilagupha M	51.19	
Sudurpaschim Province	KhaptadChhanna RM	60.3	Janaki RM √	20.6	Kedarsyun RM	44.79	Janaki RM Durgathali RM
	Kailari RM	61.4	Bedkot M	21.3	Masta RM	46.03	
	Janaki RM √	62.1	Godawari M	32.6	Mohanyal RM	48.81	
	Sanphebagar M	64	Krishnapur M	32.8	ChhabisPathibhara RM	50.12	
	BannigadhiJayagadh RM	64.5	Kailari RM	37.6	Surma RM	52.72	
	Durgathali RM √	66.7	Mohanyal RM	38.7	KhaptadChhanna RM	54.72	
	Belouri M	69.3	Joshipur RM	39	Chure RM	56.80	
	Bhajani M	70.3	Punarbas M	40.6	Durgathali RM √	58.10	
	Joshipur RM	70.7	Lekam RM	42.3	Bitthadchir RM	58.32	
	Tikapur M	72.4	Shuklaphanta M	42.7	Bogatan RM	58.97	

Annex 2: Description of the study sites

Mangsebung Gaaupalika, Illam, Koshi Province

Mangsebung Rural Municipality was founded in 27th falgun, 2073 B.S, has six wards. The area of the palika is about 142.41 km^2. Total population is 16,897 (female: 8,295, male: 8,602) and there are 3,793 households. It has a rich agriculture land and the major cash crop is the Ginger. Mangsebung is an absolute Kirat community and has its own diginity and unique feature i.e. vegetarian life style. Non-vegeterian foods are prohibited, as are smoking and alcoholic drinks. The number of Limbu's is high and followed by Rai. The Limbu ethnic group is in the majority in this rural municipality, followed by the Rai. Mangsebung has its own dignity and unique features. One of the important unique features of Mangsebung is adoption of vegetarian life style. There is prohibited the non-vegetarian foods, smoking and alcoholic drinks. Mangsebung has a master plan to make society peaceful and harmonious. Kirat religious organizations are working to make Mangsebung totally free from non-vegetarian food, smoking, alcoholic drinks, murder, rape, kidnap, bloodshed and any kind of violence. There is no proper provision of electricity and development in case of roadways. The office of Mangsebung Gaunpalika is located in Ibhang, Ilam district of Nepal. The health post was about ten to fifteen minutes from the rural municipality. Regarding the health facility, there were three health posts, five community health unit and one birthing center. Talking about the temples, there was the famous temple Gajurmukhi Dhaam where most of the pilgrimage used to come. The roadways were challenging and faced difficulty in getting the vehicles.

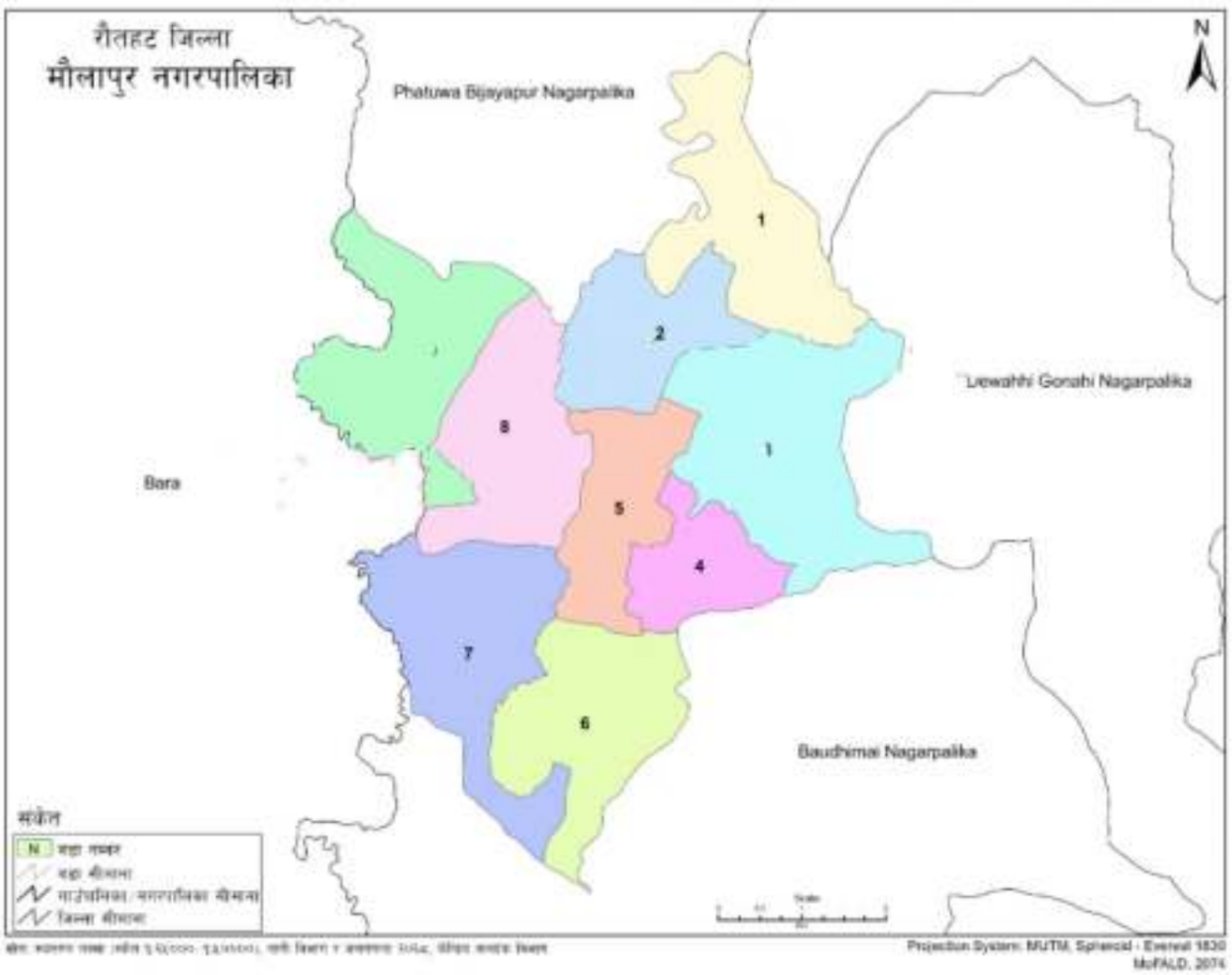
Belbari Municipality, Morang, Koshi Province



Belbari Municipality is spread over 132.79 km^2 of flat land and has a population about 75595. Among them 57.13 % are Janjati, 32.23% Brahaman Chhetri, 7.81% Dalit and 2.83 % Backward Madheshi. The litracy rate of this Municipality is 74.17%, among this 66.66% are female and 83.22% are female. It is surrounded by Letang in the North and Kerabari, Kanpokhari in the East, Sundarharaicha and Gram than in West and Rangeli in the North. The municipality has eleven wards, one health posts, seven community health units, and two birthing centres in a health-post in ward 5. There is no provision of birthing centre in every ward of the municipality. As well as there is one PHCand one Municipality Hospital. The municipality has good connectivity of road and access to vehicles as well but with limited local routes of transportation. So, auto is a major means of commute that work on reservation basis for the people at the time of need. The nearest city is Itahari which is at a distance of 15 km from the municipality and has many health centres.

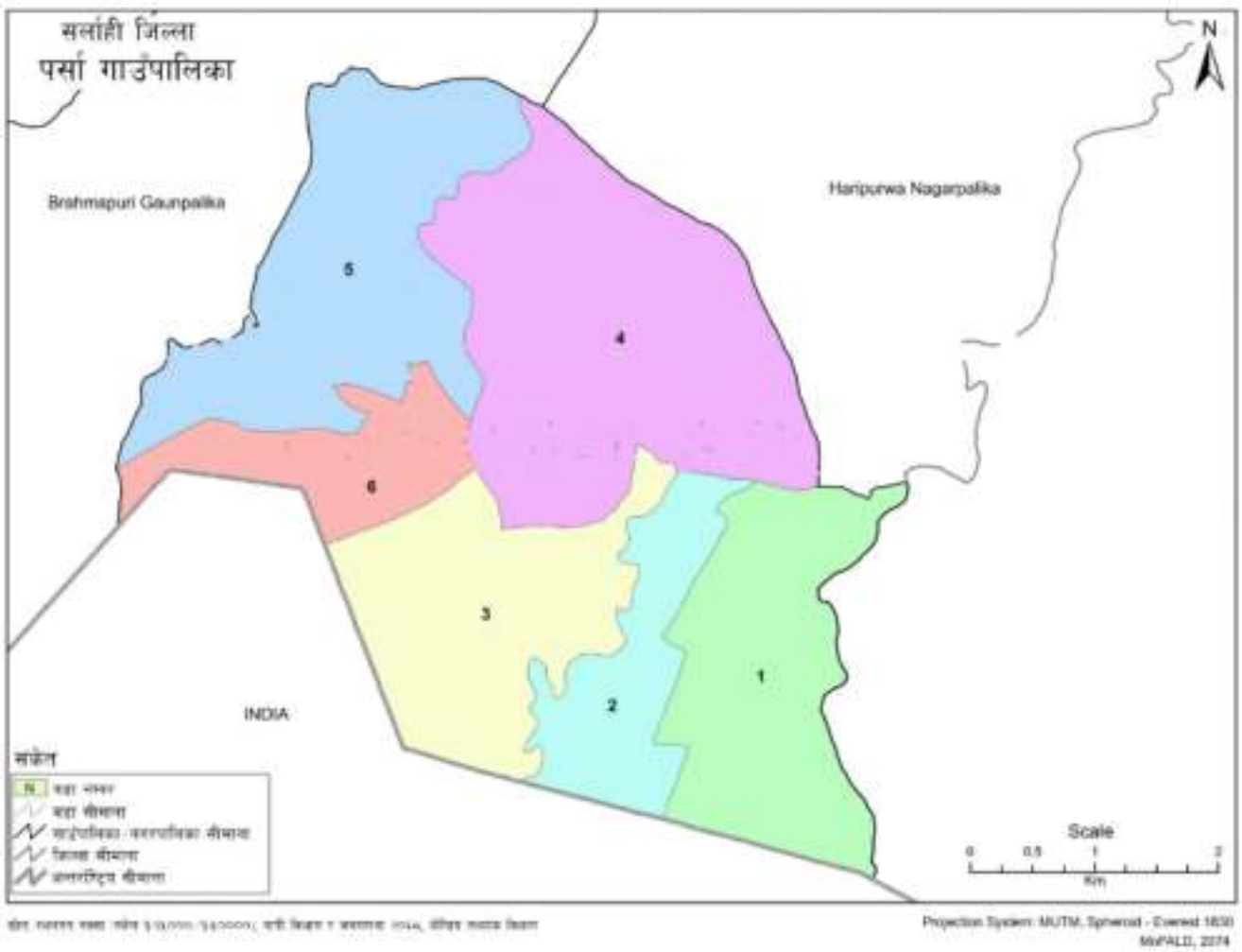
Maulapur, Rautahat, Madhesh

The municipality is spread over an area of 34.75 km^2 square kilometres flat land and has a population of 26,431. The municipality has nine wards, one PHC, three health posts, two basic health care centres and one birthing centre in the PHC. The area has no public vehicles. People travel in vehicles that carry commodities and basic supplies to the rural municipality or their own vehicle. At the time of emergency, people use non-governmental ambulance that cost them high expenses. There is only one birthing centre. But with the staff being limited, the birthing centres would shut if the staffs go for some training. When the people needed to do USG they would need to go to gaur or Chandranigahpur or Birganj which was approximately 15 km 20 km and 35 km far respectively. At the time of complications, people would go to Gaur or Birganj.



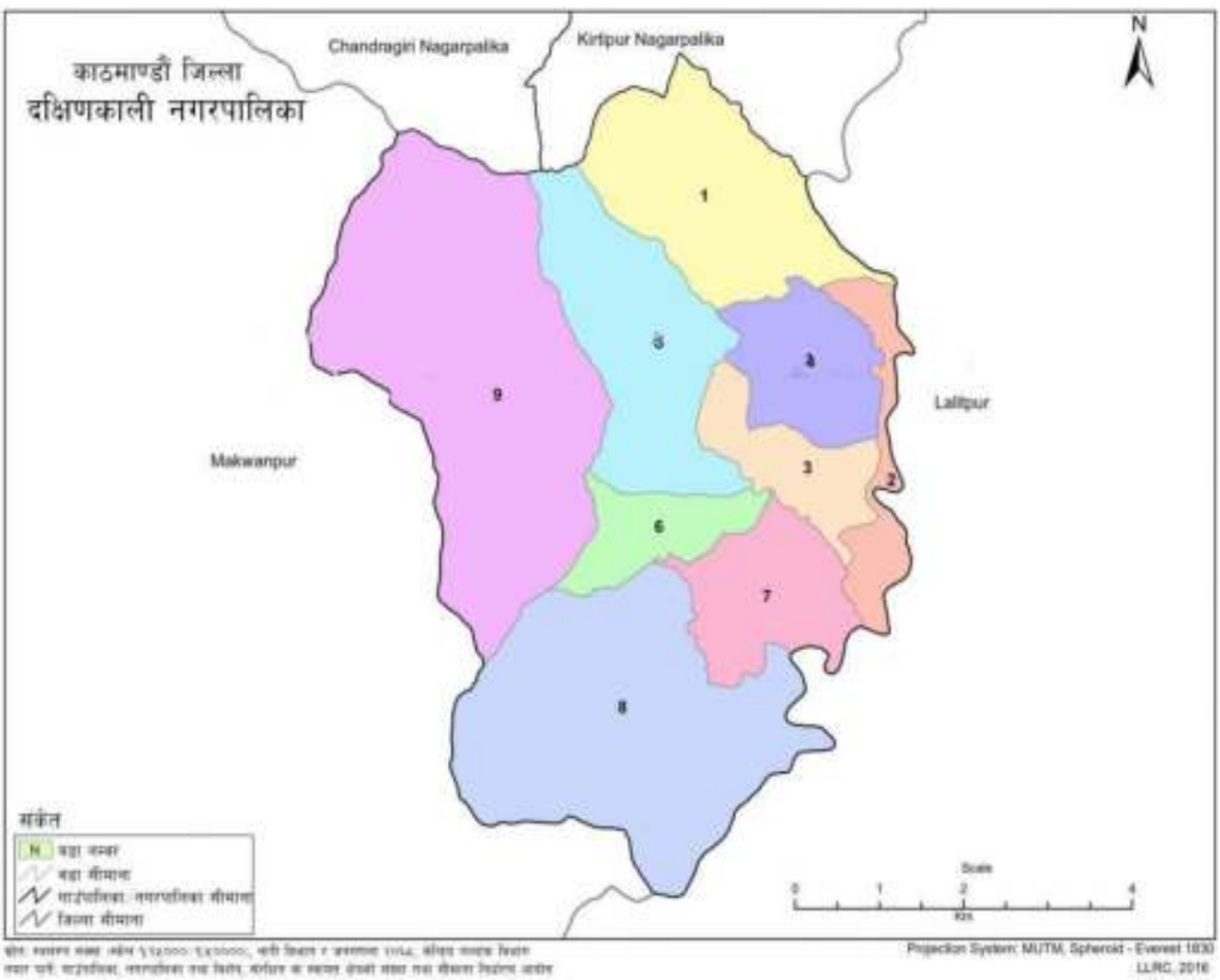
Parsa, Sarlahi, Madhesh

Parsa Rural Municipality is spread over 23.12 km^2 of flat land and has a population of 21,650. The municipality has six wards, four health posts, two community health units, and one birthing centre in a health-post in ward 5. There is no provision of birthing centre in every ward of the municipality. The municipality has good connectivity of road and access to vehicles as well but with limited local routes of transportation. So, auto is a major means for commute that work on reservation basis for the people at the time of need. The nearest city is Malangwa which is at a distance of 10 km from the rural municipality and has multiple health centres and a provincial hospital. There are slum areas and a sizeable Muslim community.



Dakshinkali Municipality, Kathmandu, Bagmati

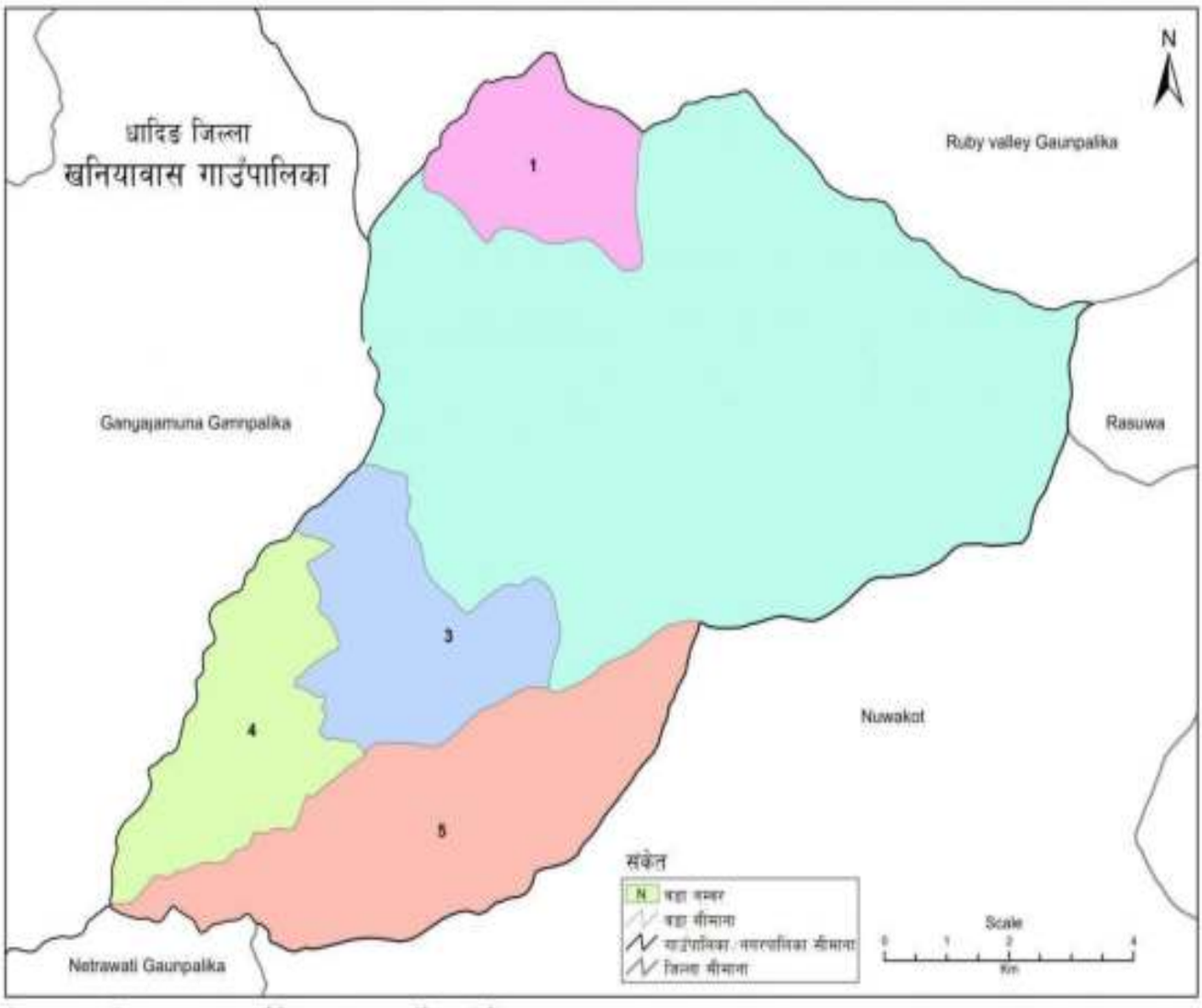
Dakshinkali is situated at southern part of Kathmandu and surrounded by Lalitpur District in East-South, Makawanpur District in West-South and By chandragiri and Kirtipur Municipality in North. It is scattered across 43 square kilometers. According to census 2011, the total population of the municipality is 24,297, among them 11,873 are male and 12, 424 Female (48.87% male and 51.13% female). The major castes of the municipality are Tamang, Chhetri, Bahun and Newar. Only 17,045 people were fully literate who were able to read and write, while 585 were able to read only. There are 9 wards with, 1 Primariy health center, and 3 urban health centres and 5 health posts. There were a lot of cases with home delivery at Chhaimale, ward no. 8, and few in ward 9 (bhandarkharka, simpaane, kerabaari). These places were very remote with no transportation facility.



Khaniyabash Rural Municipality, Dhading, Bagmati

Khaniyabas Rural Municipality is located in the northern part of Dhading district which is spread over an area of 120.8 square kilometres of hilly land. It has a total population of 12,749. The population is made up mostly of Tamang, Gurung and other ethnic groups. Among 2,902 households counted in household survey of 2075, only 152 households were non-ethnic communities. The main languages spoken are Nepali, Tamang and Magar. Its headquarters is located in Darkha which is in ward of the Municipality. The municipality has five wards. Khaniyabas RM has one rural hospital, two health posts, two basic health service centres and one community health unit. Khaniyabas Rural Hospital, Bhogateni Health Post and Jharlang Health Post have birthing facilities. Khaniyabas Rural Hospital also acts as referral centre of thepalika. RM has a private primary level hospital in ward 3, Kimtang Fedi, which has also been a main centre for primary health services.

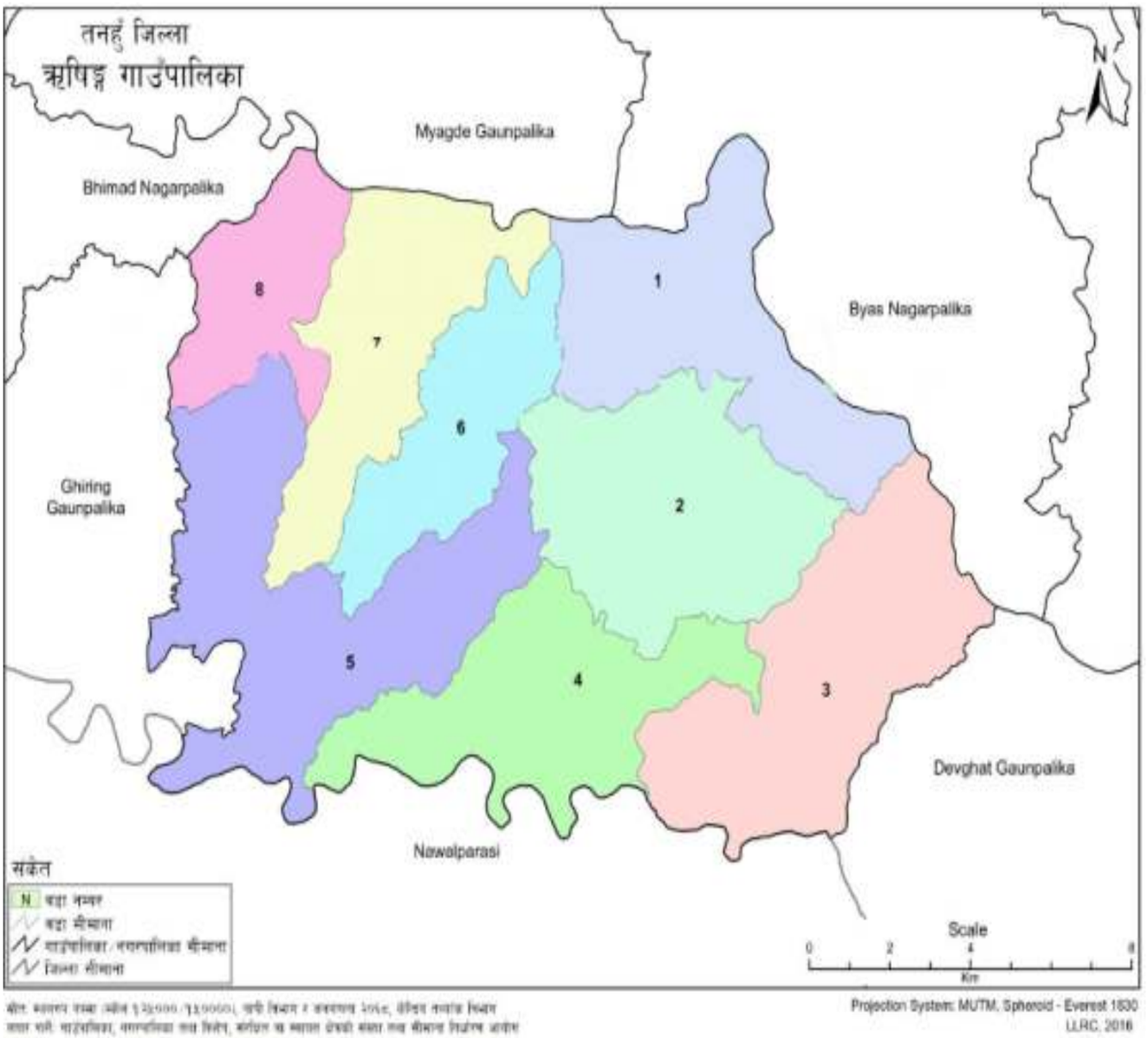
The area has access of earthen road to the district headquarter, Dhading besi. The other roadways connecting different wards are earthen and motorable. The main and connecting roads remain disturbed in the monsoon season due to landslides, rivers and rivulets over the roads. There is challenge in getting access of vehicles in the area with only some buses and jeeps running infrequently. People need to hire the jeeps if they have to travel during emergencies. The palika has an ambulance for emergency travel to and from Khaniyabas Rural Hospital and as required.



Projection System: MUTM, Spheroid - Everest 1830
LLRC, 2016

Rhishing Rural Municipality, Tanhu, Gandaki

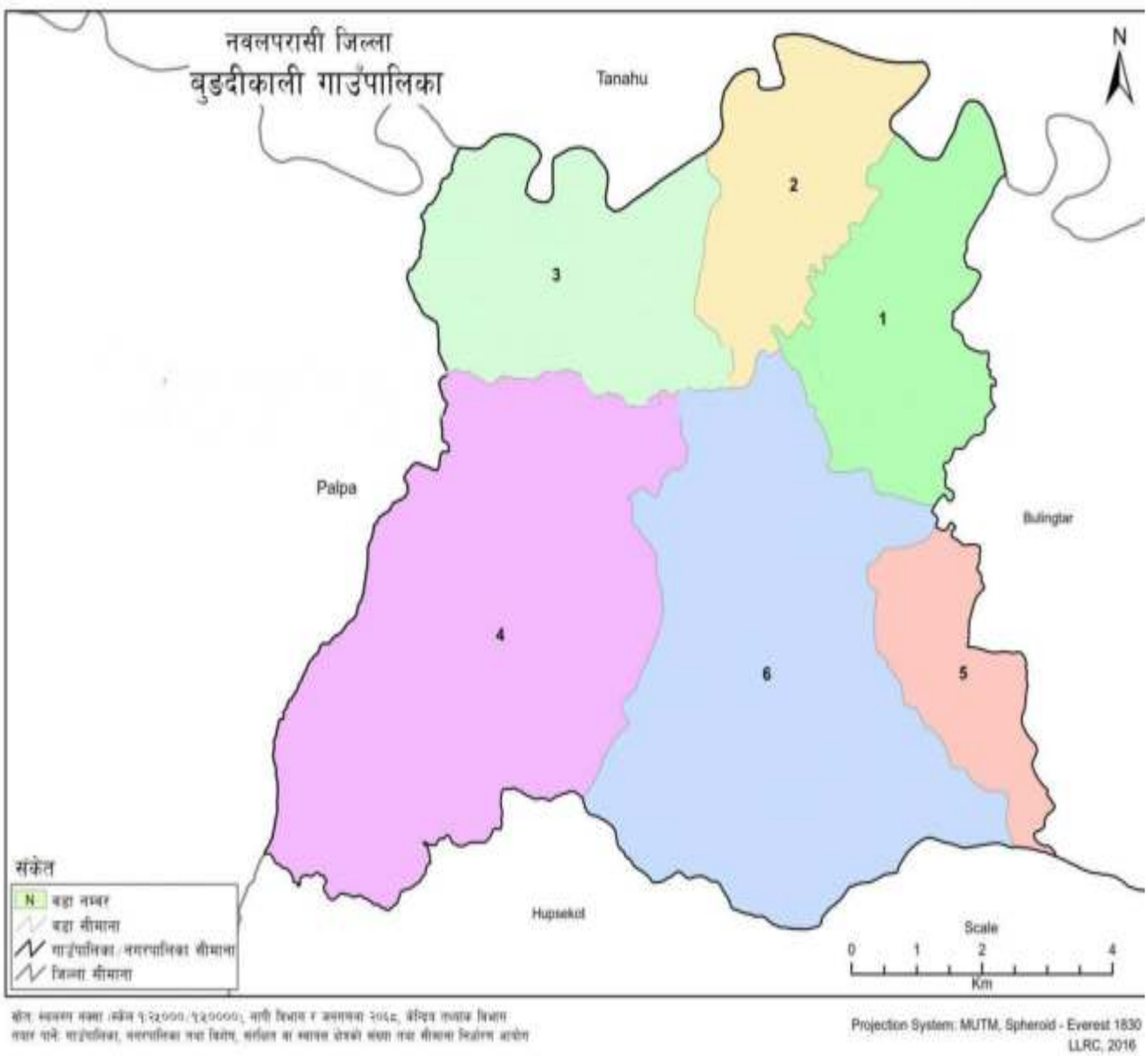
Rhishing Rural Municipality is spread over 215 square kilometres of hilly land and has a population of 25,870. The municipality has eight wards, five health posts with three of them having birthing centres, and one basic health unit. The area has access of pitched road to the municipality office. However, the other roadways connecting different wards are earthen and motorable. Vehicle access is challenging, with only some buses and jeeps running infrequently. People needed to hire a jeep if they had to travel during emergencies. There was no availability a autos on a reservation basis at the time of need. The area had issues in the regular supply of electricity and water, which not only affected the daily life of people but also service delivery at health facilities. The nearest city for the people to go in a time of need were Bhimad district and Pokhara.



Baudikali Rural Municipality, Nawalparasi, Gandaki

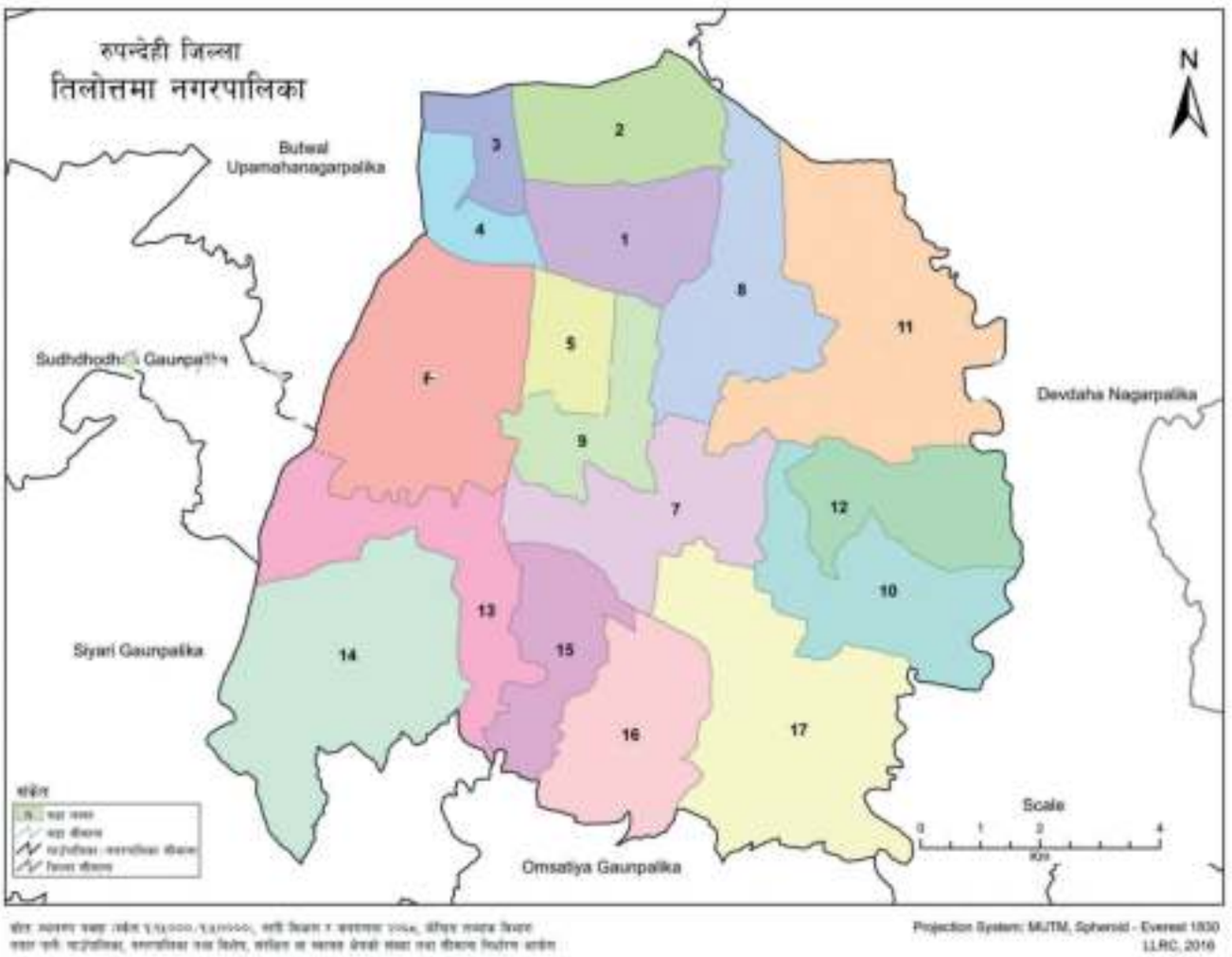
Baudikali Rural Municipality is spread over an area of 91.9 square kilometres of flat land with surrounding hilly area and has a population of 15,374. The municipality has six wards, one primary health care centre, four health posts with one having a birthing centre, and three community health units.

The municipality is connected with under-construction Kaligandaki corridor and is 23 kilometres from Bharatpur, while Pokhara has multiple private and government hospitals along with multispecialty hospitals. The municipality had recently been facilitated with three wheeler autos which worked by reservation. Those two autos greatly helped the mobility of people, particularly during emergencies.



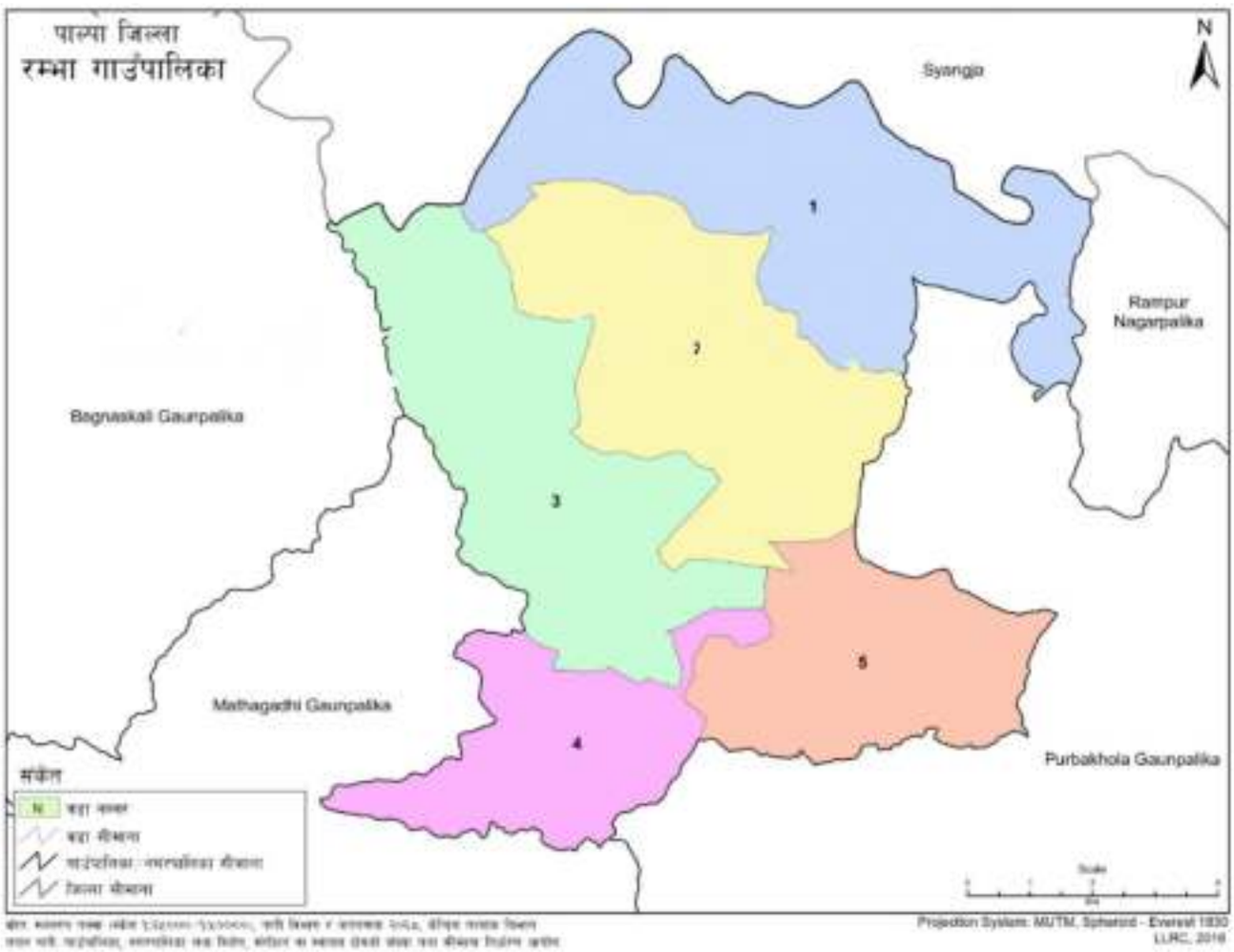
Tilottama Municipality, Rupandehi, Lumbini

Tilottama Municipality is spread over 126.2 square kilometres of flat land and has a population of 123,000. The municipality has 17 wards, seven health posts (two having birthing centres), seven basic health centres, and three urban health centres. The area has multiple private health facilities providing up to tertiary level health care services. The area is easily accessible to vehicles with multiple roads.



Rambha Rural Municipality, Palpa, Lumbini

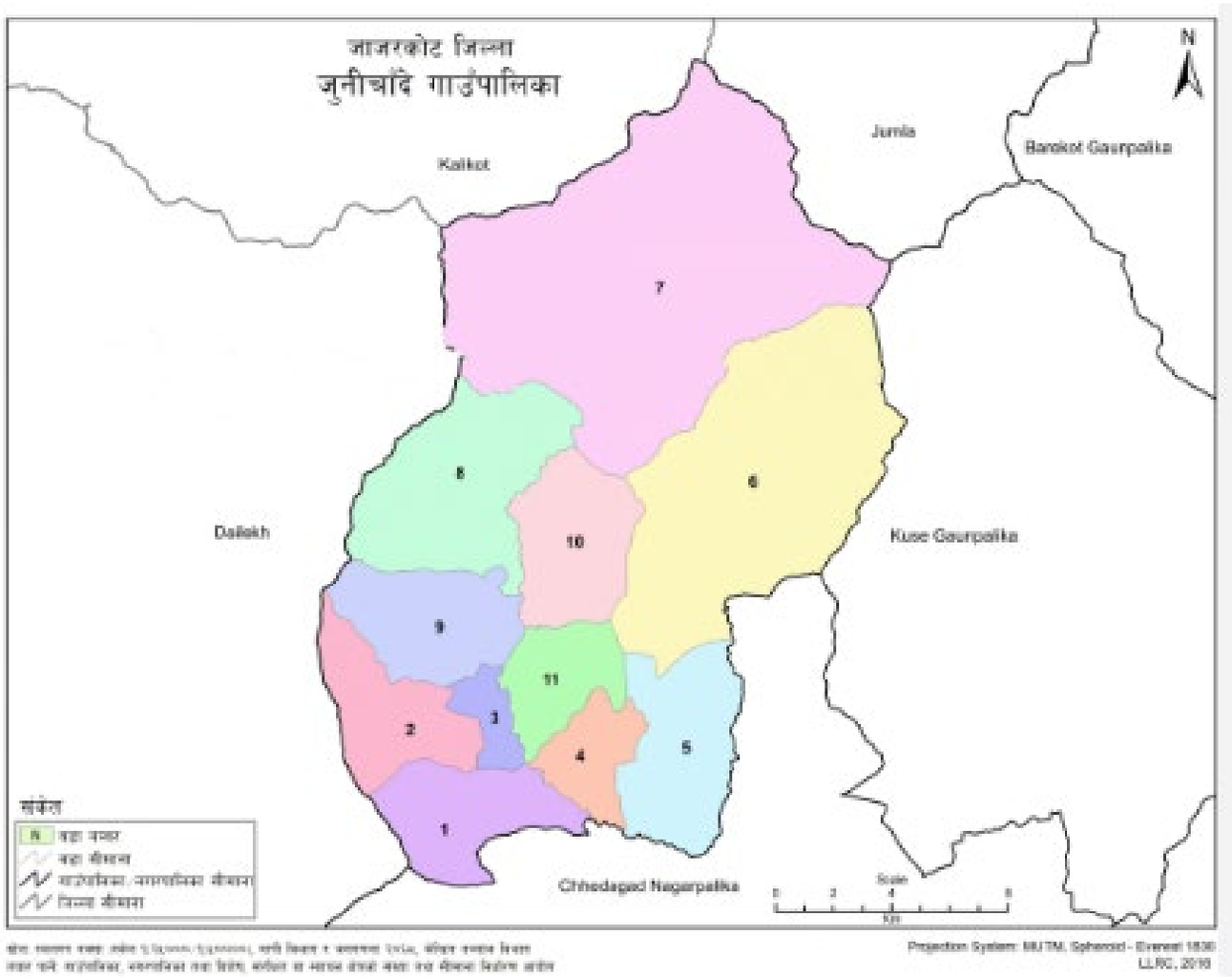
Rambha Rural Municipality is spread over 94.12 square kilometres of hilly land and has a population of 20,190. The municipality has five wards, one primary health care centre, five health posts with each having a birthing centre, and three community health units. The municipality is connected to the Siddhartha Highway and is 23 kilometres from Tansen, which has two hospitals: the Mission Hospital and Lumbini Medical College. The topography is hilly, making the roads challenging. That is exacerbated by seasonal landslides. Three-wheeler autos have recently been introduced here. Those four autos have greatly helped in people's mobility, particularly in emergencies.



Junichande, Jajarkot, Karnali

Junechande Rural Municipality is spread over 346.21 square kilometres of hilly land and has a population of 21,733. The municipality has 11 wards, one primary health care centre, three health posts, 11 basic health care centres, four birthing centres and 16 PHC ORC. There are no separate birthing centres. One birthing centre is in the PHC and the other three are in the health posts. The area is not accessible to public vehicles. People travel in vehicles that carry commodities and supplies. In emergency, those vehicles can be hired on a reservation basis, but that is expensive.

With limited staff, the birthing centres remain closed when staff go for training. The alternative is to go to Birendranagar or the headquarters of Jajarkot District. It takes one day (12 hours) to get there by vehicle. In emergency, people go to Jajarkot District Hospital 150 kilometres away.

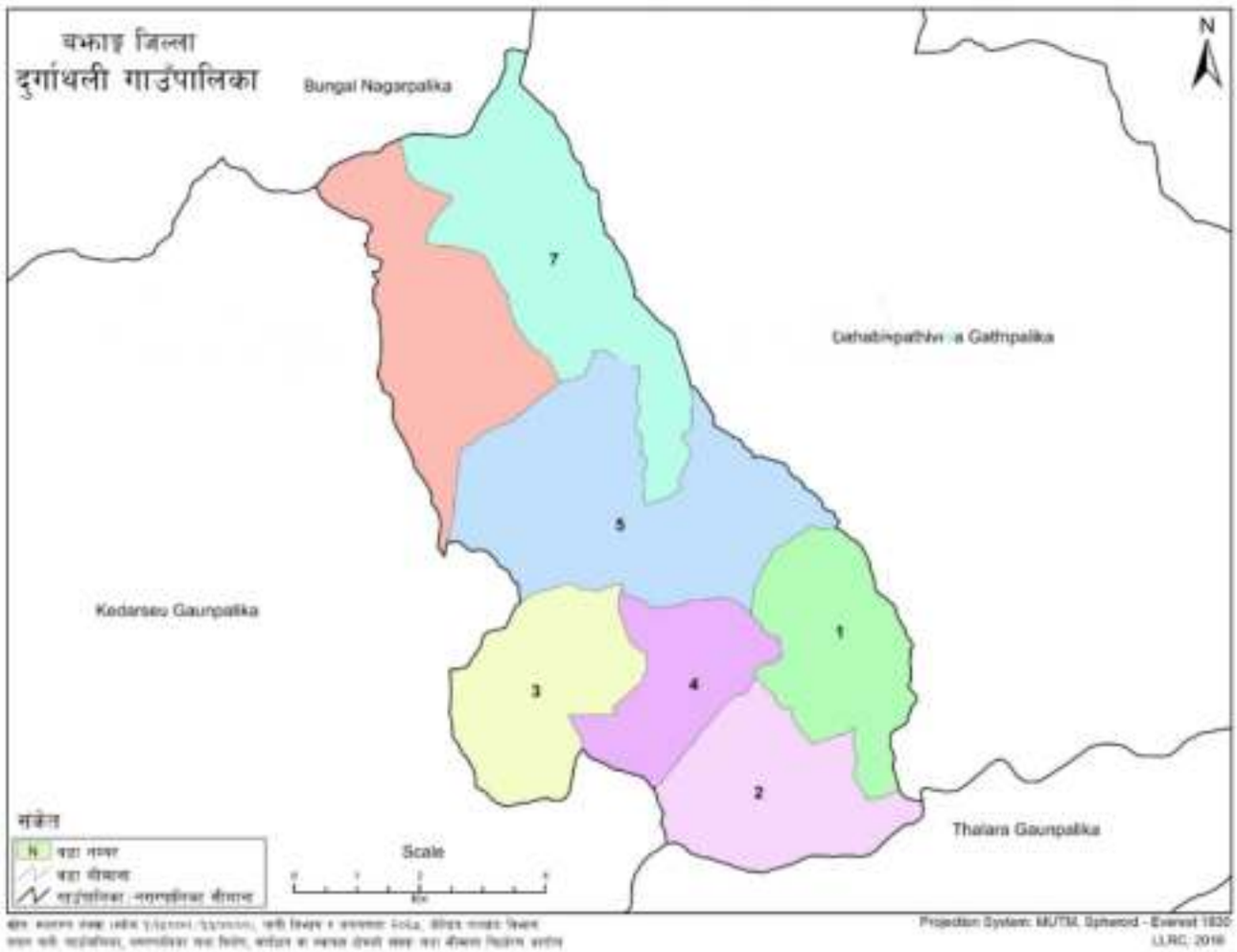


Barhatal, Surkhet, Karnali

Barhatal Municipality is spread over 455.09 square kilometres of flat land and has a population of 25,622. The municipality has 10 wards, five health posts, five basic health care centres, four community health units and six birthing centres. Not every ward has a birthing centre. The municipality is not easily accessible by road. So, auto is a major means of commute. They work on reservation basis at a time of need. The nearest city is Birendranagar which is 30 kilometres from the rural municipality and has multiple health centres, and tertiary care services.

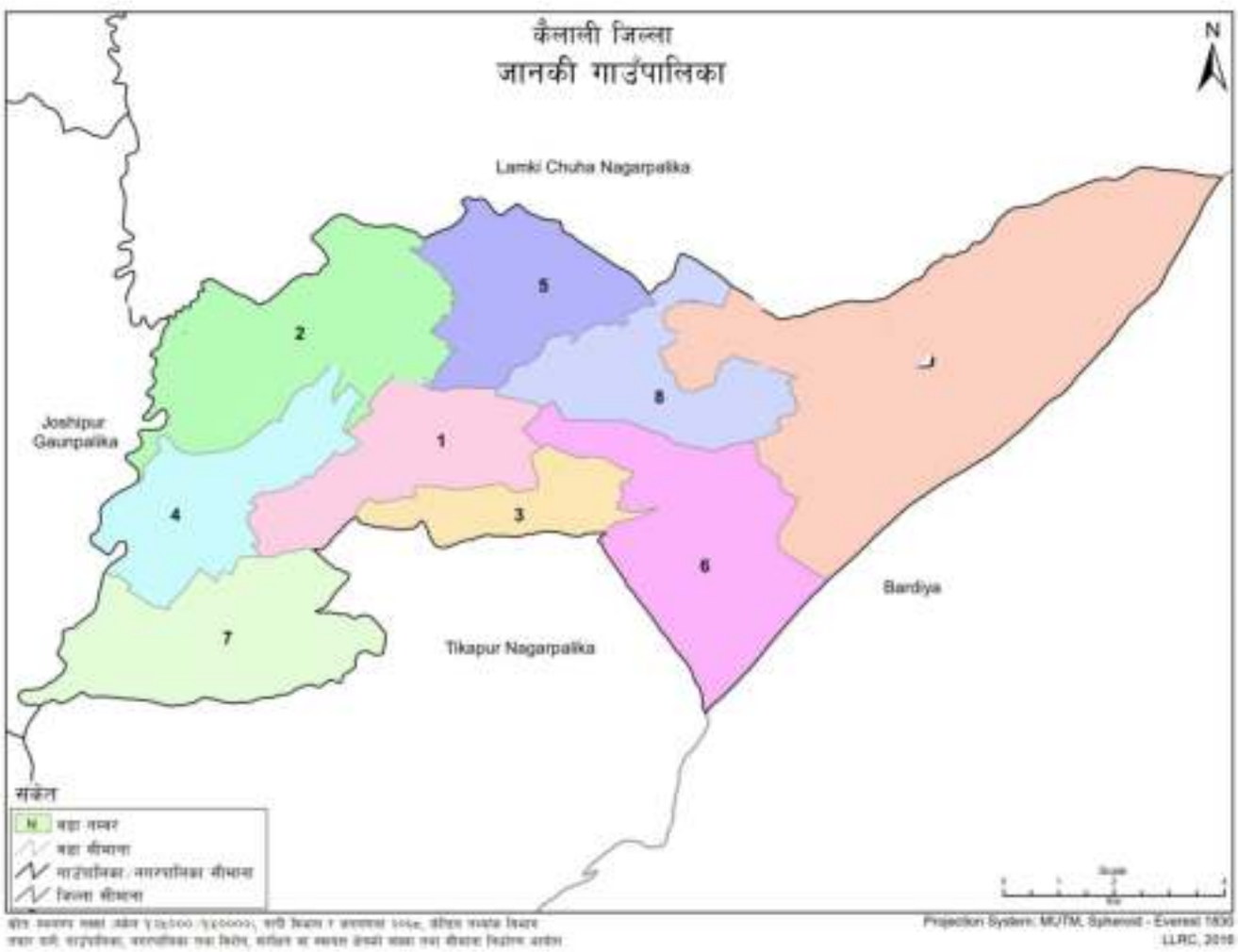
Durgathali Rural Municipality, Bajhang, Sudurpachhim

Durgathali Rural Municipality is spread over 61.83 square kilometres of hilly land and has a population of 12,972. The municipality has seven wards, three health posts, five basic health care centres and seven birthing centres. The area is not accessible to public vehicles, and people hitch a lift on vehicles carrying commodities and supplies. In emergency, those vehicles can be hired on reservation basis, but that is expensive. Every ward has a birthing centre. But the birthing centres remain shut if staff are not present. When needed, people go to Chaudari health post in ward 1, but the road is very challenging. In emergency, people go to Chainpur in Bajhang District Hospital, which is approximately 22 kilometres away.



Janaki Rural Municipality, Kailali, Sudurpachhim

Janaki Rural Municipality is spread over 107.27 square kilometres of flat land and has a population of 48,540. The municipality has nine wards, four health posts, one community health unit, five basic health care centres and five birthing centres. Not every ward has a birthing centre. The municipality has good road connectivity, but has limited local transport routes. Auto is a major means of travel. They run on a reservation basis. The nearest city is Tikapur. It is three kilometres from the rural municipality and has multiple health centres with tertiary care services. There are slum areas and a substantial Muslim community



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