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Service Availability and Readiness For Maternal and Newborn Care in Peripheral Birthing Centers of Nepal

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- Study Team

Acronyms

HEARD	Health Nutrition Education and Agriculture Research and Development
ANC	Antenatal Care
BCs	Birthing Centers
BEmONC	Basic Emergency Obstetric and Newborn Care
CEmONC	Comprehensive Emergency Obstetric and Newborn Care
CPAP	Continuous Positive Airway Pressure
FCHVs	Female Community Health Volunteers
FGDs	Focus Group Discussions
KMC	Kangaroo Mother Care
KII	Key Informant Interviews
MPDSR	Maternal and Perinatal Death Surveillance and Response
MMR	Maternal Mortality Ratio
MNH	Maternal and Neonatal Health
MSS	Minimum Service Standards
NMR	Neonatal Mortality Rate
PMTCT	Prevention of Mothers-to-Child Transmission
PNC	Postnatal Care
PPH	Post Partum Hemorrhage
SARA	Service Availability and Readiness Assessment
SBA	Skilled Birth Attendant
STI	Sexually Transmitted Infections

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Executive Summary

Introduction

Nepal has made substantial progress in maternal and newborn health. Maternal mortality fell from 239 per 100,000 live births in 2016 to 151 in 2022. Neonatal mortality declined from 39 per 1,000 in 2001 to 21 in 2022. Despite these gains, progress varies by province and socioeconomic group. Lumbini Province still has an MMR of around 207, much higher than the national average. Neonatal mortality improvements stalled between 2016 and 2022. Wealth, education, and geography contribute to these gaps. Peripheral birthing centers are often under-resourced. Many lack proper space, equipment, and staff.

The Government of Nepal developed the Safe Motherhood and Newborn Health Roadmap 2030. It aims to reduce MMR below 70 and NMR below 12 per 1,000 by 2030. Birthing centers—mostly in health posts and primary health care centers—are critical to reaching rural women. There are about 2,848 birthing centers across Nepal, with 2,831 functional. These centers provide antenatal care (ANC), normal delivery, postnatal care (PNC), and basic newborn services. Yet questions remain about their readiness and quality of care. The 2021 Nepal Health Facility Survey highlighted readiness gaps but sampled only a subset of peripheral centers. This study offers a more detailed examination at birthing centers, adding the Ministry's Minimum Service Standards (MSS) and voices from service providers, planners, and mothers.
The study had four objectives: assess service availability and readiness for MNH care at birthing centers; identify factors behind underutilization of services; evaluate compliance with MSS for infrastructure, clinical care, and support; and capture stakeholder perspectives on quality and access of MNH care. Findings aim to provide recommendations of tailored interventions targeting quality and equity of maternal and newborn care.

Methods

A mixed-method convergent design combined a cross-sectional facility survey with qualitative inquiries. Quantitative data came from 222 birthing centers in 45 of Nepal's 77 districts, covering all seven provinces. This sample represents just over 10% of birthing centers in the country. Districts were selected to reflect provincial quotas, ecological zones, and known service gaps—Madhesh and Lumbini received extra weight due to higher mortality and lower readiness in prior surveys.

Data collectors used KoBo Toolbox on mobile devices to record observations using an adapted Service Availability and Readiness Assessment (SARA) tool. It covered infrastructure, equipment, medicines, and service availability for ANC, delivery, PNC, infection control, governance, and management information. Parallel qualitative data were captured from 342 key informant interviews (KIIs) and 28 focus group discussions (FGDs). KIIs included facility in-charges, nurses, municipal and provincial health officials. FGDs involved mothers of children under two years, exploring barriers and enablers to service use.

Quantitative data were analyzed in R, generating descriptive statistics by province and facility type. Qualitative transcripts were coded in NVivo to identify themes around infrastructure, human resources, community factors, and MSS compliance. Results were integrated to give a full picture of birthing center readiness and utilization.

Results

a. Antenatal, institutional delivery and postnatal services

Antenatal services		Services provided	
	Service Availability **100%**	Iron + Folic acid	**93.2%**
	Counselling services **~100%**	Albendazole	**99.5%**
	Available on all days **98.2%**	Calcium	**76.6%**
Tests during ANC		Td vaccination	**91%**
	Urine Protein Hemoglobin **~57%**		
	Blood glucose **51%**		

Institutional Delivery	
Recommended units: • Oxytocin: **36.5%** • Ergometrine: **21.2%** • Magnesium sulfate: **19.4%**	24-hr duty schedule **85.1%** EoC job aid available **58.1%** Designated newborn corner **67.6 %** Partograph use **97.3%** Discharge from facility before 24-hrs **24.3%**

Recommended units: Oxytocin: ≥30, Ergometrine: ≥5, and magnesium sulfate: ≥50

Postnatal Care Services

Service Availability
~100%

>= 4 PNC availability
>95%

Assessment, management and referral of newborns with danger signs
~80%

Vitamin K1 injection
74.5%

Newborn growth monitoring
79.5%

Kangaroo Mother Care (KMC) For Low-Birth Weight Baby
83.6%

Only **18%** had KMC corner

Delayed bathing Of newborns
72.7%

Recommended units: Vitamin K1 injection: ≥1

b. Drugs and Utilities

Availability of drugs and utilities for emergency newborn care at (>= mean amount) levels

10% Dextrose NS
39.6%

Inj. Ampicillin
38.3%

Inj. Gentamycin
41.4%

Phenobarbitone
15.8%

IV cannula
32.9%

5/10 ml syringes
27.5%

b. Equipment and instruments/infection prevention and control

Availability of equipment and instruments in delivery room at recommended levels

Electronic suction machines **~50%**	Cheatle forceps **48.2%**
Manual suction machines **37.2%**	Resuscitation tables **68.9%**
Suction tubes **68.9%**	Bed screens **71.6%**
Oxygen cylinders **22.1%**	Clean sheets & pillowcases **11.7%**

Recommended units: Electronic suction machine: ≥1, Manual suction machine: ≥1, Suction tube: ≥1, Oxygen cylinder: ≥2

Infection Prevention and Control measures

IPC Protocols available **85.1%**

Placenta Pits	**78%**
Core IPC materials	**>75%**
Alcohol hand rub	**62.2%**
Color coded waste bins	**88.3%**
Visible IPC signage	**36.9%**
Handwashing posters	**45%**
Daily surface cleaning	**64%**
Clean toilets	**79.3%**
Flushing water	**77.5%**

Recommended units: Placenta pits: ≥1
Core IPC materials: surgical masks, gowns/aprons, and disposable gloves

d. Leadership and Governance

Leadership and Governance	Management Information System
HFOMC formed **85.1%**	HMIS registers used **100.0%**
HFOMC members trained **85.1%**	DHIS-2 use **98.6%**
Regular HFOMC meetings **93%**	Designated data reporter **95.9%**
	RDQA done **68.5%**
	LMIS systems in place **95%**

Minimum Service Standard Scores

- **61% of BCs had MSS Score 70–90**
- **15.7% scored between 50–70**
- **4.9% below the score of 50.**

Province wise Mean MSS Score

Lowest in Madhesh: 71.8

Highest in Bagmati: 81.4

Quality assurance action plans were in place in 83.8% of facilities

Koshi: 51.5%
Karnali: 100%

e. Perspectives on service delivery by service providers and service users

- The officials of federal ministry of health and population and provincial health ministries shared the policy level and operational challenges in terms of quality and coverage for MNH services. For instance, many local governments have unilaterally declared new birthing centers without prior needs assessments and service capacity in terms of infrastructure, human resources, drugs and amenities.
- Establishment of birthing centers without prior assessment led to inconsistent service quality, underutilization of services and poor coverage of institutional deliveries.
- The absence of coordination and oversight from provincial and federal authorities has contributed to inadequate service quality, little room for improvement, and lack of public trust.
- Birthing center faces shortage of Skilled Birth Attendants (SBAs) that led to hinder the provision of 24-hour delivery services. The federal government's conditional grant scheme covers salaries for around 1,600 Auxiliary Nurse Midwives (ANMs), but this is insufficient given the number of birthing centers.
- Some provinces and local governments have allocated additional funds for ANM recruitment, yet systemic issues persist.
- Operational challenges remain as some ANMs have shared that they were not receiving the salaries aligned with the official government pay scale, and employment contracts are often inconsistent.
- Access to SBA training remains limited, and retention is problematic—trained ANMs frequently migrate to private sector facilities.
- Providers also reported burnout and skill gaps in managing obstetric complications, further compromising service delivery.
- Service providers expressed the need for coaching, mentoring, and updated training on maternal and newborn health. In addition, incentives to service providers, their residential management at the health facilities, and uncertainty of the job tenure were also the challenges shared by the service providers.
- Home deliveries remain prevalent in several communities, indicating a need for further community and home-based intervention.
- Women are bypassing the nearest birthing center with an expectation of high-level care at district and private hospitals, that led to underutilization of services
- Those women who deliver at the birthing center, were opting for early discharge post-delivery due to a lack of basic amenities and residential accommodations at birthing centers.
- Routine supervision and quality assurance mechanisms are weak. Some of the birthing centers have not conducted Minimum Service Standard (MSS) assessments, and among those that have, many fail to achieve the recommended MSS score of 85% or higher. Local governments have limited effort in providing consistent oversight, that further compounded quality assurance challenges.
- Despite those challenges, some of the positive aspects of MNH service use were seen from the consultation.
- Mothers shared that Cash Incentive programs, particularly maternity incentive schemes and nutritional support after delivery have significantly increased antenatal care (ANC) attendance across several regions.
- Some municipalities had supplemented maternal incentives from their internal budgets to promote institutional deliveries.
- Most health facilities reported consistent use of partographs to monitor labor, and active management of the third stage of labor with uterotonics was widely practiced and identified and referred the complicated cases
- Delivery Service has been provided regularly and post-natal visits were also observed for both home delivery and institutional delivery.

Recommendations and key take aways

- To improve access, coverage and quality, the existing birthing centers need strategic assessment based on the service access and utilization, infrastructure availability and quality, drugs and equipment availability, and staff availability and their capacity.
- Services should be consolidated in strategically locations, with adequate infrastructure and service readiness such as least three separate rooms, and strengthened facilities with equipment. (Local and provincial government)
- While designating birthing centers, assessments should be conducted in coordination with district, provincial, or federal authorities.
- To improve ANC services, urine pregnancy test, hemoglobin test, rural ultrasound should be made available for early detection of risk pregnancy and their timely referral
- Medicines such as oxytocin, ergometrine, and magnesium sulfate should be made available at a recommended level. Ergometrine is still in use and bundle approach for prevention and management of PPH is through prescription of Tranexamic Acid.
- To improve quality of MNH services, coaching and mentoring activities should be expanded and regularized focusing on practical MNH skills, aligned with the Continuum of Care approach and incorporating structured PNC checklists.
- A robust oversight mechanism should be in place to support local levels and birthing centers so that provincial and federal entities monitor service quality, consistency, and operational issues of MNH services.
- Untrained ANMs should be provided with SBA training without interruption of the services in the birthing centers. Further, their retention should be ensured with adequate residential space and with incentives for PNC visits.
- Local levels should assess whether birthing centers meet the standard covering required rooms, toilet, water supply, amenities, medicines, care facilities, and referral services, prior to designation of birthing centers.
- Community activities should be led by health facilities to bridge women to health facilities for increasing service access and utilization.
- Referral mechanisms should be made robust for the identified risk pregnancies and complicated cases with the essential arrangement of transport systems as around half of the facilities have ambulance services.
- Low costs interventions could be sought from donors supporting for MNH areas covering those but not limited to post-partum hemorrhage (PPH) Drape for better PPH management, AI handheld ultrasound devices, low-cost Continuous Positive Airway Pressure (CPAP) machines for asphyxia management in newborn, single-dose IV Iron (Ferric carboxymaltose) for severe Anemia, Maternal Micronutrient Supplements for Maternal Nutrition, Infant probiotics, non-invasive hemoglobin testing devices etc.
- MSS assessments should be done regularly and improvement plan should be prepared and implemented regularly to ensure the service readiness and quality of care.

1. Introduction

1.1. Background and Context

Nepal has made remarkable strides in its health sector over the past decades in improving maternal and child health. Despite the limited resources and systemic issues, Nepal has observed substantial improvement in in the reduction of maternal and child mortality in recent years. The country has been able to reduce maternal mortality ratio (MMR) from 239 per hundred thousand live births in 2016 to 151 per hundred thousand live births in 2022. However, provincial disparity remains high. For instance, MMR in Lumbini province has 207 per hundred thousand live births, which is higher to national level. Furthermore, neonatal mortality rate (NMR) has been reduced from 39 per 1000 live births in 2001 to 21 per thousand live births in 2022 (Nepal Demographic and Health Survey, 2001, 2022). However, the achievement on reduction on Neonatal mortality remained stalled over the six years period from 2016 to 2022 (Nepal Demographic and Health Survey, 2016 and 2022). Equity gaps remain high in terms of wealth index, provinces, mother's education, provinces and their empowerment in terms of the maternal mortality and neonatal mortality[1] . Further peripheral health facility lacks adequate infrastructure, human resources, and equipment, particularly government designated birthing centers the country[2].

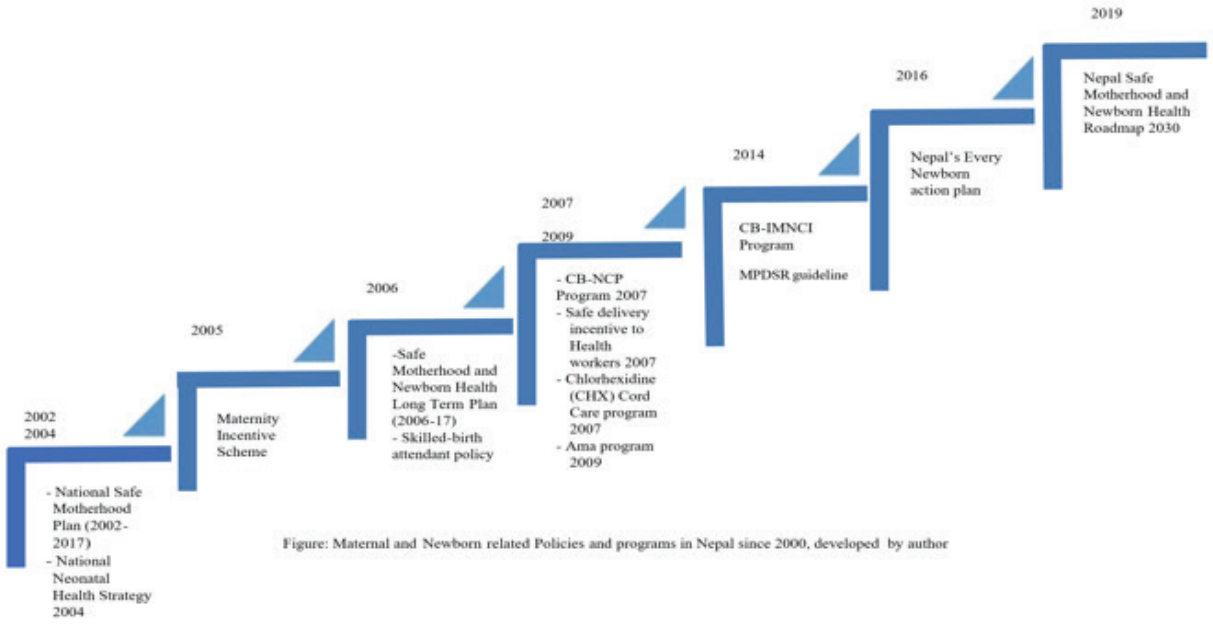

Figure: Maternal and Newborn related Policies and programs in Nepal since 2000, developed by author

Nepal Government has developed myriads of policies, strategies, and program to improve the maternal and neonatal health. The following figure shows the existing policies and programs that have become effective in Nepal. The Safe Motherhood and Newborn Road Map 2030, which set the targets for reduction of MMR below 70 per 100,000 live births and NMR below 12 per 1000 live births in line with sustainable development goals target 3.

1 *Khatri, R.B., Alemu, Y., Protani, M.M. et al. Intersectional (in) equities in contact coverage of maternal and newborn health services in Nepal: insights from a nationwide cross-sectional household survey. BMC Public Health 21, 1098 (2021). https://doi.org/10.1186/s12889-021-11142-8*

2 *Tuladhar, S., Paudel, D., Rehfuess, E. et al. Changes in health facility readiness for obstetric and neonatal care services in Nepal: an analysis of cross-sectional health facility survey data in 2015 and 2021. BMC Pregnancy Childbirth 24, 79 (2024). https://doi.org/10.1186/s12884-023-06138-8*

Recent government report shows that the Nepal has around 2848 birthing centers and most of them are functional (n=2831) covering federal, provincial, community, private, medical colleges, primary health cares and health posts. The Maternal and Neonatal Health (MNH) section of the Family Welfare Division at the Department of Health Services, the federal level unit under the MoHP, leads Nepal's maternal newborn care program. A total of 115 health facilities provided Comprehensive Emergency Obstetric and Newborn Care (CEmONC) services, which has expanded to 76 districts across the country except Manang district. In addition, 27 Basic Emergency Obstetric and Newborn Care (BEmONC) services are provided from basic hospitals (5–15 beds) and onward. In addition, health facilities that are designated as BCs provide basic essential newborn care. Basic hospitals and lower-level health facilities are managed by local municipalities. Below figure summarizes the health facilities and institutions responsible for providing and delivering MNH services at all three tiers of government.

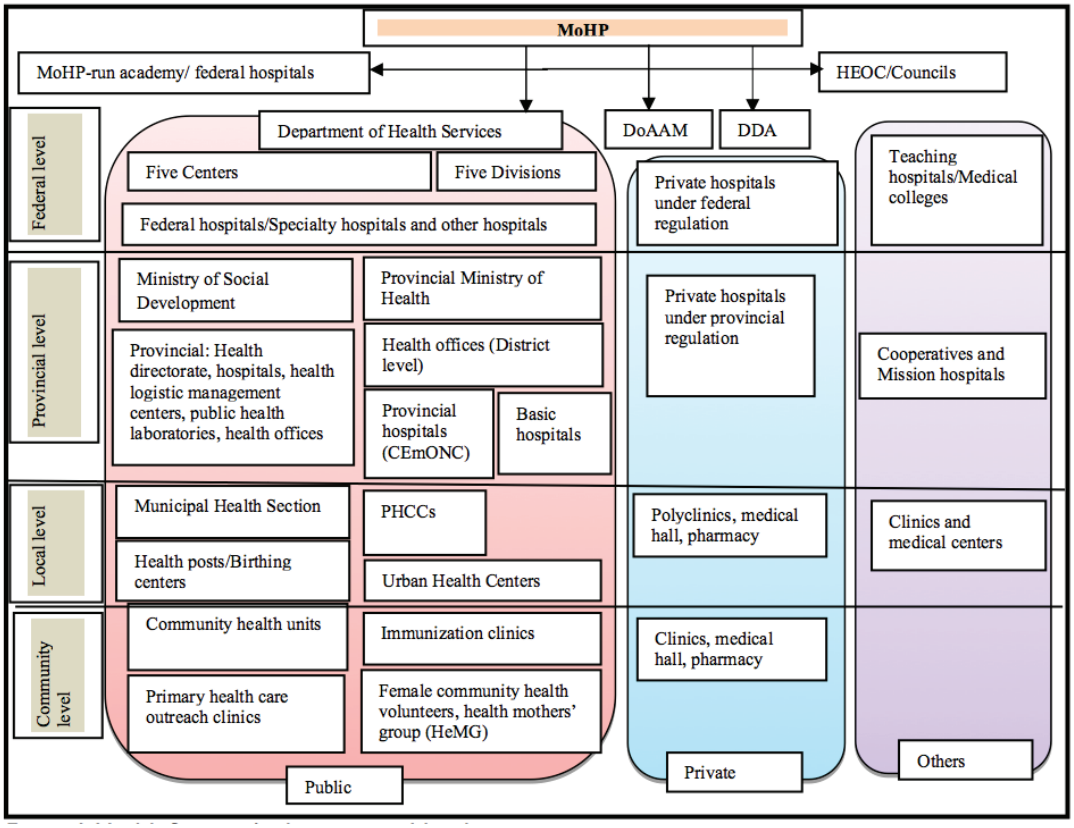

Figure 1 Health Se*rvice Architecture in Nepal*
Source: Pokhrel K.N. et al. 2025

Out of 2,800 birthing centers, around 2,200 are the birthing centers in primary health care centers and health post. Such peripheral birthing centers are providing essential antenatal care, vaginal delivery services, post-partum care, and newborn care. The birthing centers in Nepal play a pivotal role in maternal and neonatal health services in the peripheral health facilities such as health posts and primary health care centers. However, these face several challenges in providing quality services because of lack of human resources, medicines, equipment, and infrastructures [3] .

3 *Khatri RB, Dangi TP, Gautam R, Shrestha KN, Homer CSE. Barriers to utilization of childbirth services of a rural birthing center in Nepal: A qualitative study. PLoS One. 2017 May 11;12(5):e0177602. doi: 10.1371/journal.pone.0177602. PMID: 28493987; PMCID: PMC5426683.*

Additionally, some birthing centers are underutilized as these are nearby hospital and lack of trained human resources. An analysis of trends and determinants of neonatal mortality by Pokhrel K. et al. has shown that women who had no education, from poor or poorest households, lacking decision making in health services were more likely to have higher neonatal mortality. Further the study has also shown the neonatal mortality was higher in those mothers who did not receive services by skilled birth attendants [4].

As peripheral service outlets for MNH, birthing centers are providing normal vaginal delivery care. However, the declared birthing centers are of more concern in terms of their service quality with trained human resources. Further, some of the birthing centers are non-functional and underutilized. This assessment aims to examine service availability and readiness of birthing centers for essential maternal and newborn care service. The examination will focus on assessment of infrastructure, human resources, their training status amenities, commodities, and equipment. Further, the perspectives of service providers and service beneficiaries will be captures.

1.1. Rationale for this study

The Nepal Health Facility Survey 2021 assessed the availability and readiness of health facilities across Nepal to provide maternal and neonatal health (MNH) services. However, the results for peripheral health facilities were based on a sample rather than a comprehensive assessment, which may not fully reflect the actual status of all facilities. Additionally, the survey needs to be supplemented with the evidence of government's minimum service standards (MSS) for MNH care.

Furthermore, qualitative insights from service providers and municipal authorities, and service users are crucial for understanding and improving access to and utilization of services. Since 2022, the number of birthing centers has increased, making it essential to examine their functionality, relevance, and service utilization. Therefore, this study is highly relevant for assessing health facility readiness and service availability, incorporating additional indicators from MSS and the perspectives of service providers, planners, and implementers.

1.2. Objectives

- To examine the service availability and readiness for Maternal and Newborn Health (MNH) care at birthing centers in Nepal.
- To identify the factors for underutilization of MNH services in birthing centers.
- To examine the minimum service standards for MNH services in birthing centers including governance, clinical, and support services.
- To explore the perspectives on quality of MNH services of health planners, service providers, community volunteers, and beneficiary mothers for optimal access and utilization of MNH care.

4 *Pokhrel, K. N., R. Khatri, G. Pradhan, T. R. Thapa, T. Pullum, and F. Greenwell. 2024. Trends in and Determinants of Neonatal Mortality and Availability and Service Readiness for Newborn Care, 2016–2022 Nepal DHS Surveys and 2015–2021 Nepal HFS Surveys. DHS Further Analysis Reports No. 151. Rockville, Maryland, USA: ICF; Kathmandu, Nepal: USAID Learning for Development; and Kathmandu, Nepal: MOHP.*

2. Methodology

2.1. Study Design

The design of the study is mixed method convergent research, where qualitative methods were applied through exploratory research, and quantitative methods were applied through descriptive cross-sectional survey design.

2.2. Study Area and Population

The study was conducted in 45 districts of Nepal i.e. 222 health facilities that are designated as birthing centers, excluding hospitals as this study primarily focused on the study on the birthing center of the peripheral health facilities. The study sample was slightly more than the 10% of total birthing centers in Nepal.

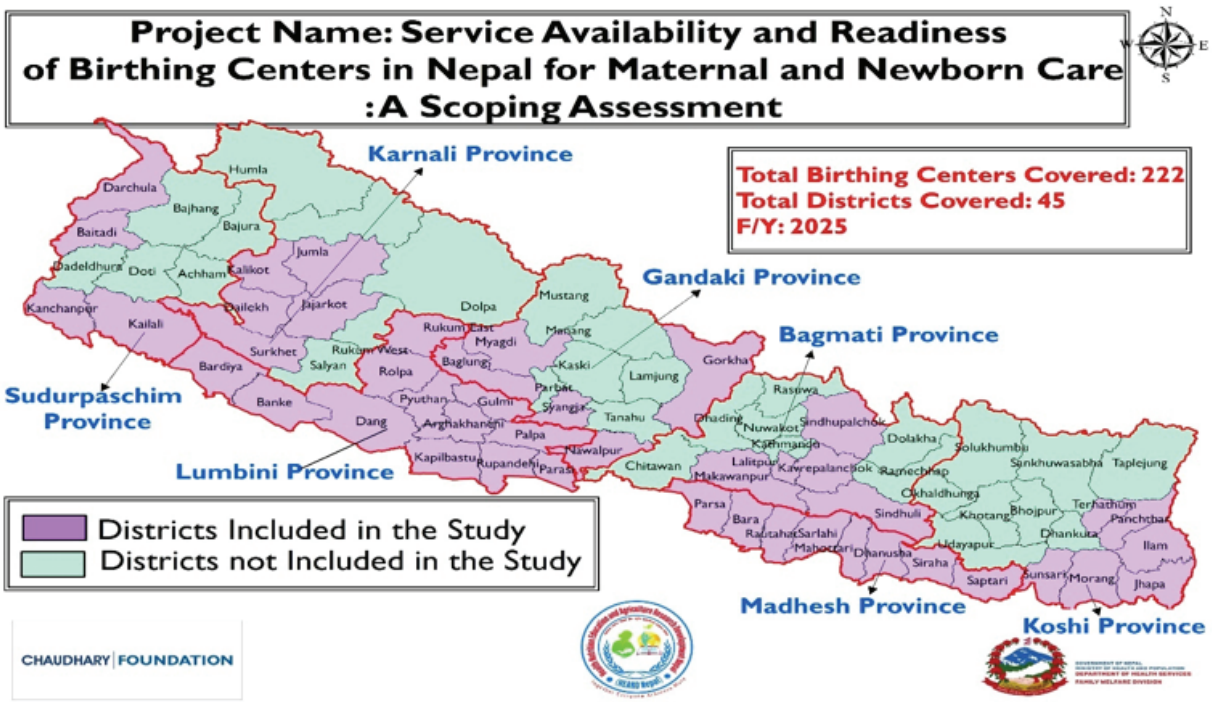

Figure 2 Selected and non-selected districts for the study.

2.3. Sample Size

2.3.1 Quantitative Survey

The districts were selected based on the number of birthing centers (BCs), provincial quota, ecological region, and service utilization status. Lumbini and Madhesh Province has given higher weightage for selection of sample for birthing centers as those centers had lower service availability and readiness status as shown by the 2021 Nepal Health Facility Survey. Further, the prevalence of higher maternal mortality ration and neonatal mortality ratio were also considered while giving weightage for those provinces. The following tables shows the number of birthing centers by districts and sampled numbers. The list of the birthing centers is given in annex 1.

Table i: Sample size by province and districts

Provinces	Selected districts	# Birthing Centers (BC)	# of Selected BCs
Koshi	Jhapa	19	7
	Sunsari	20	7
	Morang	24	7
	Ilam	26	4
	Panchthar	32	4
	Solukhumbu	24	4
	Total	145	33
Madhesh	Saptari	31	7
	Siraha	22	5
	Dhanusha	12	3
	Mahottari	21	5
	Sarlahi	30	7
	Rautahat	26	6
	Bara	30	7
	Parsa	25	6
	Total	197	45
Bagmati	Kavre	45	3
	Makwanpur	52	6
	Sindhupalchowk	18	2
	Lalitpur	22	3
	Sindhuli	40	4
	Total	177	18
Gandaki	Nawalparasi East	21	3
	Gorkha	56	7
	Syangja	39	5
	Baglung	65	8
	Myagdi	29	3
	Total	210	25
Lumbini	Rukum East	15	2
	Rolpa	64	9
	Dang	40	5
	Pyuthan	55	7
	Gulmi	68	9
	Arghakhachi	24	3
	Palpa	49	7
	Nawalparasi West	13	2
	Rupandehi	29	4
	Kapilvastu	31	4
	Banke	34	5
	Bardiya	27	4
	Total	449	60

Karnali	Kalikot	32	4
	Jajarkot	33	4
	Surkhet	55	7
	Rukum	24	3
	Jumla	30	4
	Total	228	21
Sudurpaschim	Kanchanpur	27	8
	Baitadi	53	4
	Darchula	55	4
	Kailali	51	4
	Total	186	20
Total (7)	43 out of 77	1592*	222

Note: Birthing centers numbers are exclusive of hospitals. The list of selected birthing centers is given in the annex of this report

2.3.2 Sample Size for Qualitative Study

For qualitative methods, key informant interviews (KII) will be conducted with Health Coordinator of Local Levels, Health Post in-charge, Female Community Health Volunteers (FCHV), Skilled Birth Attendant (SBA), District officials, Provincial officials, and Federal Level officials, and Focus Group Discussion (FGDs) with lactating mothers with children below 2 years will be conducted utilizing purposive quota-based sampling approach by applying saturation of information principle. The detailed tentative sample size to conduct the qualitative assessment is presented below (Details in table ii).

Table ii: Sample size to conduct qualitative study

Study	Respondents	Sample	Total
Key Informant Interviews (KIIs)	Health Coordinators	4 in each Province	28
	FCHV	4 in each Province	28
	District (CHO/PHN)	1 in each District	45
	SBA/Nurse/Health Post Incharge	Either of them from each Birthing Center	222
	Provincial	2 in each Province	14
	Federal	5	5
Total			342
Focus Group Discussion(FGD)	Lactating Mothers with children below 2 years	4 in each province	28
Total			370

2.4. Study tools

Quantitative: Service Availability and Readiness Assessment tool were developed adopting the standard questionnaires from Nepal Health Facility Survey, 2021, Minimum Service Standards indicators, and other relevant information for MNH care. For this assessment, the tools were developed covering the indicators presented in Figure 3. (Questionnaires and checklist are attached as annex 2 in the separate file).

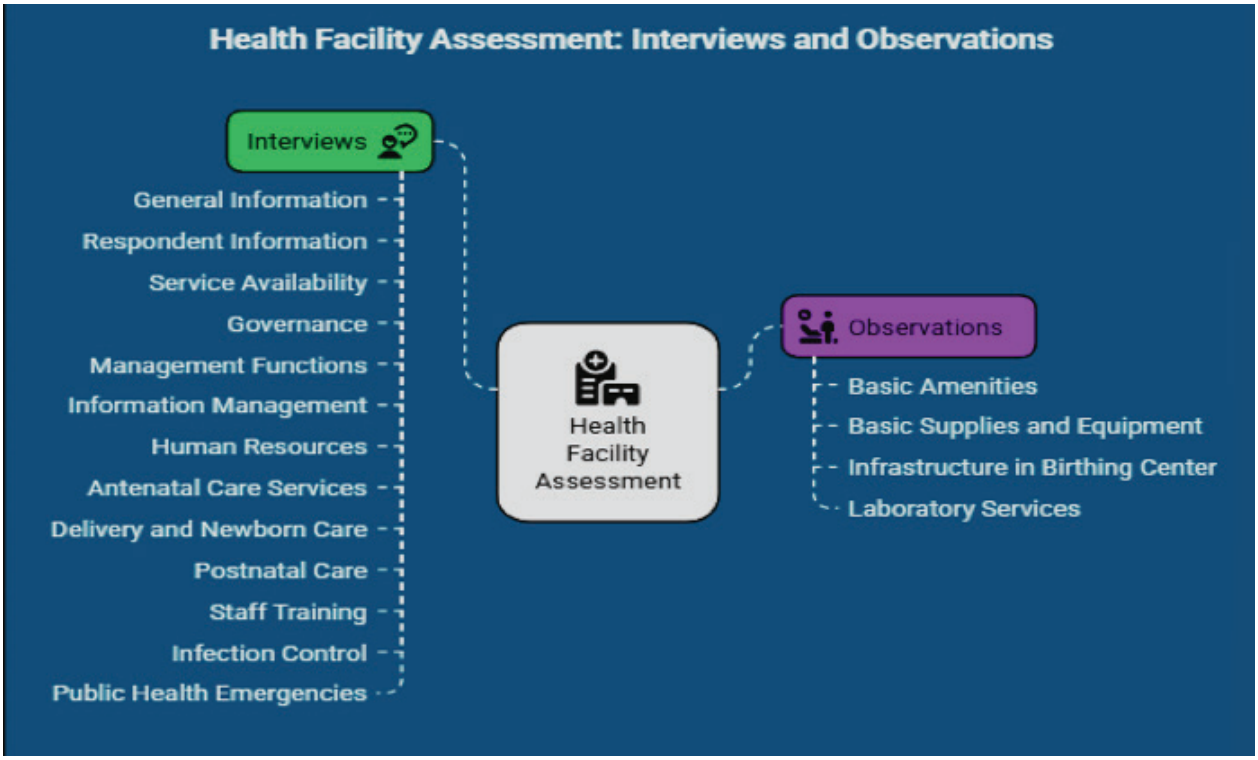

Figure 3 Quantitative data collection techniques and contents of tools

Qualitative

KII guideline and FGD guideline will be developed based on the review of policy documents, previous surveys, and minimum service standards reports. The perspectives of policy makers, planners, implementers, and female community health volunteers in strengthening services at birthing centers will be captured. Further, mother's perspectives about their access and utilization and health seeking behavior will be captured using focus group discussions. (KII and FGDs are attached in annex separate files).

2.5. Data Collection Methods

Quantitative Survey

For quantitative surveys, the study team developed questionnaires in KOBO, a mobile based platform to collect data. A total of 22 Field Researchers and five Field Research Coordinators were hired and trained for data collection procedures and ethical principles. Training was conducted in Kathmandu pretesting of the tools were done after the training and necessary modifications were made.

Qualitative Methods

A total of 342 Key Informant Interviews (KII) were conducted with health facility in-charge, Nursing In charge and health coordinators/local government representatives, District, Provincial and Federal level officials to gather more in-depth information.

Further to understand the perspective of mothers, a total of 28 FGDs (4 from each Province) will be conducted throughout the study period with lactating mothers having children below 2 years of age. There were 6-8 participants in the FGDs, and the teams were responsible for administering the FGDs which include at least one facilitator and one recorder. The FGDs were audio-recorded with permission from all participants, and were conducted in the preferred language of participants.

2.6. Data analyses

Quantitative survey data, that are collected in KOBO were transferred into R and were analyzed assessing Service Availability and Readiness assessment (SARA) framework of WHO. The assessment was stratified by provinces, type of health facilities, and so on.

Qualitative information was analyzed developing codes and themes and writing narratives.

For analysis of codes and themes NVivo software will be used. Data analyst and Team Leader developed the codes and were agreed to consider the additional themes and finalized the codes while analysis.

2.7. Ethical consideration

This study supervisor and team leader will obtain informed consent from the participants and confidentiality and voluntary information will be ensured. For recording separate informed consent will be requested from the participants. Participants below 18 years of age are requested to have their parent's assent form signed.

2.8. Monitoring and Supervision

Team leader, Field manager monitored the daily data collection activities and received update from the field supervisors, field managers and enumerators. Data analyst daily monitored the collected data in the KOBO program. Study Management Lead from Chaudhary foundation had oversight for the quality of data collection. Technical oversight, supervision, monitoring was done for all process of assessment from Family Welfare Division and coordination was made with all provincial directorates, health offices in the districts, and municipalities.

3. Findings

3.1. Distribution of types of health facilities by Province

Table 1 summarizes the types of health facilities assessed across Nepal's seven provinces. Overall, the majority of facilities assessed were Health Posts or Basic Health Service Centers, representing 87.8% of all assessed facilities.

Table 1 Distribution of types of health facilities by Province

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Facility Type								
Primary health care center	25 (11.3)	6 (18.2)	9 (20.0)	2 (11.1)	2 (8.0)	5 (8.3)	1 (4.8)	0 (0.0)
Health post/Basic Health Service Center	195 (87.8)	27 (81.8)	36 (80.0)	16 (88.9)	23 (92.0)	54 (90.0)	20 (95.2)	19 (95.0)
Urban health center	2 (0.9)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (1.7)	0 (0.0)	1 (5.0)
In (%)								

3.2. General service availability and readiness for maternal and newborn health services

3.2.1 General service availability in health facilities

Table 2 describes the availability of key service components across assessed health facilities in Nepal's seven provinces. Antenatal care (ANC) and delivery services were universal across all facilities. PMTCT services were available in 91.4% of facilities overall, with full coverage in Karnali and near-full coverage in most other provinces. Availability of services related to sexually transmitted infections (64.4%) and HIV testing and counselling (90.1%) varied across provinces. The availability of abortion-related services showed considerable variation, with 61.7% of facilities providing abortion services and 28.0% offering comprehensive abortion care. Screening services for cervical and breast cancer were available in 58.1% and 70.7% of facilities, respectively. Adolescent-friendly services were present in 59.5% of facilities, with notable provincial disparities. The presence of in-house pharmacies was in limited health facilities (15.3% overall). Availability of modern contraceptives was high for male condoms, Depo-Provera, and oral contraceptives (above 97%), while access to implants (86.9%), IUDs (62.2%), and emergency contraceptive pills (53.2%) was more variable. Permanent methods and female condoms were not available in almost all the facilities.

3.2.2 Infrastructure, basic amenities and utilities in health facilities

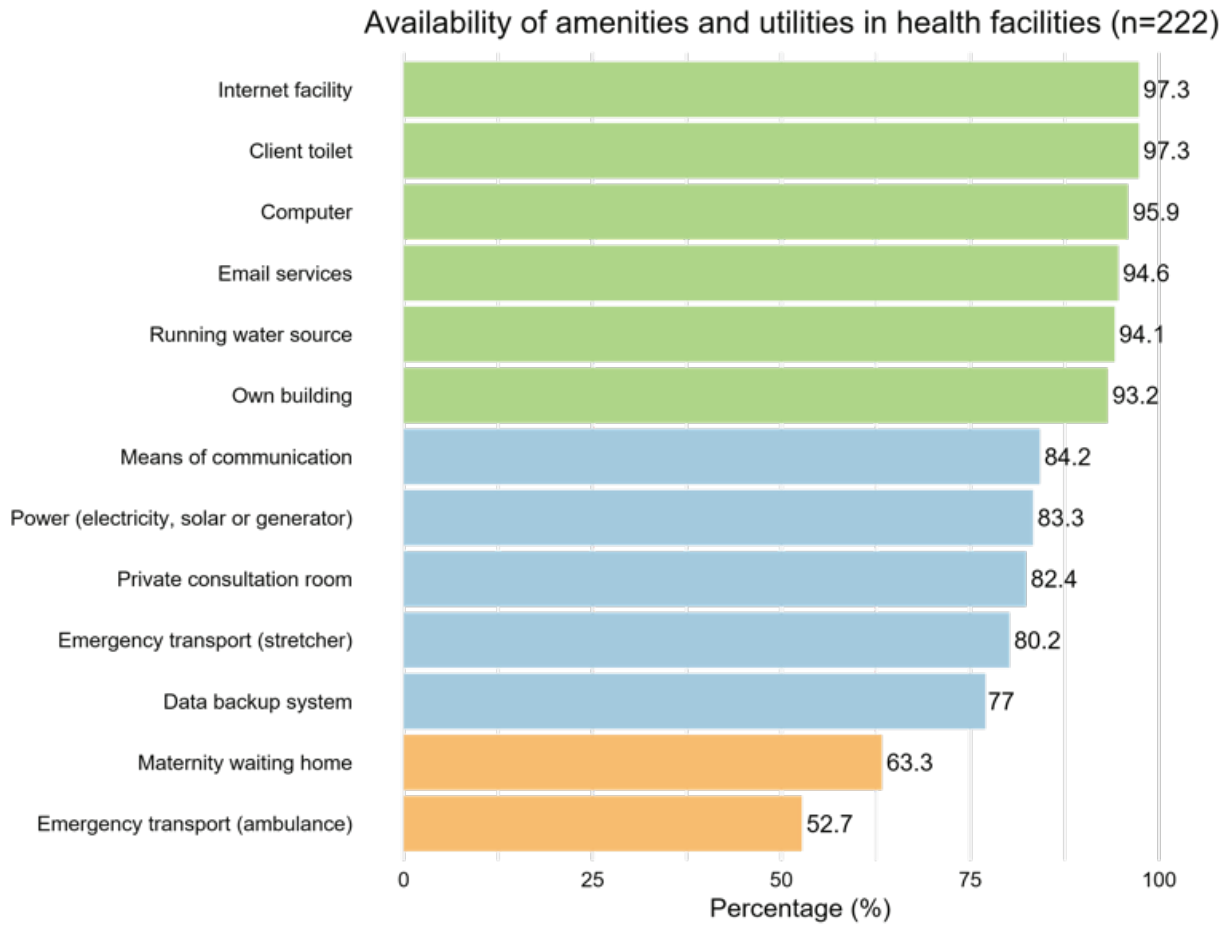

Figure 4. Availability of amenities and utilities in health facilities

Assessment of amenities and utilities across 222 health facilities, shown in Figure 4 and Table 3, revealed substantial variation in basic infrastructure and service readiness. Power availability was in 83.3% of facilities having a functional source (electricity, solar, or generator). However, Bagmati and Gandaki lagged behind with only about two-thirds of facilities reporting functional power. Running water was available and functional in 94.1% of facilities, while computers were available and working in 95.9%. Internet access was near-universal (97.3%), though a few facilities in Sudurpaschim reported non-availability.

While most facilities had email services (94.6%), reliable data backup systems were present in only 77% overall—with especially low coverage in Madhesh and Gandaki (61.1% and 52.0%, respectively). Private consultation rooms were functional in 82.4% of facilities. Client toilets were nearly universally available and functional (97.3%). Communication systems were functional in 84.2% of facilities, but Sudurpashchim lagged (66.7%).

Emergency transport infrastructure showed notable gaps. Only 80.2% had functional stretchers, and less than 53% had access to a working ambulance. As presented in Figure 5, Koshi and Madhesh had particularly low ambulance availability (33.3% and 45.2%, respectively), while Sudurpaschim performed better (70.0%). Maternity waiting homes were functional in just 63.3% of facilities overall—with stark provincial gaps: only 35% in Sudurpaschim versus over 80% in Gandaki, Madhesh, and Karnali.

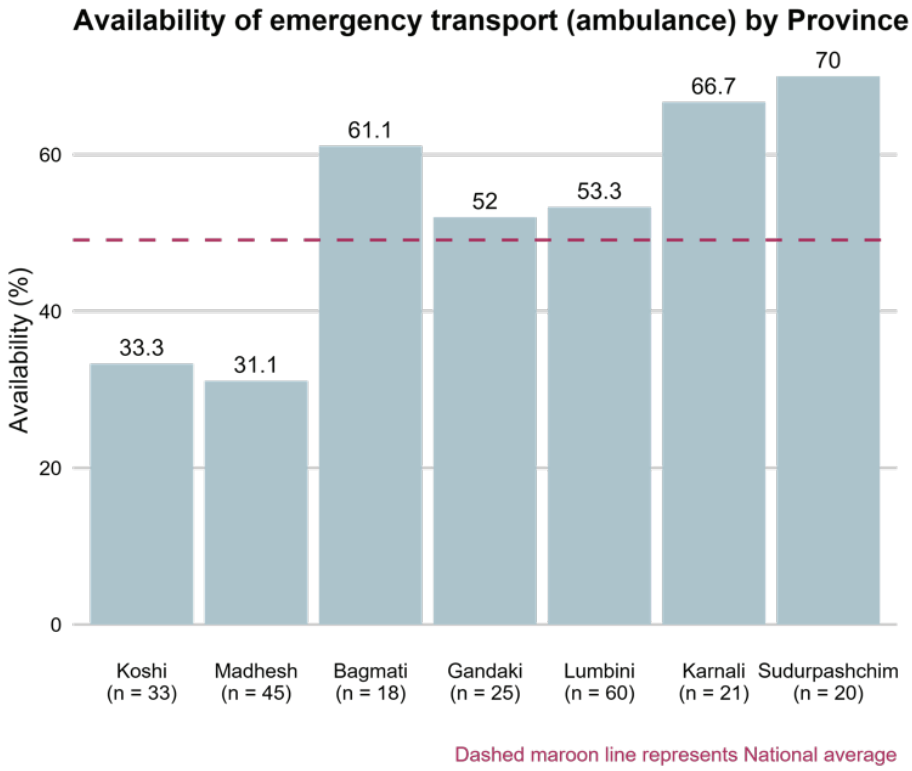

Figure 5 Availability of ambulance service in health facilities

3.2.3 Infrastructure, furniture, space and basic amenities in birthing centers

Table 4, Figure 6, Figure 7 and Figure 8 presents the assessment of birthing center infrastructure in compliance with standard spatial and utility requirements across provinces. Only 41.4% of facilities met the recommended minimum of three rooms, with the proportion lowest in Sudurpaschim (35.0%) and highest in Koshi (48.5%). Alarmingly, 44.1% of centers reported no dedicated rooms for maternity related services. Although examination rooms were available in 61.3% of facilities overall, the proportion was notably lower in Sudurpaschim (35.0%) and Karnali (57.1%).

Figure 6. Availability of rooms at recommended levels in birthing centers

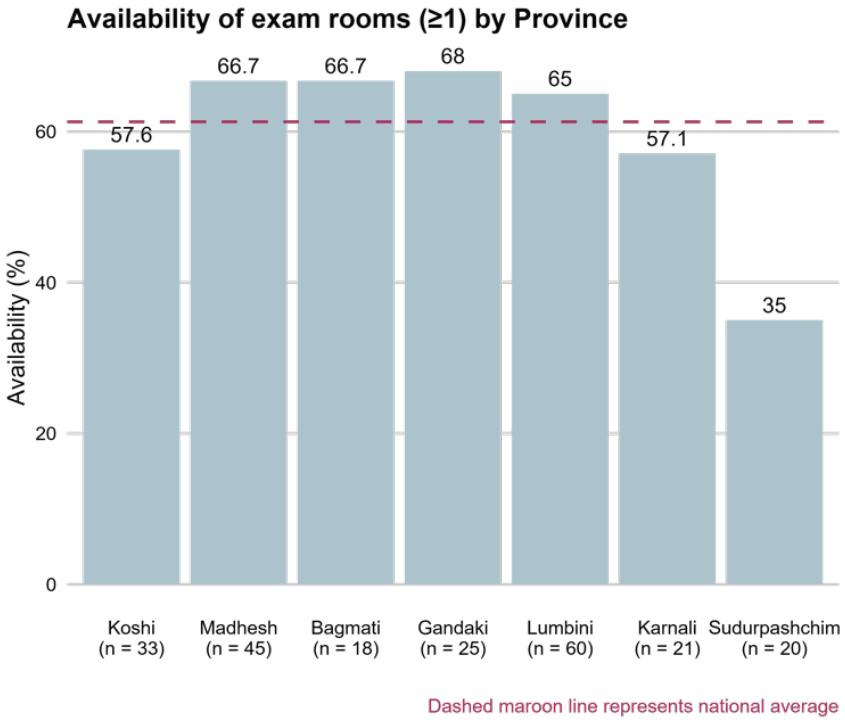

Figure 7 Availability of examination room at recommended level in birthing centers

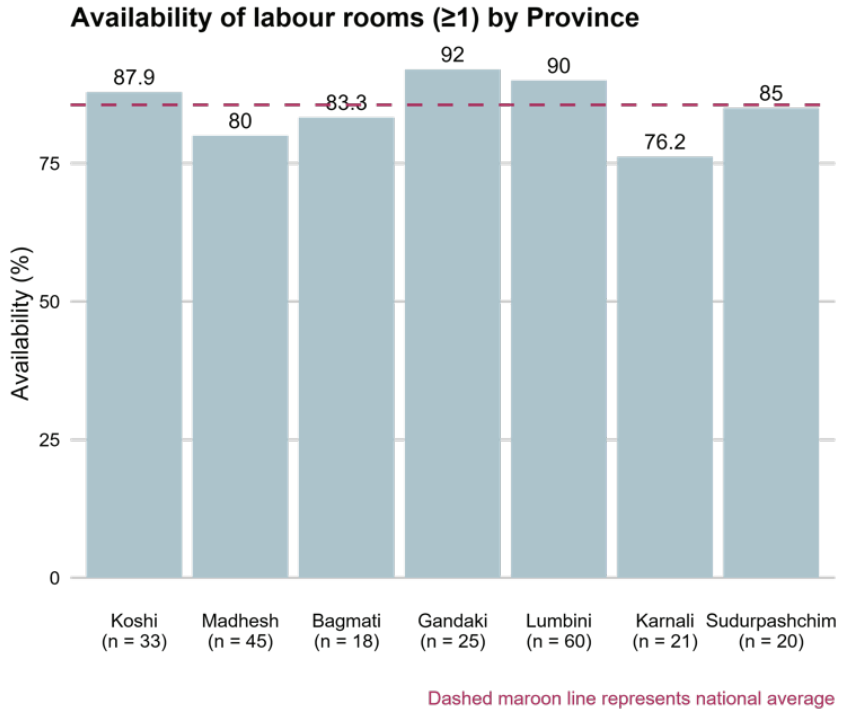

Figure 8 Availability of labour room at recommended level in birthing centers

Table 5 and Figure 9 shows that the availability of toilets remained a concern, with nearly one-third (30.2%) of centers having fewer than two toilets, and 5.0% reporting none. While placenta pits were available in most facilities (89.6%), their absence in 10.4% indicates missed infection control standards. Key amenities such as benches (≥2) and lockers (≥3) were insufficient in 19.8% and 39.6% of facilities, respectively, with Sudurpaschim and Karnali notably under-equipped in locker provision. Only 8.6% of all facilities met the locker requirement, and over half (51.8%)

had none. Staff rooms were available in 63.1% of centers overall, with higher availability in Sudurpaschim (75.0%) and lower in Karnali (52.4%).

Similarly, as shown in Table 5 and Figure 9, furniture such as tables and chairs was widely available (≥1 table in 95.5%, ≥3 chairs in 74.3%), though Sudurpaschim (70.0%) and Lumbini (61.7%) showed relative deficiencies in seating. Storage infrastructure was mixed: only 40.5% of centers had racks, and 88.7% had cupboards, with Karnali having the lowest cupboard coverage (61.9%). Water tank availability was near-universal (94.6%), and electricity supply was available 24/7 in 80.6% of centers—most reliably in Lumbini (90.0%) and least in Karnali (66.7%). Water availability was higher, with 91.4% of centers reporting continuous 24-hour supply, particularly strong in Koshi and Sudurpaschim (100% and 95%, respectively).

The qualitative findings highlight critical gaps in physical infrastructure and accessibility of birthing centers across diverse geographic and administrative regions in Nepal.

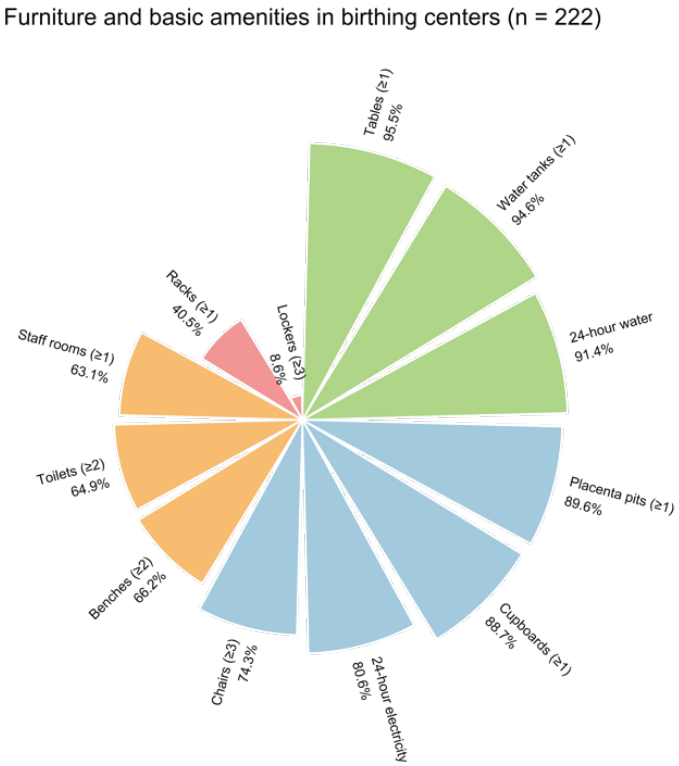

Figure 9. Availability of furniture and basic amenities in birthing centers

a. Inadequate physical infrastructure

Many facilities reported severe space constraints, with services for ANC, delivery, and PNC provided in shared or substandard spaces. Such settings limit the capacity to offer safe and respectful maternity care.

"Our health facility, you see, is so small, narrow, and there isn't even space to keep the equipment. We have a very hard time. There is no water supply. Look, right now, we handled cases by searching for a pipe and attaching a makeshift connection, but there is no water facility, nothing. There's no room to keep things, look at the room, how to manage there. Waiting rooms,

there are only two beds. If three or four come consecutively, it becomes difficult for us. Also, there is no water facility, the building is small, although they say a building has been constructed upstairs." (Service provider, Sudur Paschim province)

"Currently, we have sufficient medical equipment and a full delivery set to meet our needs. However, our birthing center faces a significant spatial challenge; the facility is a bit small. According to established protocols, newborns should be placed in a separate room immediately after delivery to ensure their care and monitoring. Unfortunately, we lack the space for this, so we have no choice but to keep them in the waiting room, which is not ideal. Additionally, for the first PNC check, we also utilize the waiting area, further straining our limited resources." (service provider, Gandaki Province)

b. Geographic barriers and accessibility challenges

Difficult terrain and poor road infrastructure were recurring issues, especially in hilly and remote areas. These barriers frequently delayed or prevented timely access to birthing care.

"Another major issue is transport. In certain wards, the distance to the health center is long and there's a river in between, making it difficult to access. This creates challenges, especially during harvest season, when transport becomes even more difficult. In some communities, mother group meetings still happen, but the lack of transport remains an issue. Even in communities where roads are built, it's still not enough to solve the problem. The physical infrastructure is not sufficient. It doesn't meet the standards that a birthing center's infrastructure should meet. We don't have that." (Service provider, Bagmati province)

"Transport issues caused one mother to deliver on the way, resulting in the death of the newborn." (FCHV, Bagmati Province)

c. Ambulance services and referral systems

While free ambulance services are available in many municipalities, limitations in fleet size, distance, and timeliness continue to affect emergency referrals. In some cases, reliance on private or improvised transport was necessary. In some Provinces, there was an existing referral tracking system, while it lacked in others.

"In cases of complications, we refer patients and coordinate with the municipality to provide free ambulance services .However, Wards 1, 2, and 3 are located farther from the health facility. These areas face challenges due to poor road accessibility. There are no vehicles that can reach some of these communities directly, so residents often walk long distances on foot or use stretchers along rough roads before they can access vehicles or ambulances. In some cases, women give birth on the way to the facility." (Service provider, Surkhet, Karnali province)

"In some area, home delivery cases are still occurring. When we ask families why they didn't bring the mother to the facility, they often say that the labor started suddenly and they couldn't make it in time. Although, we provide transport incentives and delivery incentives, proper newborn care, Vitamin K to the baby and oxytocin to the mother after delivery. Despite all these available services, some people still face challenges in bringing the mother to the health facility due to geographical difficulties. We have an ambulance services available here which is free of

cost. Even though, there are two ambulances available for service, people often show negligence and do not seek help in time." (Service provider, Sindhuli, Bagmati province)

"We initiated an ambulance tracking system to strengthen referral linkages between lower and higher-level facilities." (Provincial Health Directorate, Lumbini Province)

"Referral services are available, but coordination issues persist, causing delays in emergency care." (Provincial Health Directorate, Karnali Province)

Table 2 General service availability in assessed health facilities

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
ANC Services								
Yes	222 (100.0)	33 (100.0)	45 (100.0)	18 (100.0)	25 (100.0)	60 (100.0)	21 (100.0)	20 (100.0)
No	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Yes, but service provider not available	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
PMTCT Services								
Yes	203 (91.4)	28 (84.8)	40 (88.9)	14 (77.8)	24 (96.0)	57 (95.0)	21 (100.0)	19 (95.0)
No	11 (5.0)	4 (12.1)	1 (2.2)	1 (5.6)	1 (4.0)	3 (5.0)	0 (0.0)	1 (5.0)
Yes, but service provider not available	8 (3.6)	1 (3.0)	4 (8.9)	3 (16.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Delivery & Newborn Care								
Yes	222 (100.0)	33 (100.0)	45 (100.0)	18 (100.0)	25 (100.0)	60 (100.0)	21 (100.0)	20 (100.0)
No	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Yes, but service provider not available	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
STI Services								
Yes	143 (64.4)	21 (63.6)	27 (60.0)	8 (44.4)	15 (60.0)	48 (80.0)	15 (71.4)	9 (45.0)
No	68 (30.6)	10 (30.3)	13 (28.9)	7 (38.9)	9 (36.0)	12 (20.0)	6 (28.6)	11 (55.0)
Yes, but service provider not available	11 (5.0)	2 (6.1)	5 (11.1)	3 (16.7)	1 (4.0)	0 (0.0)	0 (0.0)	0 (0.0)

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
HIV Testing/Counseling								
Yes	200 (90.1)	32 (97.0)	36 (80.0)	17 (94.4)	24 (96.0)	57 (95.0)	20 (95.2)	14 (70.0)
No	16 (7.2)	1 (3.0)	4 (8.9)	1 (5.6)	1 (4.0)	3 (5.0)	0 (0.0)	6 (30.0)
Yes, but service provider not available	6 (2.7)	0 (0.0)	5 (11.1)	0 (0.0)	0 (0.0)	0 (0.0)	1 (4.8)	0 (0.0)
Abortion Services								
Yes	137 (61.7)	22 (66.7)	25 (55.6)	9 (50.0)	14 (56.0)	44 (73.3)	8 (38.1)	15 (75.0)
No	79 (35.6)	8 (24.2)	19 (42.2)	8 (44.4)	11 (44.0)	15 (25.0)	13 (61.9)	5 (25.0)
Yes, but service provider not available	6 (2.7)	3 (9.1)	1 (2.2)	1 (5.6)	0 (0.0)	1 (1.7)	0 (0.0)	0 (0.0)
Medical Abortion								
Yes	136 (95.1)	22 (88.0)	25 (96.2)	10 (100.0)	13 (92.9)	43 (95.6)	8 (100.0)	15 (100.0)
No	2 (1.4)	0 (0.0)	0 (0.0)	0 (0.0)	1 (7.1)	1 (2.2)	0 (0.0)	0 (0.0)
Yes, but service provider not available	5 (3.5)	3 (12.0)	1 (3.8)	0 (0.0)	0 (0.0)	1 (2.2)	0 (0.0)	0 (0.0)
Manual Vacuum Aspiration								
Yes	26 (18.2)	6 (24.0)	7 (26.9)	3 (30.0)	2 (14.3)	5 (11.1)	2 (25.0)	1 (6.7)
No	114 (79.7)	19 (76.0)	17 (65.4)	7 (70.0)	11 (78.6)	40 (88.9)	6 (75.0)	14 (93.3)
Yes, but service provider not available	3 (2.1)	0 (0.0)	2 (7.7)	0 (0.0)	1 (7.1)	0 (0.0)	0 (0.0)	0 (0.0)
Comprehensive Abortion Care								
Yes	40 (28.0)	5 (20.0)	14 (53.8)	4 (40.0)	6 (42.9)	9 (20.0)	1 (12.5)	1 (6.7)
No	103 (72.0)	20 (80.0)	12 (46.2)	6 (60.0)	8 (57.1)	36 (80.0)	7 (87.5)	14 (93.3)

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Yes, but service provider not available	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Unknown	79	8	19	8	11	15	13	5
Postabortion Care								
Yes	74 (51.7)	13 (52.0)	18 (69.2)	5 (50.0)	8 (57.1)	20 (44.4)	2 (25.0)	8 (53.3)
No	67 (46.9)	11 (44.0)	8 (30.8)	4 (40.0)	6 (42.9)	25 (55.6)	6 (75.0)	7 (46.7)
Yes, but service provider not available	2 (1.4)	1 (4.0)	0 (0.0)	1 (10.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Unknown	79	8	19	8	11	15	13	5
Postnatal Services								
Yes	218 (98.2)	33 (100.0)	44 (97.8)	18 (100.0)	25 (100.0)	60 (100.0)	19 (90.5)	19 (95.0)
No	3 (1.4)	0 (0.0)	1 (2.2)	0 (0.0)	0 (0.0)	0 (0.0)	1 (4.8)	1 (5.0)
Yes, but service provider not available	1 (0.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (4.8)	0 (0.0)
Utero Vaginal Prolapse Screening								
Yes	150 (67.6)	26 (78.8)	22 (48.9)	13 (72.2)	20 (80.0)	41 (68.3)	15 (71.4)	13 (65.0)
No	64 (28.8)	7 (21.2)	18 (40.0)	4 (22.2)	3 (12.0)	19 (31.7)	6 (28.6)	7 (35.0)
Yes, but service provider not available	8 (3.6)	0 (0.0)	5 (11.1)	1 (5.6)	2 (8.0)	0 (0.0)	0 (0.0)	0 (0.0)
Obstetric Fistula Screening								
Yes	79 (35.6)	12 (36.4)	14 (31.1)	5 (27.8)	9 (36.0)	21 (35.0)	6 (28.6)	12 (60.0)
No	132 (59.5)	20 (60.6)	25 (55.6)	11 (61.1)	14 (56.0)	39 (65.0)	15 (71.4)	8 (40.0)
Yes, but service provider not available	11 (5.0)	1 (3.0)	6 (13.3)	2 (11.1)	2 (8.0)	0 (0.0)	0 (0.0)	0 (0.0)

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Cervical Cancer Screening								
Yes	129 (58.1)	25 (75.8)	18 (40.0)	10 (55.6)	15 (60.0)	30 (50.0)	14 (66.7)	17 (85.0)
No	82 (36.9)	6 (18.2)	26 (57.8)	7 (38.9)	5 (20.0)	30 (50.0)	5 (23.8)	3 (15.0)
Yes, but service provider not available	11 (5.0)	2 (6.1)	1 (2.2)	1 (5.6)	5 (20.0)	0 (0.0)	2 (9.5)	0 (0.0)
Breast Cancer Screening								
Yes	157 (70.7)	32 (97.0)	28 (62.2)	10 (55.6)	19 (76.0)	36 (60.0)	15 (71.4)	17 (85.0)
No	56 (25.2)	1 (3.0)	13 (28.9)	7 (38.9)	2 (8.0)	24 (40.0)	6 (28.6)	3 (15.0)
Yes, but service provider not available	9 (4.1)	0 (0.0)	4 (8.9)	1 (5.6)	4 (16.0)	0 (0.0)	0 (0.0)	0 (0.0)
Adolescent Friendly Services								
Yes	132 (59.5)	18 (54.5)	33 (73.3)	11 (61.1)	11 (44.0)	47 (78.3)	4 (19.0)	8 (40.0)
No	85 (38.3)	15 (45.5)	10 (22.2)	6 (33.3)	12 (48.0)	13 (21.7)	17 (81.0)	12 (60.0)
Yes, but service provider not available	5 (2.3)	0 (0.0)	2 (4.4)	1 (5.6)	2 (8.0)	0 (0.0)	0 (0.0)	0 (0.0)
In-house Pharmacy								
Yes	34 (15.3)	8 (24.2)	6 (13.3)	3 (16.7)	7 (28.0)	6 (10.0)	1 (4.8)	3 (15.0)
No	188 (84.7)	25 (75.8)	39 (86.7)	15 (83.3)	18 (72.0)	54 (90.0)	20 (95.2)	17 (85.0)
Yes, but service provider not available	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Family planning								
Male condom	217 (97.7)	32 (97.0)	45 (100.0)	17 (94.4)	22 (88.0)	60 (100.0)	21 (100.0)	20 (100.0)
Depo Provera	219 (98.6)	33 (100.0)	42 (93.3)	18 (100.0)	25 (100.0)	60 (100.0)	21 (100.0)	20 (100.0)
Oral contraceptive pills	219 (98.6)	32 (97.0)	44 (97.8)	18 (100.0)	25 (100.0)	60 (100.0)	20 (95.2)	20 (100.0)
Implant	193 (86.9)	28 (84.8)	31 (68.9)	17 (94.4)	22 (88.0)	55 (91.7)	21 (100.0)	19 (95.0)
IUD	138 (62.2)	21 (63.6)	19 (42.2)	11 (61.1)	17 (68.0)	43 (71.7)	13 (61.9)	14 (70.0)
Male sterilization	3 (1.4)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	3 (5.0)	0 (0.0)	0 (0.0)
Emergency contraceptive pills	118 (53.2)	6 (18.2)	16 (35.6)	9 (50.0)	12 (48.0)	40 (66.7)	18 (85.7)	17 (85.0)
Female sterilization	6 (2.7)	0 (0.0)	2 (4.4)	1 (5.6)	0 (0.0)	3 (5.0)	0 (0.0)	0 (0.0)
Female condom	11 (5.0)	0 (0.0)	1 (2.2)	4 (22.2)	4 (16.0)	0 (0.0)	2 (9.5)	0 (0.0)
In (%)								

Table 3 Amenities and utilities available and functional in the health facility

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Power (electricity, solar or generator)	185 (83.3)	31 (93.9)	36 (80.0)	12 (66.7)	17 (68.0)	57 (95.0)	18 (85.7)	14 (70.0)
Running water source	209 (94.1)	32 (97.0)	43 (95.6)	17 (94.4)	24 (96.0)	56 (93.3)	19 (90.5)	18 (90.0)
Computer	213 (95.9)	32 (97.0)	43 (95.6)	17 (94.4)	25 (100.0)	58 (96.7)	21 (100.0)	17 (85.0)
Internet facility	216 (97.3)	33 (100.0)	44 (97.8)	17 (94.4)	25 (100.0)	60 (100.0)	20 (95.2)	17 (85.0)
Data backup system	171 (77.0)	32 (97.0)	27 (60.0)	11 (61.1)	13 (52.0)	51 (85.0)	18 (85.7)	19 (95.0)
Email services	210 (94.6)	31 (93.9)	39 (86.7)	17 (94.4)	25 (100.0)	58 (96.7)	21 (100.0)	19 (95.0)
Own building	207 (93.2)	32 (97.0)	41 (91.1)	17 (94.4)	24 (96.0)	55 (91.7)	19 (90.5)	19 (95.0)
Private consultation room	183 (82.4)	26 (78.8)	37 (82.2)	17 (94.4)	20 (80.0)	59 (98.3)	20 (95.2)	4 (20.0)
Client toilet	216 (97.3)	32 (97.0)	45 (100.0)	18 (100.0)	25 (100.0)	57 (95.0)	19 (90.5)	20 (100.0)
Means of communication	187 (84.2)	31 (93.9)	35 (77.8)	16 (88.9)	20 (80.0)	53 (88.3)	14 (66.7)	18 (90.0)
Emergency transport (stretcher)	166 (80.2)	22 (66.7)	21 (67.7)	17 (100.0)	25 (100.0)	52 (86.7)	19 (90.5)	10 (50.0)
Emergency transport (ambulance)	109 (52.7)	11 (33.3)	14 (31.1)	11 (61.)	13 (52.0)	32 (53.3)	14 (66.7)	14 (70.0)
Maternity waiting home	131 (63.3)	24 (72.7)	25 (80.6)	9 (52.9)	21 (84.0)	27 (45.0)	18 (85.7)	7 (35.0)

1n (%), % represents column %, % of not available or non-functional amenities and utilities not shown

Table 4 Availability of rooms at recommended levels in birthing center

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Rooms (need ≥3)	92 (41.4)	16 (48.5)	19 (42.2)	8 (44.4)	8 (32.0)	26 (43.3)	8 (38.1)	7 (35.0)
Exam rooms (need ≥1)	136 (61.3)	19 (57.6)	30 (66.7)	12 (66.7)	17 (68.0)	39 (65.0)	12 (57.1)	7 (35.0)
ANC/PNC rooms (need ≥1)	182 (82.0)	27 (81.8)	41 (91.1)	14 (77.8)	20 (80.0)	51 (85.0)	19 (90.5)	10 (50.0)
Labour rooms (need ≥1)	190 (85.6)	29 (87.9)	36 (80.0)	15 (83.3)	23 (92.0)	54 (90.0)	16 (76.2)	17 (85.0)
Delivery rooms (need ≥1)	222 (100.0)	33 (100.0)	45 (100.0)	18 (100.0)	25 (100.0)	60 (100.0)	21 (100.0)	20 (100.0)

1n (%), % represents column %

Table 5 Availability of furniture and basic amenities at recommended levels in birthing centers

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Benches (need ≥2)	147 (66.2)	26 (78.8)	37 (82.2)	12 (66.7)	17 (68.0)	34 (56.7)	10 (47.6)	11 (55.0)
Lockers (need ≥3)	19 (8.6)	6 (18.2)	5 (11.1)	2 (11.1)	2 (8.0)	3 (5.0)	0 (0.0)	1 (5.0)
Staff rooms (need ≥1)	140 (63.1)	23 (69.7)	28 (62.2)	10 (55.6)	15 (60.0)	38 (63.3)	11 (52.4)	15 (75.0)
Tables (need ≥1)	212 (95.5)	31 (93.9)	42 (93.3)	18 (100.0)	25 (100.0)	56 (93.3)	21 (100.0)	19 (95.0)
Chairs (need ≥3)	165 (74.3)	24 (72.7)	36 (80.0)	17 (94.4)	18 (72.0)	37 (61.7)	19 (90.5)	14 (70.0)
Racks (need ≥1)	90 (40.5)	9 (27.3)	22 (48.9)	7 (38.9)	17 (68.0)	25 (41.7)	10 (47.6)	0 (0.0)
Cupboards (need ≥1)	197 (88.7)	29 (87.9)	44 (97.8)	18 (100.0)	22 (88.0)	53 (88.3)	13 (61.9)	18 (90.0)
Water tanks (need ≥1)	210 (94.6)	30 (90.9)	41 (91.1)	18 (100.0)	24 (96.0)	56 (93.3)	21 (100.0)	20 (100.0)
24-hour electricity supply	179 (80.6)	29 (87.9)	36 (80.0)	14 (77.8)	18 (72.0)	54 (90.0)	14 (66.7)	14 (70.0)
Toilets (need ≥2)	144 (64.9)	22 (66.7)	25 (55.6)	13 (72.2)	21 (84.0)	31 (51.7)	15 (71.4)	17 (85.0)
Placenta pits (need ≥1)	199 (89.6)	27 (81.8)	37 (82.2)	16 (88.9)	24 (96.0)	58 (96.7)	19 (90.5)	18 (90.0)
24-hour water supply	203 (91.4)	33 (100.0)	39 (86.7)	16 (88.9)	21 (84.0)	57 (95.0)	18 (85.7)	19 (95.0)

1n (%), % represents column %

3.3. Service availability and readiness of ANC services in birthing centers

3.3.1 Availability of ANC services in birthing centers

Antenatal care (ANC) services were universally available across all assessed birthing centers in Nepal. Table 6 shows that almost all (98.2%) offered ANC services on every working day. Exceptions were minor, with a few facilities in Bagmati and Gandaki providing ANC on specified days only.

Integration of ANC services into primary health care - outreach clinics (ORC) was reported in nearly four-fifths of centers (78.8%), with notably higher integration in Bagmati (94.4%), Madhesh (91.1%), and Gandaki (92.0%), and relatively lower levels in Karnali (66.7%) and Sudurpaschim (65.0%). As presented in Figure 10, distribution of essential supplements and medications as the part of ANC was generally high: iron plus folic acid (93.2%) and albendazole (99.5%) were routinely provided. However, calcium supplements (76.6%) were less consistently provided, Similarly, calcium supplementation was provided in about three fourths of the facilities nationally. Nepal Government's ANC to PNC Continuum of Care Guideline is recommended for calcium supplementation for prevention of pre-eclampsia/pre-eclampsia. Although federal government's supply of calcium is not at present, local levels procure themselves calcium tables provide from birthing center. However, there is substantial provincial variation as illustrated in Figure 11.

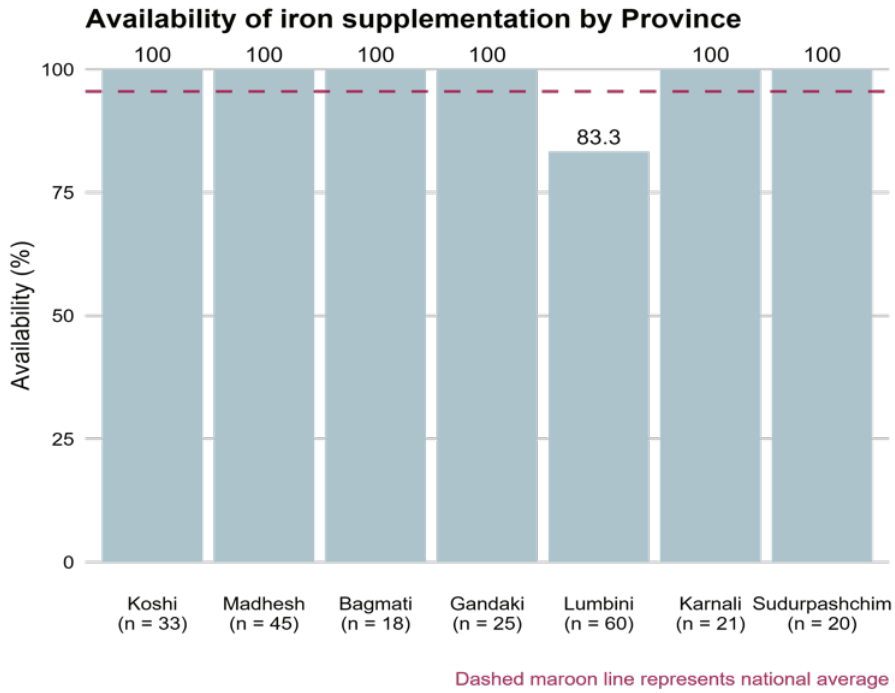

Figure 10 Availability of iron supplementation service during ANC visits in birthing center

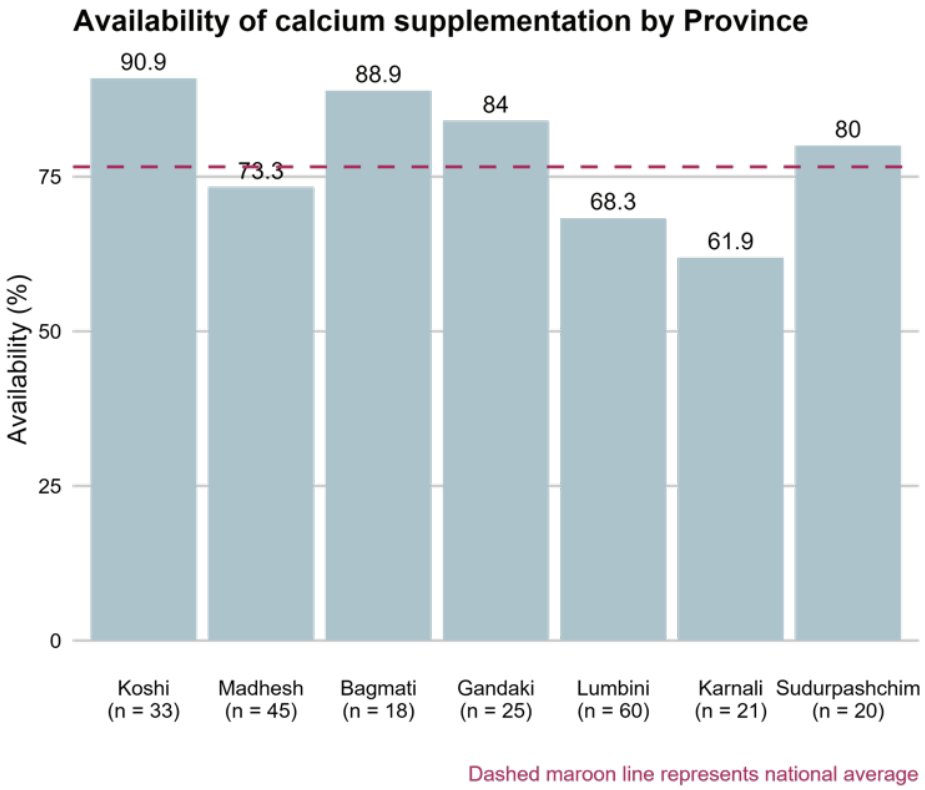

Figure 11 Availability of calcium supplementation service during ANC visits in birthing center

Tetanus/diphtheria (Td) vaccination coverage was only in 91.0% of facilities providing the vaccine and 62.6% conducting outreach immunization days, though again, outreach provision was lower in provinces such as Karnali (47.6%) and Lumbini (43.3%). The average number of Td outreach days per month was 2.8 (SD 3.5), with substantial variation across provinces. Distribution of misoprostol as the part of routine ANC was also limited, with only 36.5% of facilities providing it—ranging from just 15.2% in Koshi to 72.0% in Gandaki. Similarly, chlorhexidine gel (CHX, or navi malam) was distributed during ANC in 53.2% of birthing centers nationally, with particularly strong distribution in Gandaki (92.0%) but much lower in Koshi (30.3%) and Lumbini (43.3%).

3.3.2 Availability of counseling services, management of pregnancy complications and STIs and HIV/AIDS diagnosis and management during ANC visits in birthing centers

As presented in Table 7, all birthing centers included in the assessment reported the provision of ANC counseling across a comprehensive range of topics, reflecting the successful mainstreaming of key maternal health messages in Nepal's primary care facilities. Counseling on the WHO-recommended eight ANC contacts, birth preparedness, family planning, breastfeeding, newborn care, postnatal visits, danger signs during pregnancy, and maternal nutrition was universally provided across all facilities (100%). Counseling on HIV/AIDS was nearly universal as well (99.5%), with the only shortfall observed in one facility from Lumbini Province.
However, counseling on long-lasting insecticide-treated net (LLIN) use was more variable—offered in only 85.1% of facilities overall. The lowest coverage was observed in Koshi Province (60.6%), in contrast to full coverage in Sudurpaschim and near-universal coverage in Madhesh (93.3%) and Gandaki (92.0%). Counseling on gestational diabetes mellitus (GDM) was also broadly provided (93.7%), though gaps were evident in Koshi (87.9%) and Madhesh (91.1%).

In terms of managing pregnancy complications, nearly 70% of facilities reported the ability to identify, manage, and refer cases, with Karnali (95.2%) and Sudurpaschim (90.0%) showing particularly high readiness. Conversely, a substantial proportion of facilities in Madhesh (48.9%) reported only identifying and referring cases without management capability.

3.3.3 Screening and diagnostic tests available during ANC visits in the birthing centers

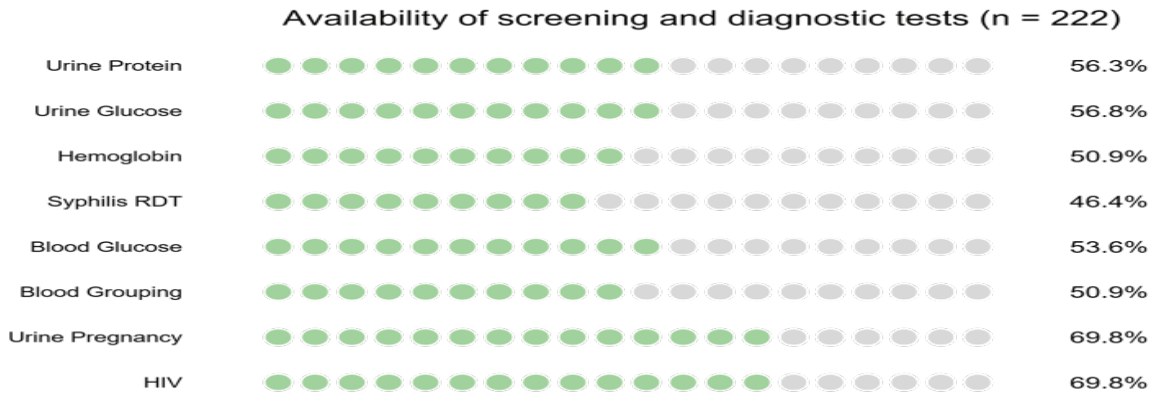

Figure 12. Availability of screening and diagnostic tests during ANC visits in birthing centers

As shown in Table 8 and Figure 12, ANC screening and diagnostic tests across birthing centers in Nepal remains variable, reflecting persistent gaps in basic laboratory services. Among key ANC tests, urine protein and glucose tests were directly available and valid in approximately 57% of facilities. The situation was similar for hemoglobin testing, available and valid in only 51% of facilities, with particularly limited access observed in Bagmati (38.9%) and Madhesh (37.8%). Access to syphilis rapid diagnostic testing (RDT) was notably limited: less than half (46.4%) of facilities had the test available and functional, and nearly 30% had never offered it. A similar pattern was observed for blood glucose testing, where just over half of the facilities (53.6%) had the service functioning on the day of assessment.
Blood grouping tests and HIV testing were both available in approximately 51%–70% of facilities, though again, availability was inconsistent across provinces. Facilities in Gandaki and Sudurpaschim demonstrated relatively higher readiness for HIV testing, while Bagmati and Madhesh showed lower availability. For urine pregnancy tests, availability was relatively better—with 69.8% of facilities having valid tests on hand. However, some provinces, such as Madhesh (51.1%) and Bagmati (72.2%), still showed shortfalls, indicating disparities in basic diagnostic support for confirming pregnancy.

The least available test across the board was the syphilis RDT, and there was consistent under availability in Bagmati, Madhesh, and Gandaki for most tests, including hemoglobin and HIV diagnostics.

3.3.4 Services provided during ANC visits in birthing centers

As shown in Table 9 and Figure 13, mixed levels of adherence to key clinical and counseling components across birthing centers was observed during ANC service delivery. Basic physical examinations such as weighing and blood pressure measurement were either observed or reported in nearly all facilities (99.5%), underscoring high compliance with routine assessments.

Health education and counseling—essential for promoting maternal and newborn health—had similarly high coverage, observed or reported in 99.6% of facilities.

In contrast, as presented in Table 8 and Figure 13, more technical diagnostic procedures showed variable coverage. Urine protein testing, an important marker for pre-eclampsia, was either observed or reported in only 70.3% of facilities. Hemoglobin assessment for anemia screening was noted in just 61.2%, highlighting gaps in routine laboratory-based evaluations. Height measurement was observed or reported in 84.7% of facilities.

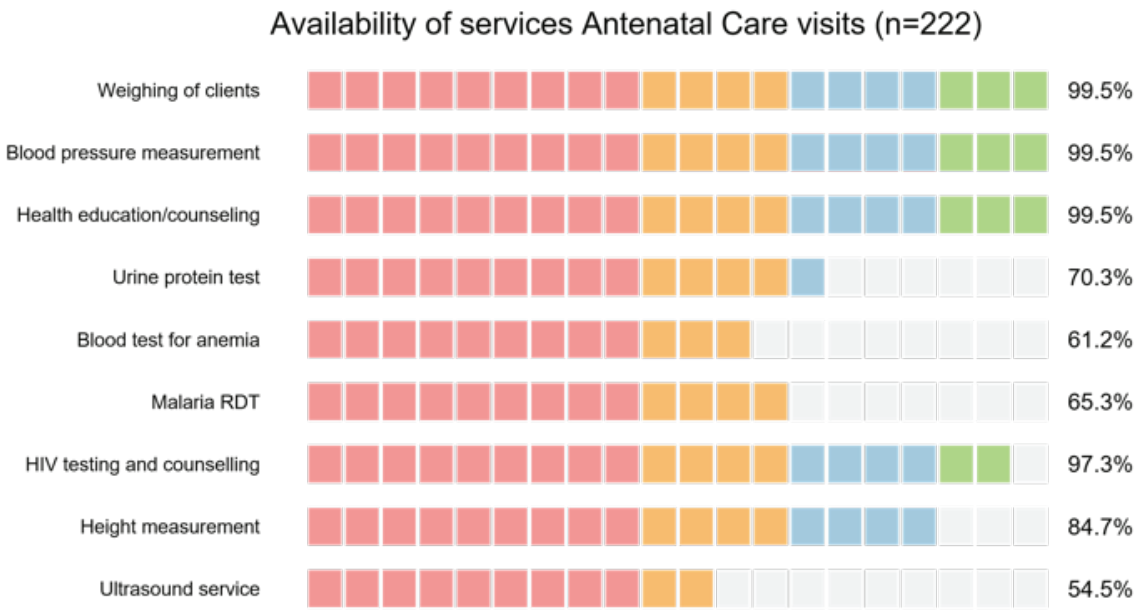

Figure 13. Availability of services during ANC visits in birthing centers

Availability of malaria rapid diagnostic tests during ANC—relevant in endemic regions—was markedly low, reported or observed in only 65.3% of facilities. Similarly, ultrasound services, though critical for monitoring fetal development and detecting complications, were either observed or reported in just over half of the facilities (54.5%), with wide provincial variation. Despite nearly universal availability of HIV testing and counseling (90.1%), a small proportion of facilities reported the absence of a provider to deliver these services at the time of the survey.

3.3.5 Perspectives of service providers

Financial incentives, such as conditional cash transfers, have encouraged women to attend the recommended number of ANC visits. Locally initiated programs like 'Anda ra Jhanda' offer both monetary and in-kind nutritional support, which have been well-received in the community and have contributed to improved adherence to ANC protocols and institutional delivery.

"In terms of birthing centers, except for one government employee, the municipality manages the rest of the staff and regularly arranges the budget for necessary materials. They receive an incentive of 800 rupees, and for delivery here at the institution, they receive 2,000 rupees for transportation costs. Additionally, the municipality has provided an extra incentive of 1,500 rupees. So, a total of 4,500 rupees is given to each woman. After delivery here, they also receive a delivery kit, and both the mother and child receive clothes. Any saline or medicine used here is

also provided free of charge." (Service provider, Kavre, Bagmati province)

"An incentive of NPR 800 is provided for completing all 8 ANC (Antenatal Care) visits, and NPR 2,000 is provided after institutional delivery totaling NPR 2,800. In addition, our province provides a Poshan Kosheli worth NPR 2,000 to mothers." (Service provider, Surkhet, Karnali province)

"Our municipality has taken a very good initiative for this . For example, when a girl is born, NPR 5,000 is deposited in her name, and another NPR 5,000 is provided for the nutrition of both the mother and child. In the case of a boy, while the amount is not deposited in an account, NPR 5,000 is still given for nutrition support." (Service provider, Nawalparasi, Gandaki province)

"Pregnant women who complete eight ANC check-ups receive an incentive, which amounts to Rs. 3800 [likely combining national ANC/delivery incentive + transport allowance]. Additionally, there's a local initiative called "Upamayor Koseli". Previously, this involved providing items like fruits, nuts, and eggs, but now it's provided as Rs. 2000 in cash. These are the current incentives." (Service provider, Darchula, Sudurpaschim)

"Sometimes, the rural municipality asks us to gather the pregnant women, and we do so to provide awareness. There is an MNH incentive of NRs 2000 along with a one-way ambulance incentive if the women complete 8 ANC visits and bring their birth registration." (Service provider, Jhapa, Koshi province)

Table 6 ANC service availability and services offered during ANC visits

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
ANC Days per Month	218 (98.2)	32 (97.0)	45 (100.0)	16 (88.9)	24 (96.0)	60 (100.0)	21 (100.0)	20 (100.0)
ANC as Part of PHC/ORC	175 (78.8)	25 (75.8)	41 (91.1)	17 (94.4)	23 (92.0)	42 (70.0)	14 (66.7)	13 (65.0)
Services provided during ANC visits								
Td vaccine	202 (91.0)	27 (81.8)	42 (93.3)	18 (100.0)	24 (96.0)	50 (83.3)	21 (100.0)	20 (100.0)
Albendazole	221 (99.5)	33 (100.0)	45 (100.0)	18 (100.0)	25 (100.0)	59 (98.3)	21 (100.0)	20 (100.0)
Misoprostol	81 (36.5)	5 (15.2)	23 (51.1)	7 (38.9)	18 (72.0)	10 (16.7)	11 (52.4)	7 (35.0)
Iron + folic acid	207 (93.2)	30 (90.9)	39 (86.7)	18 (100.0)	24 (96.0)	57 (95.0)	21 (100.0)	18 (90.0)
Calcium supplement	170 (76.6)	30 (90.9)	33 (73.3)	16 (88.9)	21 (84.0)	41 (68.3)	13 (61.9)	16 (80.0)
Chx (navi malam)	118 (53.2)	10 (30.3)	28 (62.2)	11 (61.1)	23 (92.0)	26 (43.3)	11 (52.4)	9 (45.0)
Td vaccine	210 (94.6)	33 (100.0)	42 (93.3)	16 (88.9)	23 (92.0)	57 (95.0)	19 (90.5)	20 (100.0)
In (%)								

Table 7 Availability of counseling services during ANC visits and management of pregnancy complications

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Counselling services*	222 (100.0)	33 (100.0)	45 (100.0)	18 (100.0)	25 (100.0)	60 (100.0)	21 (100.0)	20 (100.0)
Counselling on HIV/AIDS	221 (99.5)	33 (100.0)	45 (100.0)	18 (100.0)	25 (100.0)	59 (98.3)	21 (100.0)	20 (100.0)
Counselling on LLIN use	189 (85.1)	20 (60.6)	42 (93.3)	14 (77.8)	23 (92.0)	52 (86.7)	18 (85.7)	20 (100.0)
Counselling on GDM	208 (93.7)	29 (87.9)	41 (91.1)	18 (100.0)	23 (92.0)	56 (93.3)	21 (100.0)	20 (100.0)
Identify, manage and refer pregnancy complications	155 (69.8)	24 (72.7)	16 (35.6)	12 (66.7)	20 (80.0)	45 (75.0)	20 (95.2)	18 (90.0)

In (%), *Counselling on 8 ANC contacts, birth preparedness, family planning, breastfeeding, newborn care, postnatal care visits, danger signs, nutrition

Table 8 Tests available and offered during ANC visits in birthing centers

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Urine Protein Test	125 (56.3)	18 (54.5)	19 (42.2)	10 (55.6)	15 (60.0)	40 (66.7)	11 (52.4)	12 (60.0)
Urine Glucose Test	126 (56.8)	19 (57.6)	20 (44.4)	10 (55.6)	16 (64.0)	38 (63.3)	11 (52.4)	12 (60.0)
Hemoglobin Test	113 (50.9)	20 (60.6)	17 (37.8)	7 (38.9)	13 (52.0)	35 (58.3)	10 (47.6)	11 (55.0)
Syphilis RDT	103 (46.4)	18 (54.5)	15 (33.3)	6 (33.3)	12 (48.0)	31 (51.7)	10 (47.6)	11 (55.0)
Blood Glucose Test	119 (53.6)	18 (54.5)	19 (42.2)	9 (50.0)	15 (60.0)	36 (60.0)	10 (47.6)	12 (60.0)
Blood Grouping Test	113 (50.9)	21 (63.6)	17 (37.8)	7 (38.9)	12 (48.0)	35 (58.3)	10 (47.6)	*11 (55.0)*
Urine Pregnancy Test	155 (69.8)	23 (69.7)	23 (51.1)	13 (72.2)	22 (88.0)	42 (70.0)	17 (81.0)	*15 (75.0)*
HIV Test	155 (69.8)	20 (60.6)	26 (57.8)	11 (61.1)	21 (84.0)	46 (76.7)	17 (81.0)	*14 (70.0)*

1n (%), % represents column %, Shown % represents the % of tests available and at least one test kit valid on the day of observation

Table 9 Services performed during ANC visits in birthing centers

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Weighing of clients	221 (99.5)	33 (100.0)	44 (97.8)	18 (100.0)	25 (100.0)	60 (100.0)	21 (100.0)	20 (100.0)
Blood pressure measurement	221 (99.5)	33 (100.0)	45 (100.0)	18 (100.0)	25 (100.0)	60 (100.0)	20 (95.3)	20 (100.0)
Health education/counseling	221 (99.5)	33 (100.0)	44 (97.8)	18 (100.0)	25 (100.0)	60 (100.0)	21 (100.0)	20 (100.0)
Urine protein test	156 (70.3)	26 (78.8)	24 (53.4)	12 (66.7)	21 (84.0)	49 (81.6)	11 (52.4)	13 (65.0)
Blood test for anemia	136 (61.2)	26 (78.8)	21 (46.6)	11 (61.1)	14 (56.0)	44 (73.3)	10 (47.6)	10 (50.0)
Malaria RDT	145 (65.3)	24 (72.7)	24 (53.3)	11 (61.1)	20 (80.0)	43 (71.7)	11 (52.4)	12 (60.0)
HIV testing and counselling	216 (97.3)	33 (100)	40 (88.9)	18 (100.0)	25 (100)	60 (100)	20 (95.3)	20 (100.0)
Height measurement	188 (84.7)	29 (87.9)	33 (73.4)	16 (88.9)	24 (96.0)	49 (81.7)	19 (90.5)	18 (90.0)
Ultrasound service	121 (54.5)	27 (81.8)	14 (31.1)	13 (72.3)	15 (60.0)	26 (43.3)	13 (61.9)	13 (65.0)

1n (%), % represents column %, shown % represent the % of services observed or reported to be available

3.4. Service availability and readiness for delivery and essential newborn care in birthing centers

3.4.1 Staffing, clinical practices and essential resources for maternal and newborn health services in birthing centers

Across the 222 facilities, fulfilment of sanctioned posts was highest for Senior/Staff Nurses (100.0%), Senior Health Assistants (99.1%), Cleaners (100.0%), Public Health Inspectors (96.6%), Office Assistants (97.9%), and Laboratory Technicians (98.6%), with consistently high coverage across provinces. Senior/Auxiliary Health Workers (82.9%) and SBA-trained ANMs (91.7%) were also widely available but showed lower proportions in provinces such as Lumbini (60.9% for Senior/Auxiliary Health Workers) and Madhesh (76.9% for SBA-trained ANMs). Staff Nurses (91.5%) and Health Assistants (87.0%) were present in most facilities with sanctioned posts, though coverage was lower in Karnali (66.7% for both). SBA-trained Staff Nurses (75.0%), Pharmacists (100.0% where sanctioned but in few facilities), Medical Recorders (100.0% where sanctioned, limited numbers), Accountants (100.0% where sanctioned, limited numbers), Store Keepers (100.0% where sanctioned, limited numbers), and ASBA-trained Doctors (100.0% where sanctioned, rare).

Table 10. Provincial distribution and fulfilment of sanctioned health workforce positions

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Sr./Auxiliary Health Worker	170 (82.9)	25 (86.2)	30 (71.4)	14 (82.4)	14 (60.9)	50 (87.7)	21 (100.0)	16 (100.0)
Unknown	17	4	3	1	2	3	0	4
Public Health Inspector	85 (96.6)	7 (100.0)	27 (93.1)	1 (100.0)	4 (100.0)	29 (96.7)	11 (100.0)	6 (100.0)
Unknown	134	26	16	17	21	30	10	14
Sr./Staff Nurse								
Yes	212 (100.0)	33 (100.0)	35 (100.0)	18 (100.0)	25 (100.0)	60 (100.0)	21 (100.0)	20 (100.0)
Unknown	10	0	10	0	0	0	0	0
SBA Trained Staff Nurse	21 (75.0)	6 (85.7)	6 (54.5)	2 (100.0)	1 (100.0)	4 (80.0)	2 (100.0)	0 (NA)
Unknown	194	26	34	16	24	55	19	20
Sr. Health Assistant	218 (99.1)	33 (100.0)	41 (95.3)	18 (100.0)	25 (100.0)	60 (100.0)	21 (100.0)	20 (100.0)
Unknown	2	0	2	0	0	0	0	0
SBA Trained ANM	189 (91.7)	30 (96.8)	30 (76.9)	16 (94.1)	23 (95.8)	53 (91.4)	20 (100.0)	17 (100.0)
Unknown	16	2	6	1	1	2	1	3
Lab Technician	139 (98.6)	25 (100.0)	25 (96.2)	8 (100.0)	14 (100.0)	43 (97.7)	13 (100.0)	11 (100.0)
Unknown	81	8	19	10	11	16	8	9
Radiographer/X-ray Technician	28 (96.6)	7 (100.0)	6 (100.0)	2 (100.0)	1 (100.0)	7 (87.5)	4 (100.0)	1 (100.0)
Unknown	193	26	39	16	24	52	17	19
Pharmacist								
Yes	22 (100.0)	5 (100.0)	4 (100.0)	3 (100.0)	2 (100.0)	4 (100.0)	4 (100.0)	0 (NA)
Unknown	200	28	41	15	23	56	17	20
Medical Recorder								
Yes	18 (100.0)	2 (100.0)	4 (100.0)	0 (NA)	1 (100.0)	5 (100.0)	5 (100.0)	1 (100.0)
Unknown	204	31	41	18	24	55	16	19
Accountant								

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Yes	30 (100.0)	9 (100.0)	8 (100.0)	3 (100.0)	2 (100.0)	3 (100.0)	5 (100.0)	0 (NA)
Unknown	192	24	37	15	23	57	16	20
Office Assistant	187 (97.9)	31 (100.0)	35 (94.6)	8 (100.0)	20 (100.0)	54 (96.4)	19 (100.0)	20 (100.0)
Unknown	31	2	8	10	5	4	2	0
Cleaner								
Yes	135 (100.0)	15 (100.0)	38 (100.0)	10 (100.0)	10 (100.0)	29 (100.0)	13 (100.0)	20 (100.0)
Unknown	87	18	7	8	15	31	8	0
Store Keeper								
Yes	84 (100.0)	16 (100.0)	22 (100.0)	5 (100.0)	9 (100.0)	27 (100.0)	5 (100.0)	0 (NA)
Unknown	138	17	23	13	16	33	16	20
Medical Officer	46 (95.8)	7 (100.0)	22 (100.0)	2 (100.0)	2 (100.0)	9 (81.8)	4 (100.0)	0 (NA)
Unknown	174	26	23	16	23	49	17	20
ASBA Trained Doctor								
Yes	13 (100.0)	3 (100.0)	2 (100.0)	2 (100.0)	1 (100.0)	2 (100.0)	3 (100.0)	0 (NA)
Unknown	209	30	43	16	24	58	18	20
Staff Nurse	43 (91.5)	8 (100.0)	19 (95.0)	4 (100.0)	2 (100.0)	6 (66.7)	2 (100.0)	2 (100.0)
Unknown	175	25	25	14	23	51	19	18
Health Assistant	100 (87.0)	24 (96.0)	29 (87.9)	4 (100.0)	9 (100.0)	20 (66.7)	5 (100.0)	9 (100.0)
Unknown	107	8	12	14	16	30	16	11
Sr./Auxiliary Nurse Midwife	166 (90.7)	25 (92.6)	29 (82.9)	12 (85.7)	15 (78.9)	50 (94.3)	21 (100.0)	14 (100.0)
Unknown	39	6	10	4	6	7	0	6

1n (%)

Delivery services at birthing centers across Nepal reflect substantial coverage in implementing key protocols, though gaps remain in infrastructure and practice standardization, as shown in Table 10. A 24-hour staff duty schedule was maintained in 85.1% of facilities, with full coverage in Sudurpaschim and over 90% in Bagmati and Koshi. However, availability dropped notably in Karnali (57.1%). Availability of the Nepal Medical Standards (NMS) Volume III was reported in only half (50.0%) of the facilities, and essential emergency obstetric care (EOC) job aids were available in 58.1%, with higher coverage in Lumbini (75.0%) and Sudurpaschim (75.0%) than in Koshi (39.4%).

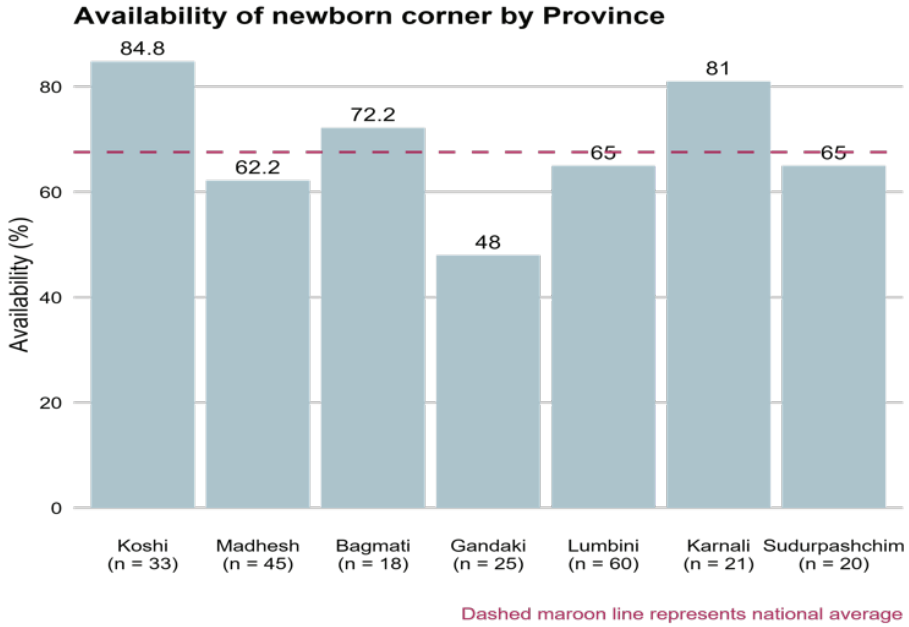

Figure 14 Availability of newborn corner in birthing centers by Province

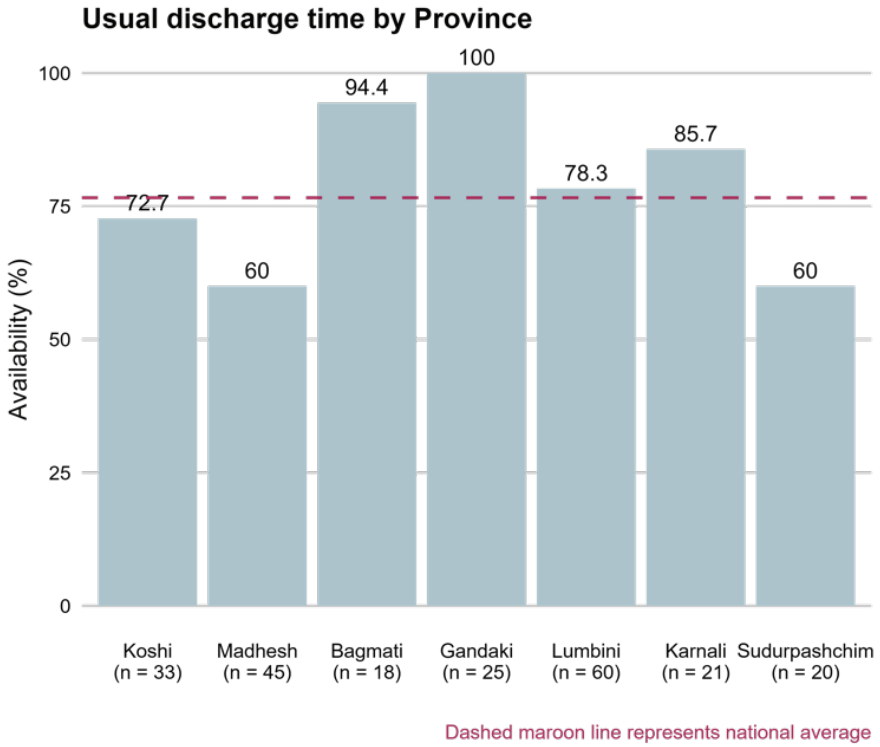

Figure 15. Usual discharge time after delivery by provinces

As presented in Figure 14 and Figure 15, a designated newborn corner was present in 67.6% of facilities, though this ranged widely by province—from just 48.0% in Gandaki to 84.8% in Koshi. Similarly, overall, 76.6% of facilities reported following a usual discharge time, with the highest in Gandaki (100.0%) and the lowest in Madhesh (60.0%).

Staff reported that they practice of Kangaroo Mother Care (KMC) for low-birth-weight babies in the 85.6% of facilities, with universal implementation in Koshi and Sudurpaschim. However, only 18.0% had a separate KMC room, the rest using integrated spaces.

Partograph use was nearly universal (97.3%), and 89.2% of facilities reported its routine use, suggesting strong adherence to labor monitoring protocols. Discharge practices varied: although 76.6% of facilities discharged mothers after 24 hours, 23.4% discharged earlier, with particularly high early discharge in Madhesh (40.0%) and Sudurpaschim (40.0%), potentially undermining postpartum care quality.

Community-based maternal and perinatal death surveillance and response (MPDSR) systems were in place in 78.4% of facilities, and among these, 90.2% reported routine MPDSR review meetings.

3.4.2 Availability of essential equipment and instruments for delivery in delivery room

The assessment of equipment and instruments in the delivery rooms of birthing centers revealed substantial heterogeneity in availability and sufficiency across provinces (Table 11 and Figure 16). While almost all facilities had a delivery bed (98.6%) and BP instruments (98.6%), a significant proportion lacked the required number of delivery sets (≥3), with only 59.9% meeting the benchmark. Notably, Madhesh and Bagmati lagged behind, with over half of their facilities having fewer than three sets. Similarly, the availability of episiotomy sets (≥2) was inadequate in one-third of centers, particularly in Madhesh (37.8%) and Sudurpaschim (25.0%).

Cervical tear repair sets were observed in 73.4% of facilities, with Koshi showing the highest coverage (93.9%), in contrast to only 55.6% in Madhesh. Basic supportive items like footsteps, mattresses and pillows were available in over 90% of facilities, but essential surfaces such as Sunmica tables were present in only 53.2%, with extreme deficits in Sudurpaschim (10.0%).

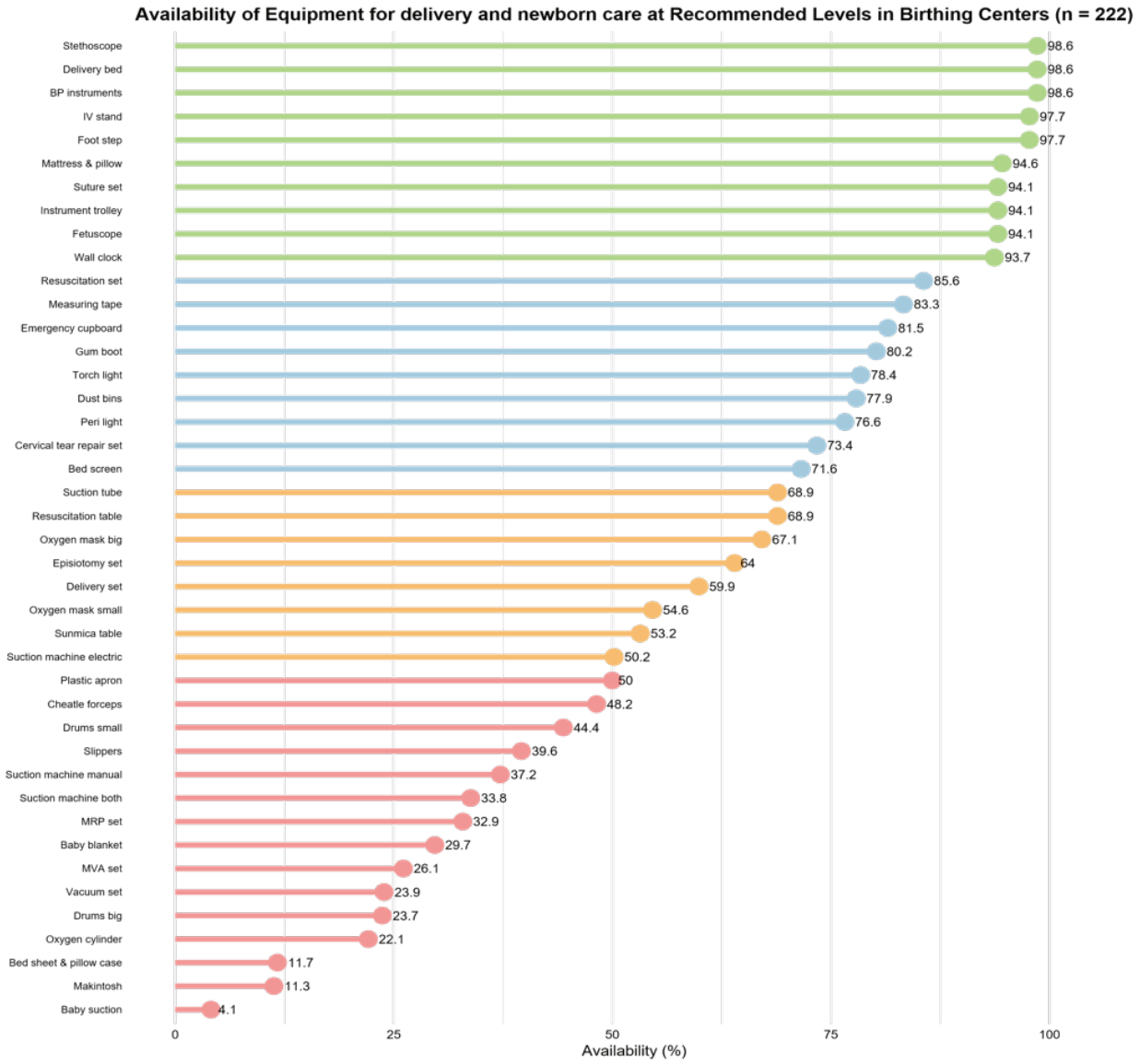

Figure 16. Availability of essential equipment and instruments in delivery room at recommended level

As presented in Figures 16, 17 and 18, electric suction machines were available in just half (50.2%) of the facilities overall, with lowest coverage in Karnali (19.0%) and Sudurpaschim (20.0%). Manual suction machines were present in only 37.2% of facilities, and the proportion with both electric and manual options was even lower (33.8%). The availability of suction tubes was comparatively better (68.9%) but still below optimal.

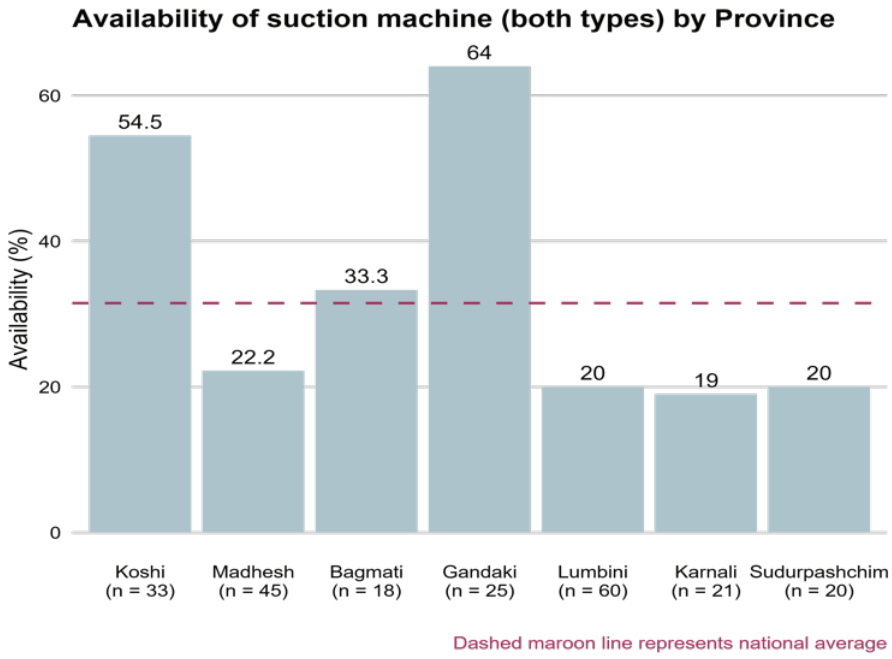

Figure 17. Availability of suction machines (both type) by Province

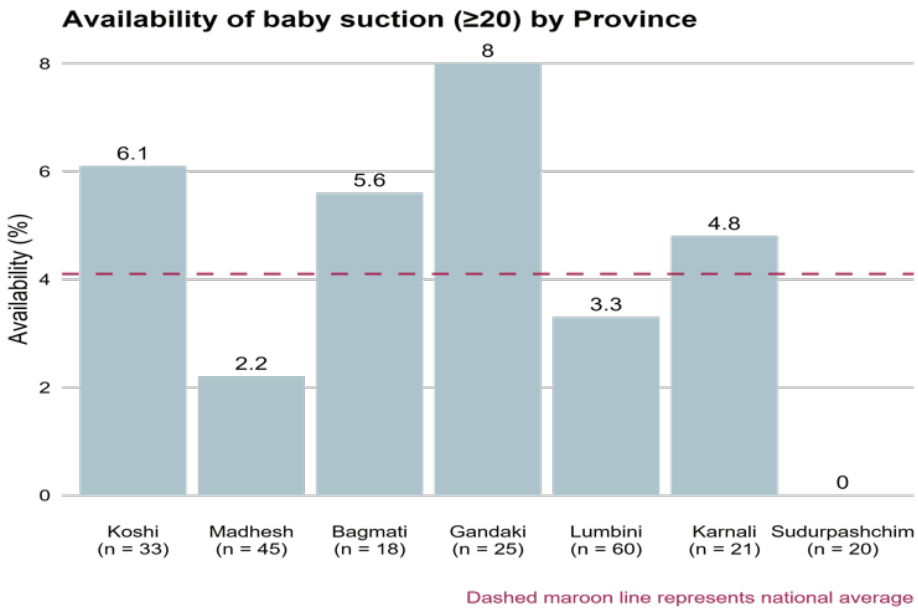

Figure 18. Availability of baby suction by Province

Most facilities had at least one oxygen mask (big: 67.1%, small: 54.6%), but oxygen cylinders (≥2) were present in only 22.1% of centers. This was particularly concerning in Karnali and Sudurpaschim, where over 60% lacked any cylinders. Basic monitoring equipment such as fetoscopes, stethoscopes, and measuring tapes were available in the majority of centers, though fetoscopes were missing in 17.8% of Madhesh facilities.

Emergency preparedness was uneven, with emergency cupboards present in 81.5% of centers, but Cheatle forceps (≥2) available in only 48.2%. Instrument trolleys were generally well-covered (94.1%), but sterilization equipment such as large drums (≥3) and small drums (≥2) had limited availability, particularly in Madhesh and Karnali.

Additional maternal and neonatal care resources showed mixed availability: resuscitation sets were available in 85.6% of facilities, but baby blankets (≥2) were present in only 29.7%, and resuscitation tables in 68.9%. Wall clocks were widely available (93.7%), but items like dustbins (≥3), plastic aprons (≥3), and gum boots (≥2) were inconsistently provided—particularly limited in Karnali.

Comfort and sanitation items such as slippers (≥3), makintosh sheets (≥6), bed sheets and pillowcases (≥6), and bed screens (≥1) also showed large variation. Only 11.7% of facilities had six or more clean sheets and pillowcases, and just 71.6% had bed screens for privacy. Overall, while most birthing centers met minimum standards for some core delivery instruments, the inconsistency in emergency preparedness, sterilization tools, oxygen availability, and neonatal care items underscores critical gaps. Provinces such as Karnali, Sudurpaschim, and parts of Madhesh exhibited more pronounced deficiencies.

3.4.3 Availability of equipment and instruments for newborn care in birthing centers

As presented in Table 12 and Figure 21, While the majority of facilities had cord clamps (91.0%) and sterile glove boxes (95.9%), the coverage of other vital items reveals troubling gaps. For instance, as shown in Figure 19 and 20 only 15.3% of birthing centers had the recommended minimum of 12 baby wrappers, with over two-thirds falling short—particularly in Bagmati (77.8% had fewer than 12) and Madhesh (71.1%). Similarly, there was poor coverage of penguin suction devices overall (48.6%).

Weighing machines were present in 77.5% of facilities overall, yet availability was alarmingly low in Karnali (28.6%) and Koshi (57.6%). Similarly, resuscitation tables were found in just two-thirds of facilities (67.1%), with the lowest coverage in Madhesh (48.9%) and Sudurpaschim (50.0%). Room thermometers—essential for maintaining neonatal thermal regulation—were available in only 61.7% of facilities, and baby stethoscopes in less than half (47.3%), with particularly poor availability in Madhesh and Koshi. The readiness of centers to manage neonatal emergencies was further undermined by limited availability of bag and mask sets, with only 60.8% of facilities having two or more. Strikingly, over 93% of facilities lacked a sufficient number of infant identification tags, posing significant risks for misidentification.

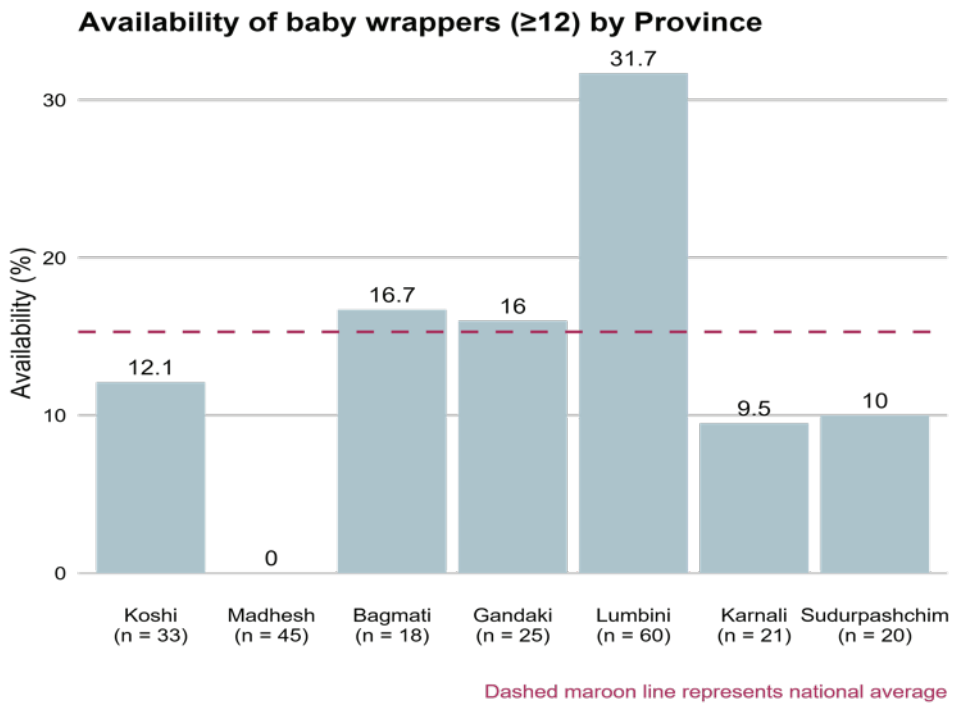

Figure 19. Availability of baby wrappers in birthing centers by Province

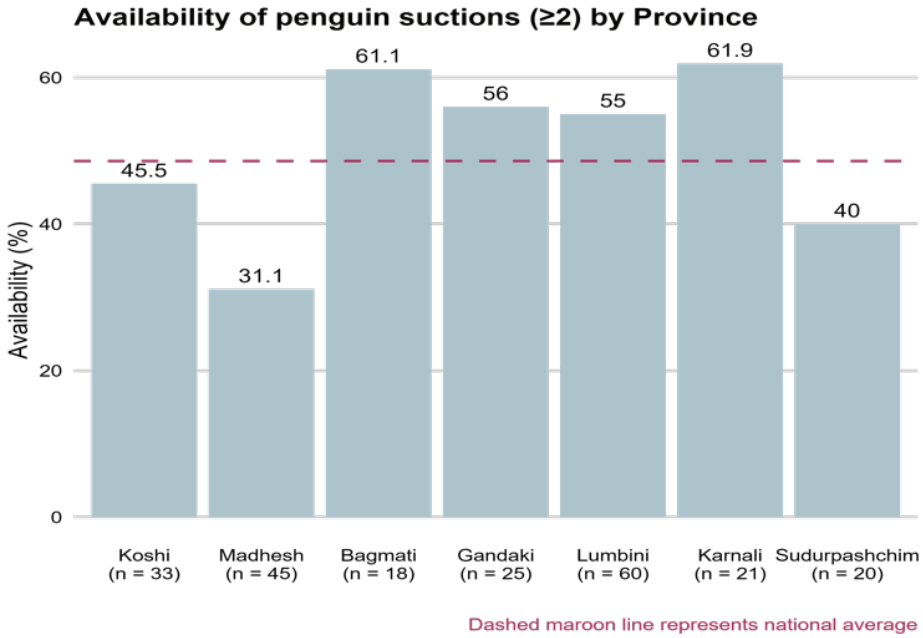

Figure 20. Availability of penguin suction in birthing center by Province

Despite relatively better availability of 1 ml syringes (80.6%) and room heaters (79.7%), shortages were evident in provinces such as Karnali and Madhesh. Kangaroo Mother Care (KMC) wrappers, which support thermal regulation and bonding, were present in the recommended quantity (≥4) in just 2.3% of centers, with most having none or too few. Glucometers were also lacking in nearly half of the facilities (45.9%), limiting the capacity for early detection of neonatal hypoglycemia.

These findings underscore serious deficiencies in the readiness of birthing centers to provide comprehensive newborn care, particularly in provinces such as Madhesh, Karnali, and Koshi.

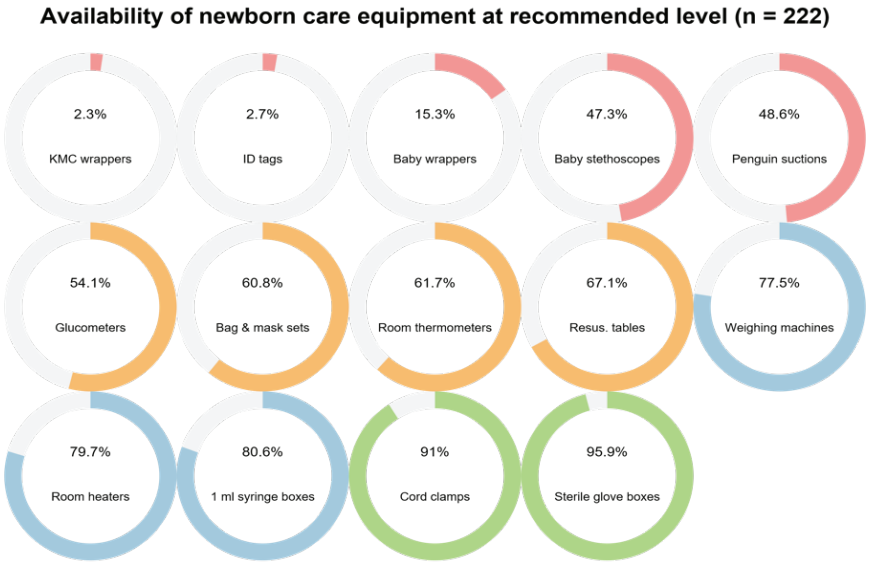

Figure 21. Availability of essential equipment and instruments for newborn care at recommended level in birthing centers

The availability of essential drugs and utilities reveals a mixed picture, with notable deficits in several life-saving medications and medical supplies, as presented in Table 13 and Figures 22, 23 and 24. For uterotonic drugs, less than half of the facilities had the recommended stock of oxytocin (36.5% had ≥30 vials) and ergometrine (only 21.2% had ≥5 ampoules), with as many as 70.7% of facilities lacking any ergometrine entirely. Ergometrine is still in use and bundle approach for prevention and management of PPH is through prescription of Tranexamic Acid.

Availability of antihypertensives and anticonvulsants was also suboptimal: just 19.4% had the recommended ≥50 vials of magnesium sulphate, and 51.4% had ≥5 tablets of nifedipine.

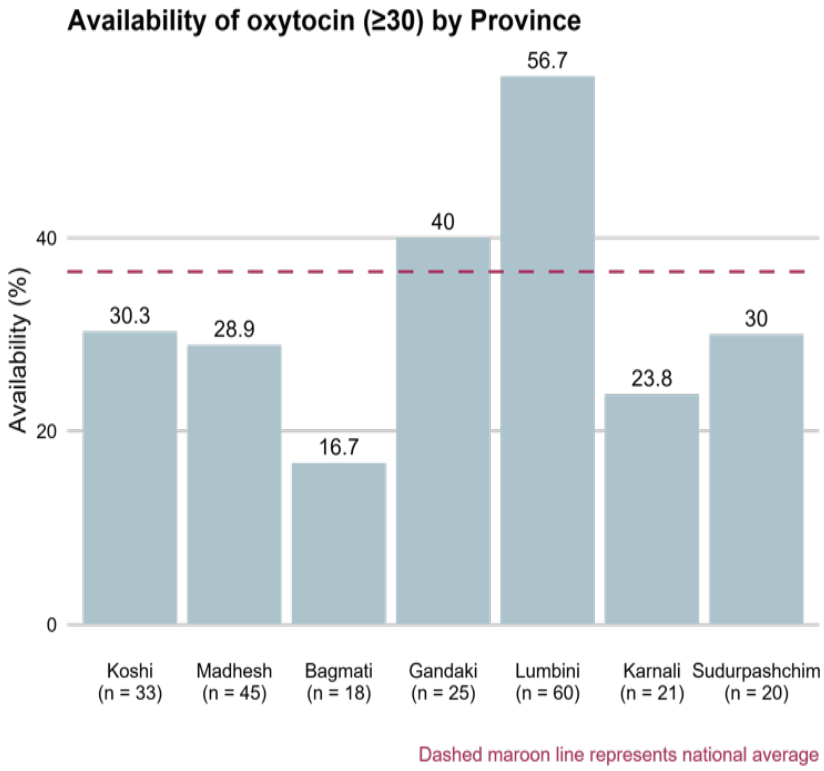

Figure 22. Availability of Oxytocin at recommended levels in birthing centers by Province

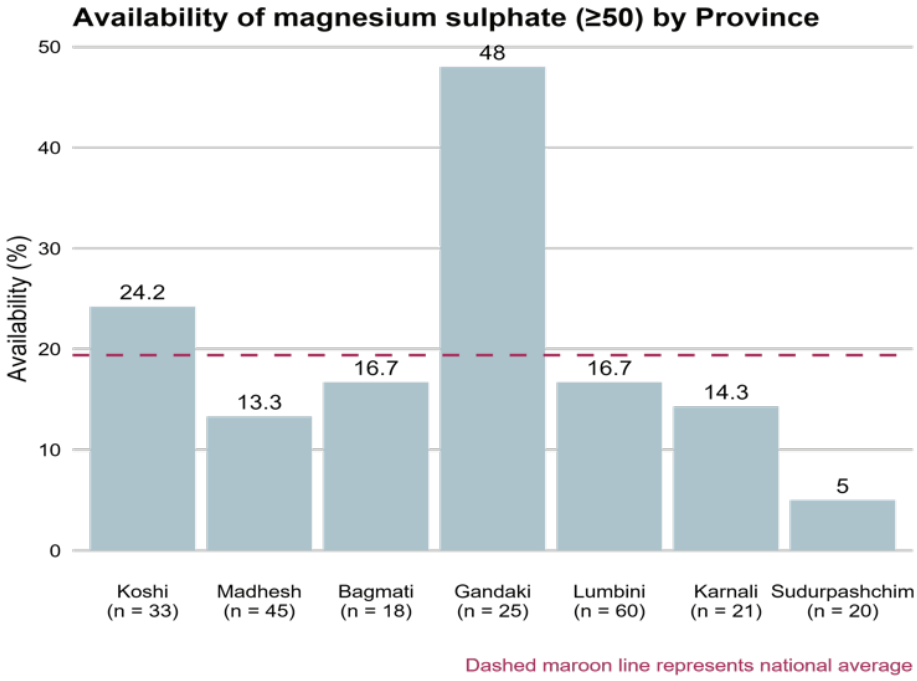

Figure 23. Availability of Magnesium Sulphate at recommended levels in birthing centers by Province

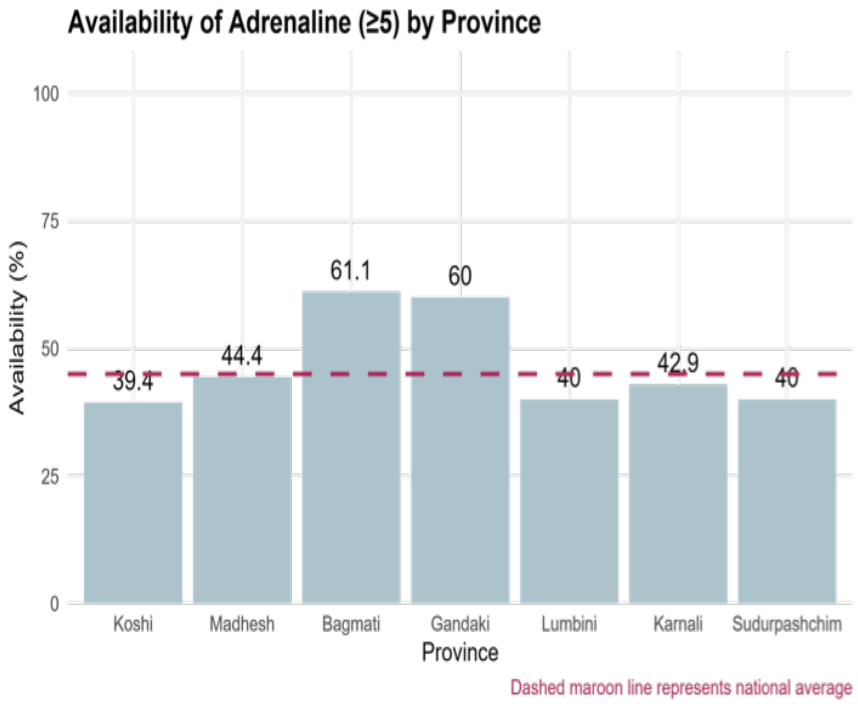

Figure 24. Availability of adrenaline at recommended levels in birthing centers by Province

Emergency drugs and adjunctive therapies, such as calcium gluconate, adrenaline, dexamethasone, and xylocaine, were inconsistently stocked. Notably, only 32.0% of facilities had adequate quantities of xylocaine 1%, while 34.2% had no dexamethasone at all. Although gentamycin—an essential antibiotic—was sufficiently stocked (≥5 vials) in 65.3% of centers, chlorhexidine gel, critical for newborn cord care, was present in recommended quantities (≥100 tubes) in just 5.4% of facilities. Alarmingly, one in five facilities had none.

Supportive utilities also presented challenges, as shown in Table 14 and Figure 25. While surgical gloves were almost universally available (98.6%), the availability of IV fluids, IV sets, syringes, and cannulas varied by region. Only 48.2% of facilities stocked the minimum 30 IV fluid units, and just 73.0% had 10 or more IV sets. Equipment for catheterization and urinary care (e.g., Foley and plain catheters, urobags) was inconsistently stocked, with one-third or more of facilities lacking sufficient quantities Basic surgical materials like chromic catgut, cotton rolls, gauze, and exam gloves were available in many, but not all, facilities—highlighting ongoing supply chain inconsistencies. For example, only 54.5% of centers had the recommended chromic catgut stock, and 13.5% had none. Similarly, cotton rolls were insufficient in 43.2% of centers, and 3.2% had no gauze at all.

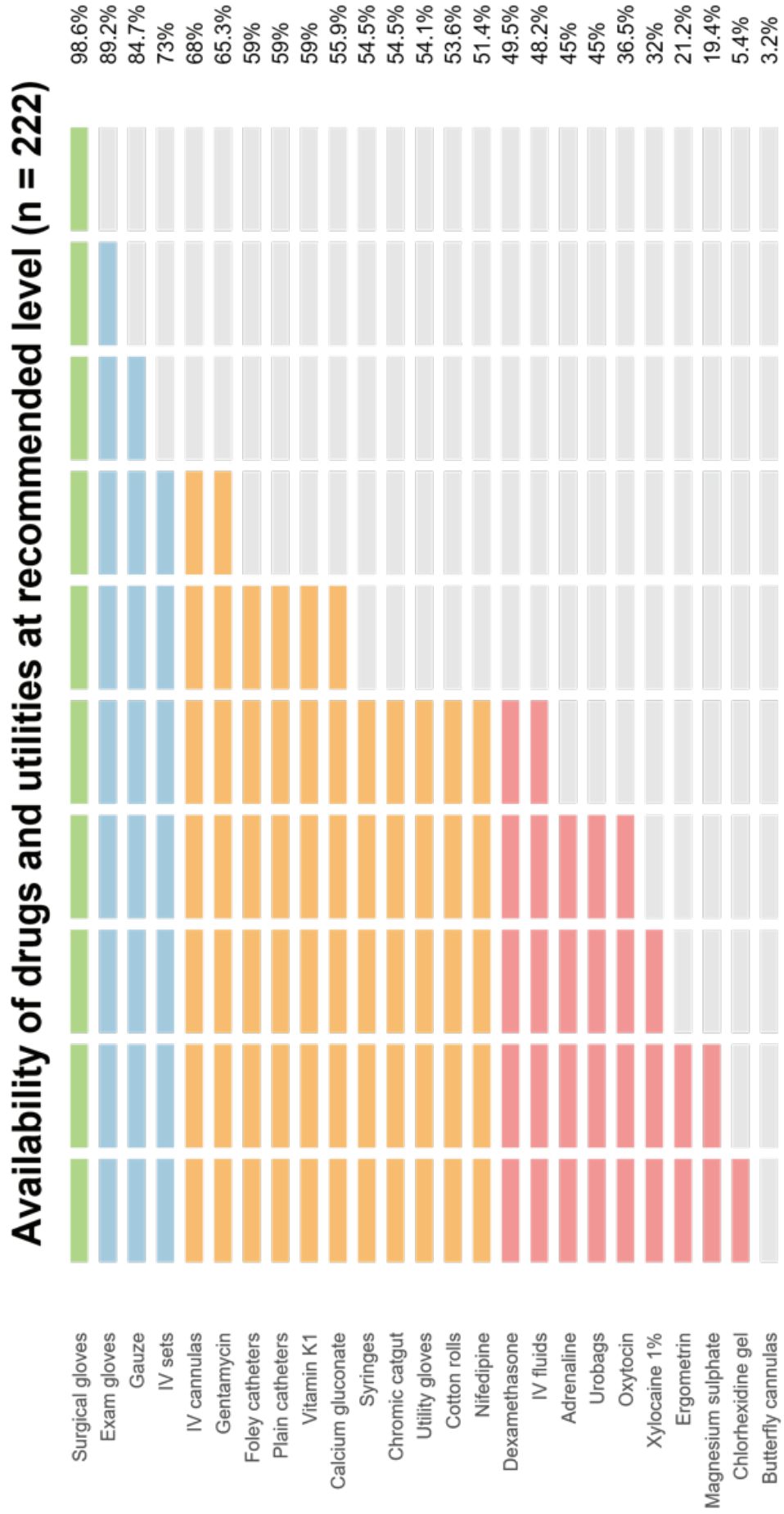

Figure 25. Availability of essential drugs and utilities at recommended level for delivery and newborn care at birthing centers

3.4.5 Availability of drugs and utilities essential for emergency newborn care in birthing centers

The proportion of birthing centers across Nepal maintaining essential emergency newborn care items at or above the national mean stock levels varied considerably by province, as shown in Table 15. While some provinces demonstrated moderate readiness, others revealed persistent shortfalls in critical supplies. Only 39.6% of birthing centers overall had 10% Dextrose Normal Saline stocks at or above the national mean, with coverage highest in Koshi (57.6%) and Sudurpaschim (50%), but alarmingly low in Lumbini (18.3%). Injectable ampicillin and gentamycin, both key antibiotics for neonatal sepsis, showed adequate availability (≥ mean) in just 38.3% and 41.4% of centers, respectively. Notably, Karnali had the highest gentamycin coverage (66.7%), while Bagmati and Lumbini lagged behind.

The availability of phenobarbitone, used to treat neonatal seizures, was in 15.8% of facilities that met the mean threshold, and fewer than 10% in Lumbini and Sudurpaschim did so. This is because only PHC and above provide these services. The IV cannulas (24F) also showed underperformance, with just one-third (32.9%) of facilities achieving mean-level stock, though Koshi (42.4%) performed better than most. For syringes (5/10 ml), critical for delivering medications and fluids, only 27.5% of birthing centers stocked at or above the national mean, with the best availability in Gandaki (56%) and Sudurpaschim (50%), in stark contrast to Karnali (14.3%) and Lumbini (16.7%).

The qualitative interviews across districts consistently underscored improvements in institutional delivery services at birthing centers in Nepal. Many health facilities, particularly in Bagmati, Gandaki, and Lumbini provinces, reported significant reductions in home deliveries over the last two years. This is attributed to increased community awareness, incentive programs for institutional deliveries, availability of 24-hour delivery services, and support from local governments. For instance, health posts in Bhimphedi and Sindhuli confirmed that no home deliveries occurred in their wards over a two-year period.

Most birthing centers had basic delivery infrastructure, including delivery beds, SBA-trained personnel, and protocols for referral in case of complications. In several cases, deliveries were successfully managed by ANMs even in the absence of SBA training, although this raised concerns about quality and capacity. Challenges such as congested delivery rooms, outdated or expired supplies, and inconsistent electricity or water supply were mentioned as structural limitations.

In terms of referral readiness, most providers reported having established linkages with higher centers such as district hospitals. However, transportation constraints, especially in hill districts, sometimes delayed emergency referrals. Despite these constraints, birthing centers were often praised by community members for their responsiveness, counseling, and care during delivery.

"During service delivery, we sometimes face a shortage of medicines when the municipality does not supply oxytocin and other essential drugs on time. In such cases, we purchase the medicines ourselves. Sometimes, when medicines are not available locally, we request them from other health facilities to ensure that services continue without interruption. Despite our efforts, this remains a challenge." (Service Provider, Surkhet, Karnali province)

"There is no suction machine, video X-ray, resuscitation table, equipment racks, and delivery bed. If these had been provided, it would have made service delivery much easier." (Service provider, Jhapa, Koshi Province)

"Only one bed is here. If another case comes during a delivery, then we do it in the same bedroom. If first case is finished then we do it there. But till now it has not happened like that." (Service provider, Sunsari, Koshi Province)

"Overall MNH indicators have improved; however, some remain challenging. Institutional delivery is around 60%." (PHN, Gandaki)

"Home deliveries are decreasing but remain a challenge. Institutional delivery is 58%." (PHO, Gandaki)

Institutional delivery stands at over 56%. Significant numbers prefer outside hospitals... Geographical challenges persist." (PHO, Bagmati)

Table 11 Status of delivery and newborn care services in birthing centers

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
24-hr Staff Duty Schedule	189 (85.1)	30 (90.9)	40 (88.9)	17 (94.4)	20 (80.0)	50 (83.3)	12 (57.1)	20 (100.0)
NMS Volume III Available	111 (50.0)	13 (39.4)	27 (60.0)	9 (50.0)	18 (72.0)	23 (38.3)	8 (38.1)	13 (65.0)
EOC Job Aid Available	129 (58.1)	13 (39.4)	23 (51.1)	9 (50.0)	13 (52.0)	45 (75.0)	11 (52.4)	15 (75.0)
Newborn Corner	150 (67.6)	28 (84.8)	28 (62.2)	13 (72.2)	12 (48.0)	39 (65.0)	17 (81.0)	13 (65.0)
Kangaroo Mother Care Practice for LBW baby	190 (85.6)	33 (100.0)	29 (64.4)	15 (83.3)	22 (88.0)	51 (85.0)	20 (95.2)	20 (100.0)
Separate KMC Room Available	40 (18.0)	4 (12.1)	11 (24.4)	6 (33.3)	5 (20.0)	4 (6.7)	7 (33.3)	3 (15.0)
Partograph Use	216 (97.3)	31 (93.9)	45 (100.0)	18 (100.0)	25 (100.0)	59 (98.3)	21 (100.0)	17 (85.0)
Partograph Frequency	198 (89.2)	31 (93.9)	34 (75.6)	12 (66.7)	25 (100.0)	57 (95.0)	21 (100.0)	18 (90.0)
Usual Discharge Time	170 (76.6)	24 (72.7)	27 (60.0)	17 (94.4)	25 (100.0)	47 (78.3)	18 (85.7)	12 (60.0)

In (%)

Table 12 Availability of essential equipment and instruments in delivery room

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Delivery bed (need ≥1)	219 (98.6)	33 (100.0)	45 (100.0)	17 (94.4)	25 (100.0)	59 (98.3)	20 (95.2)	20 (100.0)
Delivery set (need ≥3)	133 (59.9)	19 (57.6)	20 (44.4)	9 (50.0)	9 (36.0)	44 (73.3)	17 (81.0)	15 (75.0)
Episiotomy set (need ≥2)	142 (64.0)	21 (63.6)	22 (48.9)	13 (72.2)	17 (68.0)	44 (73.3)	14 (66.7)	11 (55.0)
Cervical tear repair set (need ≥1)	163 (73.4)	31 (93.9)	25 (55.6)	16 (88.9)	17 (68.0)	43 (71.7)	18 (85.7)	13 (65.0)
Foot step (need ≥1)	217 (97.7)	32 (97.0)	42 (93.3)	18 (100.0)	25 (100.0)	60 (100.0)	21 (100.0)	19 (95.0)
Mattress & pillow (need ≥1)	210 (94.6)	33 (100.0)	43 (95.6)	17 (94.4)	23 (92.0)	55 (91.7)	19 (90.5)	20 (100.0)
Sunmica table (need ≥1)	118 (53.2)	16 (48.5)	29 (64.4)	11 (61.1)	17 (68.0)	31 (51.7)	12 (57.1)	2 (10.0)
Suction machine electric (need ≥1)	104 (50.2)	19 (57.6)	23 (74.2)	9 (52.9)	15 (60.0)	30 (50.0)	4 (19.0)	4 (20.0)
Suction machine manual (need ≥1)	77 (37.2)	15 (45.5)	13 (41.9)	6 (35.3)	16 (64.0)	16 (26.7)	5 (23.8)	6 (30.0)
Suction machine both (need ≥1)	70 (33.8)	18 (54.5)	10 (32.3)	6 (35.3)	16 (64.0)	12 (20.0)	4 (19.0)	4 (20.0)
Suction tube (need ≥1)	153 (68.9)	27 (81.8)	31 (68.9)	15 (83.3)	18 (72.0)	38 (63.3)	10 (47.6)	14 (70.0)
Baby suction (need ≥20)	9 (4.1)	2 (6.1)	1 (2.2)	1 (5.6)	2 (8.0)	2 (3.3)	1 (4.8)	0 (0.0)
Oxygen mask big (need ≥1)	139 (67.1)	26 (78.8)	21 (67.7)	12 (70.6)	19 (76.0)	41 (68.3)	10 (47.6)	10 (50.0)
Oxygen mask small (need ≥1)	113 (54.6)	19 (57.6)	18 (58.1)	9 (52.9)	16 (64.0)	30 (50.0)	9 (42.9)	12 (60.0)
IV stand (need ≥1)	217 (97.7)	33 (100.0)	44 (97.8)	18 (100.0)	24 (96.0)	58 (96.7)	20 (95.2)	20 (100.0)
Peri light (need ≥1)	170 (76.6)	28 (84.8)	33 (73.3)	17 (94.4)	20 (80.0)	44 (73.3)	15 (71.4)	13 (65.0)
Oxygen cylinder (need ≥2)	49 (22.1)	7 (21.2)	16 (35.6)	8 (44.4)	9 (36.0)	2 (3.3)	2 (9.5)	5 (25.0)
BP instruments (need ≥1)	219 (98.6)	31 (93.9)	45 (100.0)	18 (100.0)	25 (100.0)	59 (98.3)	21 (100.0)	20 (100.0)
Stethoscope (need ≥1)	219 (98.6)	31 (93.9)	45 (100.0)	18 (100.0)	25 (100.0)	59 (98.3)	21 (100.0)	20 (100.0)
Fetoscope (need ≥1)	209 (94.1)	33 (100.0)	37 (82.2)	18 (100.0)	24 (96.0)	57 (95.0)	20 (95.2)	20 (100.0)
Measuring tape (need ≥1)	185 (83.3)	28 (84.8)	30 (66.7)	15 (83.3)	25 (100.0)	49 (81.7)	19 (90.5)	19 (95.0)

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Emergency cupboard (need ≥1)	181 (81.5)	28 (84.8)	34 (75.6)	13 (72.2)	23 (92.0)	52 (86.7)	18 (85.7)	13 (65.0)
Cheatle forceps (need ≥2)	107 (48.2)	13 (39.4)	20 (44.4)	10 (55.6)	14 (56.0)	21 (35.0)	12 (57.1)	17 (85.0)
Instrument trolley (need ≥1)	209 (94.1)	31 (93.9)	44 (97.8)	18 (100.0)	23 (92.0)	54 (90.0)	19 (90.5)	20 (100.0)
Drums big (need ≥3)	49 (23.7)	9 (27.3)	3 (9.7)	5 (29.4)	6 (24.0)	16 (26.7)	2 (9.5)	8 (40.0)
Drums small (need ≥2)	92 (44.4)	13 (39.4)	15 (48.4)	10 (58.8)	10 (40.0)	30 (50.0)	8 (38.1)	6 (30.0)
Vacuum set (need ≥1)	53 (23.9)	8 (24.2)	11 (24.4)	3 (16.7)	7 (28.0)	14 (23.3)	4 (19.0)	6 (30.0)
MVA set (need ≥1)	58 (26.1)	12 (36.4)	11 (24.4)	3 (16.7)	7 (28.0)	15 (25.0)	4 (19.0)	6 (30.0)
MRP set (need ≥1)	73 (32.9)	15 (45.5)	11 (24.4)	10 (55.6)	6 (24.0)	13 (21.7)	9 (42.9)	9 (45.0)
Wall clock (need ≥1)	208 (93.7)	30 (90.9)	40 (88.9)	16 (88.9)	24 (96.0)	57 (95.0)	21 (100.0)	20 (100.0)
Resuscitation table (need ≥1)	153 (68.9)	20 (60.6)	30 (66.7)	14 (77.8)	15 (60.0)	49 (81.7)	12 (57.1)	13 (65.0)
Resuscitation set (need ≥1)	190 (85.6)	31 (93.9)	32 (71.1)	16 (88.9)	19 (76.0)	54 (90.0)	19 (90.5)	19 (95.0)
Baby blanket (need ≥2)	66 (29.7)	6 (18.2)	21 (46.7)	5 (27.8)	12 (48.0)	13 (21.7)	6 (28.6)	3 (15.0)
Dust bins (need ≥3)	173 (77.9)	28 (84.8)	42 (93.3)	16 (88.9)	21 (84.0)	47 (78.3)	6 (28.6)	13 (65.0)
Bed sheet & pillow case (need ≥6)	26 (11.7)	6 (18.2)	4 (8.9)	1 (5.6)	6 (24.0)	8 (13.3)	1 (4.8)	0 (0.0)
Makintosh (need ≥6)	25 (11.3)	2 (6.1)	4 (8.9)	4 (22.2)	6 (24.0)	7 (11.7)	1 (4.8)	1 (5.0)
Bed screen (need ≥1)	159 (71.6)	29 (87.9)	37 (82.2)	14 (77.8)	21 (84.0)	34 (56.7)	11 (52.4)	13 (65.0)
Plastic apron (need ≥3)	111 (50.0)	17 (51.5)	22 (48.9)	8 (44.4)	10 (40.0)	33 (55.0)	10 (47.6)	11 (55.0)
Gum boot (need ≥2)	178 (80.2)	25 (75.8)	28 (62.2)	14 (77.8)	23 (92.0)	50 (83.3)	21 (100.0)	17 (85.0)
Slippers (need ≥3)	88 (39.6)	10 (30.3)	18 (40.0)	9 (50.0)	11 (44.0)	25 (41.7)	8 (38.1)	7 (35.0)
Torch light (need ≥1)	174 (78.4)	24 (72.7)	24 (53.3)	17 (94.4)	22 (88.0)	51 (85.0)	17 (81.0)	19 (95.0)
Suture set (need ≥1)	209 (94.1)	33 (100.0)	36 (80.0)	18 (100.0)	22 (88.0)	60 (100.0)	21 (100.0)	19 (95.0)
In (%)								

Table 13 Equipment and instruments for essential newborn care available in birthing centers

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Cord clamps (need ≥2)	202 (91.0)	32 (97.0)	33 (73.3)	17 (94.4)	22 (88.0)	60 (100.0)	19 (90.5)	19 (95.0)
Baby wrappers (need ≥12)	34 (15.3)	4 (12.1)	0 (0.0)	3 (16.7)	4 (16.0)	19 (31.7)	2 (9.5)	2 (10.0)
Weighing machines (need ≥1)	172 (77.5)	19 (57.6)	40 (88.9)	13 (72.2)	23 (92.0)	52 (86.7)	6 (28.6)	19 (95.0)
Resus. tables (need ≥1)	149 (67.1)	28 (84.8)	22 (48.9)	14 (77.8)	17 (68.0)	45 (75.0)	13 (61.9)	10 (50.0)
Room thermometers (need ≥1)	137 (61.7)	19 (57.6)	18 (40.0)	14 (77.8)	15 (60.0)	36 (60.0)	15 (71.4)	20 (100.0)
Baby stethoscopes (need ≥1)	105 (47.3)	12 (36.4)	15 (33.3)	13 (72.2)	17 (68.0)	25 (41.7)	16 (76.2)	7 (35.0)
Penguin suctions (need ≥2)	108 (48.6)	15 (45.5)	14 (31.1)	11 (61.1)	14 (56.0)	33 (55.0)	13 (61.9)	8 (40.0)
Bag & mask sets (need ≥2)	135 (60.8)	25 (75.8)	23 (51.1)	10 (55.6)	14 (56.0)	31 (51.7)	18 (85.7)	14 (70.0)
ID tags (need ≥4)	6 (2.7)	0 (0.0)	2 (4.4)	1 (5.6)	2 (8.0)	1 (1.7)	0 (0.0)	0 (0.0)
Sterile glove boxes (need ≥1)	213 (95.9)	30 (90.9)	43 (95.6)	17 (94.4)	24 (96.0)	60 (100.0)	19 (90.5)	20 (100.0)
1 ml syringe boxes (need ≥1)	179 (80.6)	30 (90.9)	29 (64.4)	16 (88.9)	23 (92.0)	50 (83.3)	14 (66.7)	17 (85.0)
KMC wrappers (need ≥4)	5 (2.3)	2 (6.1)	2 (4.4)	0 (0.0)	0 (0.0)	1 (1.7)	0 (0.0)	0 (0.0)
Room heaters (need ≥1)	177 (79.7)	26 (78.8)	27 (60.0)	16 (88.9)	20 (80.0)	55 (91.7)	16 (76.2)	17 (85.0)
Glucometers (need ≥1)	120 (54.1)	17 (51.5)	19 (42.2)	15 (83.3)	21 (84.0)	30 (50.0)	8 (38.1)	10 (50.0)
In (%)								

Table 14 Availability of drugs essential for labour, delivery management and newborn care at recommended levels in birthing centers

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Oxytocin (need ≥30)	81 (36.5)	10 (30.3)	13 (28.9)	3 (16.7)	10 (40.0)	34 (56.7)	5 (23.8)	6 (30.0)
Ergometrine (need ≥5)	47 (21.2)	6 (18.2)	14 (31.1)	5 (27.8)	4 (16.0)	10 (16.7)	5 (23.8)	3 (15.0)
Nifedipine (need ≥5)	114 (51.4)	19 (57.6)	23 (51.1)	10 (55.6)	8 (32.0)	33 (55.0)	10 (47.6)	11 (55.0)
Magnesium sulphate (need ≥50)	43 (19.4)	8 (24.2)	6 (13.3)	3 (16.7)	12 (48.0)	10 (16.7)	3 (14.3)	1 (5.0)
Calcium gluconate (need ≥5)	124 (55.9)	15 (45.5)	23 (51.1)	14 (77.8)	14 (56.0)	37 (61.7)	13 (61.9)	8 (40.0)
Xylocaine 1% (need ≥5)	71 (32.0)	12 (36.4)	14 (31.1)	8 (44.4)	10 (40.0)	18 (30.0)	5 (23.8)	4 (20.0)
Adrenaline (need ≥5)	100 (45.0)	13 (39.4)	20 (44.4)	11 (61.1)	15 (60.0)	24 (40.0)	9 (42.9)	8 (40.0)
Dexamethasone (need ≥5)	110 (49.5)	15 (45.5)	17 (37.8)	10 (55.6)	16 (64.0)	32 (53.3)	13 (61.9)	7 (35.0)
Gentamycin (need ≥5)	145 (65.3)	20 (60.6)	30 (66.7)	12 (66.7)	16 (64.0)	37 (61.7)	18 (85.7)	12 (60.0)
Chlorhexidine gel (need ≥100)	12 (5.4)	2 (6.1)	2 (4.4)	2 (11.1)	3 (12.0)	1 (1.7)	0 (0.0)	2 (10.0)
Vitamin K1 (need ≥1)	131 (59.0)	20 (60.6)	21 (46.7)	11 (61.1)	20 (80.0)	34 (56.7)	9 (42.9)	16 (80.0)

In (%)

Table 15 Availability of utilities essential for labour, delivery management and newborn care at recommended levels in birthing centers

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Syringes (need ≥65)	121 (54.5)	25 (75.8)	14 (31.1)	10 (55.6)	18 (72.0)	30 (50.0)	11 (52.4)	13 (65.0)
IV fluids (need ≥30)	107 (48.2)	21 (63.6)	20 (44.4)	7 (38.9)	13 (52.0)	26 (43.3)	13 (61.9)	7 (35.0)
IV sets (need ≥10)	162 (73.0)	31 (93.9)	24 (53.3)	14 (77.8)	21 (84.0)	42 (70.0)	15 (71.4)	15 (75.0)
IV cannulas (need ≥10)	151 (68.0)	30 (90.9)	21 (46.7)	13 (72.2)	15 (60.0)	43 (71.7)	15 (71.4)	14 (70.0)
Butterfly cannulas (need ≥20)	7 (3.2)	0 (0.0)	2 (4.4)	1 (5.6)	2 (8.0)	1 (1.7)	1 (4.8)	0 (0.0)
Foley catheters (need ≥3)	131 (59.0)	14 (42.4)	23 (51.1)	13 (72.2)	18 (72.0)	41 (68.3)	11 (52.4)	11 (55.0)
Plain catheters (need ≥5)	131 (59.0)	21 (63.6)	17 (37.8)	12 (66.7)	16 (64.0)	43 (71.7)	13 (61.9)	9 (45.0)
Urobags (need ≥3)	100 (45.0)	12 (36.4)	15 (33.3)	11 (61.1)	13 (52.0)	32 (53.3)	9 (42.9)	8 (40.0)
Surgical gloves (need ≥1)	219 (98.6)	33 (100.0)	44 (97.8)	18 (100.0)	24 (96.0)	59 (98.3)	21 (100.0)	20 (100.0)
Utility gloves (need ≥3)	120 (54.1)	19 (57.6)	23 (51.1)	8 (44.4)	12 (48.0)	40 (66.7)	8 (38.1)	10 (50.0)
Exam gloves (need ≥2)	198 (89.2)	30 (90.9)	45 (100.0)	15 (83.3)	15 (60.0)	54 (90.0)	19 (90.5)	20 (100.0)
Chromic catgut (need ≥10)	121 (54.5)	27 (81.8)	13 (28.9)	11 (61.1)	14 (56.0)	38 (63.3)	10 (47.6)	8 (40.0)
Cotton rolls (need ≥3)	119 (53.6)	18 (54.5)	23 (51.1)	8 (44.4)	19 (76.0)	26 (43.3)	11 (52.4)	14 (70.0)
Gauze (need ≥3)	188 (84.7)	32 (97.0)	42 (93.3)	15 (83.3)	18 (72.0)	52 (86.7)	13 (61.9)	16 (80.0)
In (%)								

Table 16 Proportion of birthing centers meeting or exceeding the mean stock level by province

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
10 Dextrose NS	88 (39.6)	19 (57.6)	21 (46.7)	8 (44.4)	11 (44.0)	11 (18.3)	8 (38.1)	10 (50.0)
Inj Ampicillin	85 (38.3)	12 (36.4)	15 (33.3)	6 (33.3)	12 (48.0)	20 (33.3)	11 (52.4)	9 (45.0)
Inj Gentamycin	92 (41.4)	15 (45.5)	21 (46.7)	7 (38.9)	9 (36.0)	18 (30.0)	14 (66.7)	8 (40.0)
Phenobarbitone	35 (15.8)	5 (15.2)	7 (15.6)	7 (38.9)	3 (12.0)	6 (10.0)	6 (28.6)	1 (5.0)
IV Cannula 24F	73 (32.9)	14 (42.4)	14 (31.1)	6 (33.3)	9 (36.0)	15 (25.0)	7 (33.3)	8 (40.0)
Syringes (5/10 ml)	61 (27.5)	9 (27.3)	9 (20.0)	6 (33.3)	14 (56.0)	10 (16.7)	3 (14.3)	10 (50.0)
In (%)								

3.5 Availability of postnatal services in birthing centers

As shown in Table 16, Postnatal care (PNC) services were widely available across Nepal's birthing centers, with nearly all facilities (99.1%) reporting the provision of such services.

Availability of maternal postnatal assessments were high, as presented in Table 17, with most facilities reporting routine evaluation for danger signs (95.0%), vital signs (97.3%), and vaginal discharge (90.0%). However, fewer facilities reported conducting a complete physical examination (88.2%), with substantial subnational variation (e.g., 69.8% in Madhesh vs 100% in Karnali and Sudurpaschim). Counseling services availability were widespread, especially on nutrition (97.3%), danger signs (93.6%), and iron/folic acid intake (89.1%), although availability of counseling on postpartum family planning was comparatively lower (89.5%), particularly in Madhesh (62.8%).

Newborn postnatal care services were also well integrated. Most facilities reported the assessment, management, and referral of newborns with danger signs (96.4%), and 81.4% reported assessing for congenital anomalies. Interventions such as skin-to-skin contact within an hour of birth (89.1%), warming (91.4%), cord care (95.0%), and immunization per national schedule (89.1%) were widely practiced. However, coverage of Vitamin K1 injection (74.5%) and newborn growth monitoring (79.5%) indicated room for improvement, with particularly low uptake in Madhesh.

Kangaroo Mother Care (KMC) for preterm or low-birth-weight babies was provided in 83.6% of facilities, and 72.7% adhered to guidelines for delayed bathing (after 24 hours). These findings reflect strong national performance in PNC service delivery, though critical gaps persist in certain provinces and in the delivery of more specialized interventions such as Vitamin K1 administration and newborn growth monitoring.

Postnatal care (PNC) has emerged as a growing priority across birthing centers in Nepal, with several municipalities implementing outreach services and home-based follow-ups. Interviews revealed that service providers conduct multiple PNC home visits, sometimes up to four rounds, especially in remote and underserved areas. These home visits are supported with municipal incentives and contribute significantly to monitoring maternal and newborn recovery.

"For PNC , if the delivery occurs at our facility, we retain the mothers and newborns here for an observation period of 24 hours as per PNC protocol. During subsequent PNC visits, we conduct home visits to provide personalized care and support. Our team carries essential equipment to assess the health of both the mother and the infant. This includes items such as a flashlight, a measuring tape, and a thermometer. We also bring a blood pressure monitor to ensure the mother's blood pressure is within a healthy range. Additionally, we are aware that certain areas of the newborn, such as the umbilical cord, are susceptible to infections. To mitigate this risk, we carry chlorhexidine gel, a disinfectant that helps prevent infection. We also bring along any necessary medications to address common postnatal concerns or complications. PNC incentives are awarded to staff based on the number of hours worked for each visit." (Service provider, Gandaki province)

According to protocol, we conduct the first PNC check at 24 hours. If the delivery takes place here, it is done at our center; if the delivery happens elsewhere, it is done at the respective

hospital. Additionally, we conduct PNC visits at 3rd day, between 7-14 days, and at 42nd day of postpartum. The 2nd and 3rd visits are conducted at the mother's home, while the 42-day visit is carried out at the immunization center or during the ORC clinic. During the 3-day and 7–14-day home visits, we check the vital signs of both the mother and the baby. If needed, we provide further care. We also supply iron, vitamins, and minerals as required. Dressing changes and suture removal are performed at home if necessary. (Service provider, Koshi province)

Table 17 Timing of postnatal services in birthing centers

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
PNC Services Available	220 (99.1)	33 (100.0)	43 (95.6)	18 (100.0)	25 (100.0)	60 (100.0)	21 (100.0)	20 (100.0)
1st PNC Visit at 24hrs	220 (100.0)	33 (100.0)	43 (100.0)	18 (100.0)	25 (100.0)	60 (100.0)	21 (100.0)	20 (100.0)
2nd PNC Visit 3rd day	217 (98.6)	32 (97.0)	43 (100.0)	17 (94.4)	24 (96.0)	60 (100.0)	21 (100.0)	20 (100.0)
3rd PNC Visit between 7-14 days	219 (99.5)	33 (100.0)	43 (100.0)	18 (100.0)	25 (100.0)	59 (98.3)	21 (100.0)	20 (100.0)
4th PNC Visit at 42nd day	212 (96.4)		41 (95.3)	15 (83.3)	25 (100.0)	59 (98.3)	21 (100.0)	20 (100.0)
In (%)								

Table 18 Availability of postnatal services in birthing centers

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Assessment, management & referral of mothers with danger signs	209 (95.0)	26 (78.8)	40 (93.0)	17 (94.4)	25 (100.0)	60 (100.0)	21 (100.0)	20 (100.0)
Assessment of vital signs	214 (97.3)	32 (97.0)	43 (100.0)	16 (88.9)	23 (92.0)	60 (100.0)	20 (95.2)	20 (100.0)
Complete physical check-up	194 (88.2)	29 (87.9)	30 (69.8)	15 (83.3)	23 (92.0)	56 (93.3)	21 (100.0)	20 (100.0)
Assessment of vaginal discharge	198 (90.0)	29 (87.9)	39 (90.7)	14 (77.8)	23 (92.0)	52 (86.7)	21 (100.0)	20 (100.0)
Counseling on danger signs	206 (93.6)	28 (84.8)	37 (86.0)	18 (100.0)	25 (100.0)	57 (95.0)	21 (100.0)	20 (100.0)
Counseling on nutrition	214 (97.3)	31 (93.9)	41 (95.3)	18 (100.0)	25 (100.0)	58 (96.7)	21 (100.0)	20 (100.0)
Counseling on early & exclusive breastfeeding	201 (91.4)	29 (87.9)	33 (76.7)	15 (83.3)	25 (100.0)	58 (96.7)	21 (100.0)	20 (100.0)
Counseling on postpartum family planning	197 (89.5)	33 (100.0)	27 (62.8)	18 (100.0)	25 (100.0)	53 (88.3)	21 (100.0)	20 (100.0)
Counseling on iron & folic acid intake	196 (89.1)	29 (87.9)	31 (72.1)	16 (88.9)	25 (100.0)	54 (90.0)	21 (100.0)	20 (100.0)
Assessment, management & referral of newborns with danger signs	212 (96.4)	29 (87.9)	41 (95.3)	17 (94.4)	24 (96.0)	60 (100.0)	21 (100.0)	20 (100.0)
Assessment & referral of congenital anomalies	179 (81.4)	27 (81.8)	29 (67.4)	13 (72.2)	21 (84.0)	49 (81.7)	21 (100.0)	19 (95.0)
Assessment & referral of low-birth-weight babies	195 (88.6)	28 (84.8)	34 (79.1)	15 (83.3)	25 (100.0)	52 (86.7)	21 (100.0)	20 (100.0)
Skin-to-skin contact within an hour of birth	196 (89.1)	28 (84.8)	34 (79.1)	17 (94.4)	25 (100.0)	51 (85.0)	21 (100.0)	20 (100.0)
Bathing newborn after 24 hours	160 (72.7)	18 (54.5)	26 (60.5)	8 (44.4)	18 (72.0)	50 (83.3)	21 (100.0)	19 (95.0)
Cord care of the newborn	209 (95.0)	30 (90.9)	36 (83.7)	18 (100.0)	25 (100.0)	59 (98.3)	21 (100.0)	20 (100.0)
Warming the baby	201 (91.4)	28 (84.8)	32 (74.4)	17 (94.4)	25 (100.0)	58 (96.7)	21 (100.0)	20 (100.0)
Provision of Vitamin K1 injection	164 (74.5)	27 (81.8)	19 (44.2)	11 (61.1)	23 (92.0)	48 (80.0)	16 (76.2)	20 (100.0)
Kangaroo Mother Care for preterm/LBW babies	184 (83.6)	28 (84.8)	28 (65.1)	15 (83.3)	24 (96.0)	50 (83.3)	19 (90.5)	20 (100.0)
Immunization per national schedule	196 (89.1)	30 (90.9)	28 (65.1)	17 (94.4)	24 (96.0)	58 (96.7)	19 (90.5)	20 (100.0)
Newborn growth monitoring	175 (79.5)	26 (78.8)	25 (58.1)	15 (83.3)	25 (100.0)	45 (75.0)	20 (95.2)	19 (95.0)
In (%)								

3.6 Availability and training status of human resources

Among the health facilities assessed, 86.0% reported having a health worker available on-site 24 hours a day. Provincial variation was noted, with the highest availability in Gandaki (96.0%) and Lumbini (91.7%), followed by Karnali (90.5%) and Sudurpaschim (85.0%). Availability was comparatively lower in Bagmati (72.2%) and Koshi (75.8%). (Figure 26)

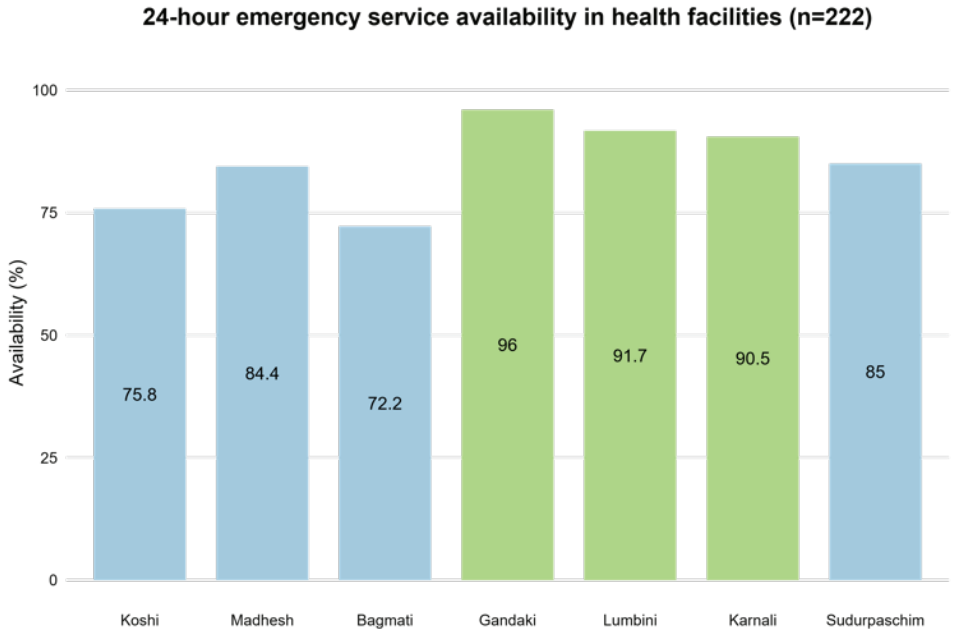

Figure 26 24-hour availability of health workers in health facilities of Nepal

As shown in Table 18, the assessment of training and capacity development among service providers revealed that a vast majority (89.6%) had staff trained in both antenatal and postnatal services, although only 72.5% had personnel who had received specific training in ANC/PNC service delivery. Provincial variations were observed, with Sudurpaschim (90.0%) and Karnali (81.0%) reporting the highest proportion of trained providers, while Madhesh (62.2%) and Gandaki (64.0%) reported comparatively lower levels. Training on ANC screening within the past 24 months was received in just 20.7% of facilities overall, with Karnali again being an exception (76.2%). Similarly, training on ANC counseling and management of complications during pregnancy was low, received within the past two years by only 23.9% and 21.6% of facilities, respectively.

Delivery-related training was more common, with 75.7% of facilities having at least one trained staff member, and particularly high in Lumbini (88.3%) and Karnali (85.7%). However, the proportion of facilities with recent (past 24 months) SBA training was just 10.8%, although most facilities had received it more than two years ago. Newborn care training lagged behind, with only 21.2% receiving neonatal resuscitation training in the past two years and just 12.6% trained on specialized newborn care. PMTCT training was ever received in 77.1% of facilities, but recent training coverage was limited (9.5%). Areas such as post-abortion care (PAC), comprehensive abortion care (CAC), and medical abortion remained severely underserved, with over three-quarters of facilities reporting no trained staff in these services.

Human resource gaps and lack of training remain a recurring issue across Nepal's birthing centers. While some centers benefit from regular staffing and skilled birth attendants (SBAs),

many continue to operate with minimal human resources. Birthing centers reported one or two SBAs working in shifts, often without adequate backup.

Municipalities are stepping in to address gaps, with many facilities receiving additional SBAs over time. However, there is a need for continuous training and support. In multiple interviews, health workers emphasized the pressure of working 24-hour shifts without sufficient relief.

"The maternal and newborn service is moderately affected due to staffing issues, as only one SBA is currently available. when the sister is unavailable due to personal reasons, leads to referrals to Hetauda Hospital, even for normal cases. This has contributed to a decrease in the number of women seeking delivery services at our facility." (Service provider, Makawanpur, Bagmati province)

"There are SBAs in many health facilities. However, in some facilities, even non-SBAs have to conduct deliveries because not everyone has received SBA training. Even when someone receives the training, they are sometimes transferred after one or two years." (service provider, Sindhuli, Bagmati province)

"There are 3 staff members on duty, but this number is insufficient for covering night, day, evening shifts, and off days. Sometimes, when one staff member is on leave, it becomes difficult to manage, and the workload increases significantly." (Service Provider, Surkhet, Karnali province)

"One of our staff members has gone on study leave and according to the rules, no one can be appointed to her position during her absence. Similarly, another staff member was transferred and again, no replacement can be assigned to her position. So, we are managing with the limited number of staff currently available here. Regarding training, not everyone has received SBA training. The nursing sister on contract hasn't received SBA training. One permanent nursing staff member has completed the SBA training, while the remaining new sisters haven't received it yet." (Service provider, Jhapa, Koshi province)

"There is a shortage of skilled human resources in the birthing centers. While many birthing centers have been established, the number of skilled human resources is low. A single SBA nurse has to provide services for 12 to 24 hours. Since there is high turnover among contracted staff, there is a gap in trained personnel. Because trained staff are not retained, there is a need for training every year." (Service provider, Bardiya, Lumbini province)

"High staff turnover due to temporary appointments affects continuity of quality maternal services. Retention strategies are urgently needed." (Provincial Health Directorate, Lumbini Province)

"The staffs have to give services in here, outreach clinics and they have to be on duty 24 hours as well. The lack of designated staffs for just birthing center has caused us difficulties." (Service provider, Gulmi, Lumbini province)

"The lack of a resident doctor to handle newborn issues that arise after delivery at the center is also a challenge. While the quality of care provided by the SBA-trained staff for normal deliveries is good and face pressure from the municipality regarding the number of deliveries at their center, as women sometimes choose to go to facilities closer to them or those offering more comprehensive services." (Service provider, Sudurpaschim province)

"We have to provide SBA training to 134 nursing staff; we only have a quota of 10 each year, taking 13 years to train everyone." (PHO, Sudurpaschim Province)

"SBA training is adequate, but staff turnover and political interference cause skilled workers to be placed in non-birthing facilities." (Provincial Health Directorate, Bagmati Province)

Table 20 Availability of equipment for infection prevention and control in health facilities

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
ANC/PNC services								
Yes, antenatal	14 (6.3)	2 (6.1)	7 (15.6)	0 (0.0)	0 (0.0)	5 (8.3)	0 (0.0)	0 (0.0)
Yes, postnatal	1 (0.5)	0 (0.0)	1 (2.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Yes, both	199 (89.6)	30 (90.9)	36 (80.0)	16 (88.9)	22 (88.0)	55 (91.7)	20 (95.2)	20 (100.0)
No, neither	8 (3.6)	1 (3.0)	1 (2.2)	2 (11.1)	3 (12.0)	0 (0.0)	1 (4.8)	0 (0.0)
ANC/PNC training	161 (72.5)	22 (66.7)	28 (62.2)	13 (72.2)	16 (64.0)	47 (78.3)	17 (81.0)	18 (90.0)
ANC screening								
Yes, within past 24 months	46 (20.7)	6 (18.2)	7 (15.6)	2 (11.1)	2 (8.0)	8 (13.3)	16 (76.2)	5 (25.0)
Yes, over 24 months ago	94 (42.3)	14 (42.4)	17 (37.8)	6 (33.3)	9 (36.0)	32 (53.3)	3 (14.3)	13 (65.0)
No, never received training	82 (36.9)	13 (39.4)	21 (46.7)	10 (55.6)	14 (56.0)	20 (33.3)	2 (9.5)	2 (10.0)
ANC counseling								
Yes, within past 24 months	53 (23.9)	7 (21.2)	7 (15.6)	4 (22.2)	5 (20.0)	11 (18.3)	15 (71.4)	4 (20.0)
Yes, over 24 months ago	107 (48.2)	18 (54.5)	23 (51.1)	5 (27.8)	11 (44.0)	32 (53.3)	4 (19.0)	14 (70.0)
No, never received training	62 (27.9)	8 (24.2)	15 (33.3)	9 (50.0)	9 (36.0)	17 (28.3)	2 (9.5)	2 (10.0)
ANC complications								
Yes, within past 24 months	48 (21.6)	9 (27.3)	5 (11.1)	3 (16.7)	2 (8.0)	13 (21.7)	14 (66.7)	2 (10.0)
Yes, over 24 months ago	107 (48.2)	19 (57.6)	22 (48.9)	5 (27.8)	15 (60.0)	31 (51.7)	5 (23.8)	10 (50.0)
No, never received training	67 (30.2)	5 (15.2)	18 (40.0)	10 (55.6)	8 (32.0)	16 (26.7)	2 (9.5)	8 (40.0)
ANC nutrition assessment								
Yes, within past 24 months	44 (19.8)	4 (12.1)	5 (11.1)	2 (11.1)	4 (16.0)	11 (18.3)	14 (66.7)	4 (20.0)
Yes, over 24 months ago	98 (44.1)	21 (63.6)	14 (31.1)	8 (44.4)	13 (52.0)	23 (38.3)	5 (23.8)	14 (70.0)
No, never received training	80 (36.0)	8 (24.2)	26 (57.8)	8 (44.4)	8 (32.0)	26 (43.3)	2 (9.5)	2 (10.0)
SBA training								
Yes, within past 24 months	24 (10.8)	1 (3.0)	4 (8.9)	2 (11.1)	3 (12.0)	5 (8.3)	6 (28.6)	3 (15.0)
Yes, over 24 months ago	173 (77.9)	28 (84.8)	36 (80.0)	11 (61.1)	19 (76.0)	51 (85.0)	14 (66.7)	14 (70.0)
No, never received training	25 (11.3)	4 (12.1)	5 (11.1)	5 (27.8)	3 (12.0)	4 (6.7)	1 (4.8)	3 (15.0)

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
MNH/LSS update								
Yes, within past 24 months	54 (24.3)	8 (24.2)	3 (6.7)	3 (16.7)	7 (28.0)	11 (18.3)	12 (57.1)	10 (50.0)
Yes, over 24 months ago	86 (38.7)	16 (48.5)	11 (24.4)	7 (38.9)	9 (36.0)	30 (50.0)	7 (33.3)	6 (30.0)
No, never received training	82 (36.9)	9 (27.3)	31 (68.9)	8 (44.4)	9 (36.0)	19 (31.7)	2 (9.5)	4 (20.0)
Neonatal resuscitation								
Yes, within past 24 months	47 (21.2)	13 (39.4)	3 (6.7)	1 (5.6)	4 (16.0)	13 (21.7)	10 (47.6)	3 (15.0)
Yes, over 24 months ago	111 (50.0)	16 (48.5)	15 (33.3)	10 (55.6)	13 (52.0)	35 (58.3)	8 (38.1)	14 (70.0)
No, never received training	64 (28.8)	4 (12.1)	27 (60.0)	7 (38.9)	8 (32.0)	12 (20.0)	3 (14.3)	3 (15.0)
Specialized newborn care								
Yes, within past 24 months	28 (12.6)	9 (27.3)	4 (8.9)	1 (5.6)	3 (12.0)	3 (5.0)	8 (38.1)	0 (0.0)
Yes, over 24 months ago	81 (36.5)	13 (39.4)	15 (33.3)	9 (50.0)	10 (40.0)	20 (33.3)	7 (33.3)	7 (35.0)
No, never received training	113 (50.9)	11 (33.3)	26 (57.8)	8 (44.4)	12 (48.0)	37 (61.7)	6 (28.6)	13 (65.0)
In (%)								

3.7. Infection prevention and control

3.7.1 Materials available for infection prevention and control in birthing centers
The availability of infection prevention materials in birthing centers across Nepal reveals significant variation, with several critical gaps undermining safe delivery environments. While autoclaves were present in 96.8% of birthing centers nationally, and plastic jugs were widely available (86.5%). (Table 19 and Figure 27)
Basic waste management equipment was also lacking. Only 19.4% of birthing centers met the requirement of four or more waste buckets, and one-third (33.3%) lacked the recommended minimum of two puncture-proof sharps containers. The availability of placenta pits—a basic necessity—was inadequate in nearly one-quarter of facilities overall, and worse in Madhesh (71.1%), Gandaki (64.0%), and Koshi (63.6%). Access to tap buckets, vital for maintaining hand hygiene, was present in just 55.4% of facilities nationwide, with even lower coverage in Bagmati (38.9%) and Madhesh (42.2%).
Similarly, momo pots (used for boiling instruments) were available in only 31.5% of facilities, with particularly poor availability in Madhesh (15.6%) and Bagmati (22.2%). These findings point to a fragmented infection prevention readiness system, marked by poor distribution and under-resourcing in several provinces.

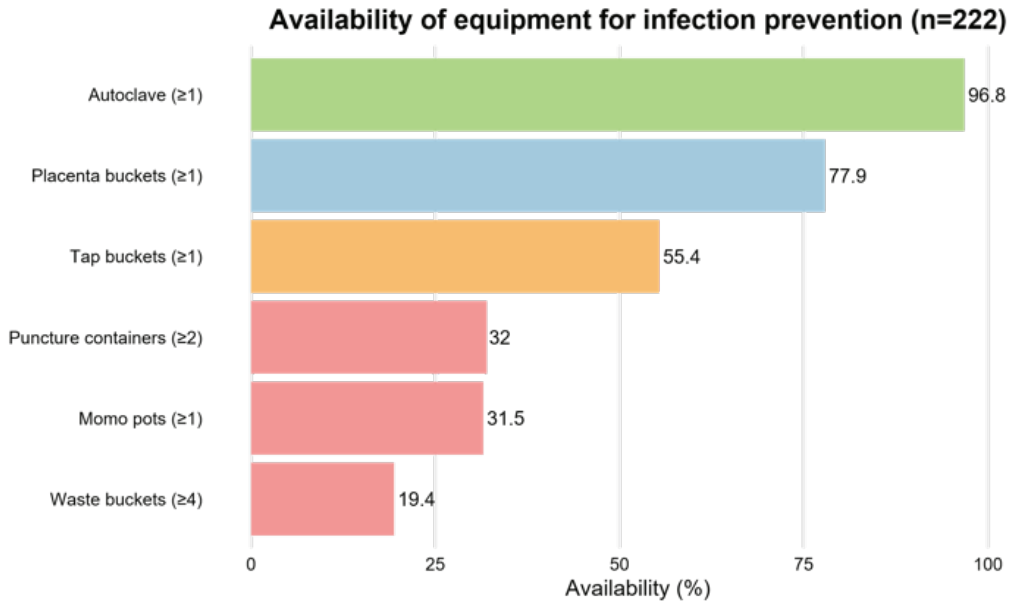

Figure 27 Avail*ability of equipment for infection prevention and control at recommended levels in health facilities*

3.7.2 Infection prevention and control measures adopted in birthing centers

Infection Prevention and Control measures in birthing centers across Nepal demonstrate both encouraging progress and persistent gaps. Nationally, 85.1% of facilities reported having IPC protocols, and 73.0% had received IPC training, though these figures mask provincial disparities—only 60.6% of centers in Koshi and 33.3% in Madhesh had staff trained in IPC. Core IPC materials such as surgical masks, gowns/aprons, and disposable gloves were observed in over 75% of facilities nationwide, with nearly universal availability in Karnali and Sudurpaschim.

However, less than two-thirds of facilities had alcohol hand rub visibly available (62.2%), and 19.4% lacked it altogether.

Basic IPC infrastructure such as hand hygiene stations (69.8% observed) and colour-coded waste bins (88.3% observed) was present in most facilities, but signage and visual cues lagged significantly. Only 36.9% of facilities had visible IPC signage, and fewer than half displayed handwashing posters (45.0%) or mask use posters (26.6%), with the latter particularly absent in provinces like Karnali and Lumbini. Eye protection and needle cutters were observed in 65.8% and 55.4% of facilities respectively, while needle destroyers were available in just 58.1%. Routine hygiene practices also showed variability: daily surface cleaning was observed in only 64.0% of facilities, while clean toilets and flushing water were available in 79.3% and 77.5% respectively. Waste disposal per protocol was observed in just 55.9% of facilities overall, falling to 35.0% in Sudurpaschim and 43.3% in Lumbini. Perhaps most concerning, active enforcement of hand hygiene was observed in fewer than one-third of birthing centers (29.7%), with over 39.6% having no system in place. (Table 20)

These findings suggest that while foundational IPC supplies are relatively widespread, enforcement and behavioral reinforcement—through staff training, visible signage, and routine monitoring—remain key weaknesses.

IPC practices were found to be well-institutionalized in most birthing centers, with routine use of PPE (personal protective equipment), color-coded waste bins, and placenta pits. Interviews showed that staff are aware of the importance of infection control, and in many cases, IPC protocols are enforced strictly during delivery procedures.
Challenges exist mainly in equipment maintenance. In some facilities, an autoclave machine essential for sterilization became non-functional due to wiring issues, forcing the facility to burn waste. Despite infrastructure limitations, staff across facilities expressed commitment to cleanliness and safe disposal.

"One thing is that if all the human resources could be oriented properly and if disposal could be done according to those guidelines, then that would be better – that's one thing. Once, we managed the waste by using an autoclave to sterilize blood-testing instruments. However, the autoclave's wiring broke, which damaged the autoclave and affected the entire health facility. Because of this, we no longer use the autoclave. Now, we burn the waste according to the proper guidelines (Service provider, Kavre, Bagmati)

"We follow the Infection Prevention and Control (IPC) protocols in our operations to ensure a safe and hygienic environment. To facilitate efficient waste management, we have implemented a colour-coded system for our dustbins. Each bin is designated for specific types of waste. All waste is collected and disposed of appropriately, minimizing the risk of contamination." (Service Provider, Gorkha, Gandaki)

"Trained staff are available, and they have received IPC training for infection prevention. We use an autoclave for sterilization." (Service provider, Banke, Lumbini province)

"About the infection prevention we have been taking care about that through boiling, sterilization, drying, we also have insulator for burning we have in health post." (Service provider, Madhesh province)

Table 20 Availability of equipment for infection prevention and control in health facilities

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Autoclave (need ≥1)	215 (96.8)	31 (93.9)	43 (95.6)	18 (100.0)	25 (100.0)	59 (98.3)	20 (95.2)	19 (95.0)
Placenta pits (need ≥1)	173 (77.9)	21 (63.6)	32 (71.1)	15 (83.3)	16 (64.0)	52 (86.7)	18 (85.7)	19 (95.0)
Waste buckets (need ≥4)	43 (19.4)	5 (15.2)	2 (4.4)	2 (11.1)	8 (32.0)	21 (35.0)	4 (19.0)	1 (5.0)
Puncture containers (need ≥2)	71 (32.0)	14 (42.4)	11 (24.4)	3 (16.7)	9 (36.0)	23 (38.3)	6 (28.6)	5 (25.0)
Tap buckets (need ≥1)	123 (55.4)	17 (51.5)	19 (42.2)	7 (38.9)	14 (56.0)	34 (56.7)	12 (57.1)	20 (100.0)
Momo pots (need ≥1)	70 (31.5)	17 (51.5)	7 (15.6)	4 (22.2)	9 (36.0)	19 (31.7)	7 (33.3)	7 (35.0)
In (%)								

Table 21 IPC measures implemented at birthing centers

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
IPC protocol available	189 (85.1)	20 (60.6)	35 (77.8)	18 (100.0)	23 (92.0)	55 (91.7)	20 (95.2)	18 (90.0)
IPC training received	162 (73.0)	11 (33.3)	33 (73.3)	15 (83.3)	19 (76.0)	52 (86.7)	20 (95.2)	12 (60.0)
Alcohol hand rub	179 (80.6)	19 (57.6)	39 (86.7)	12 (66.7)	22 (88.0)	50 (83.3)	17 (81.0)	20 (100.0)
Colour-coded bins	212 (95.5)	33 (100.0)	44 (97.8)	18 (100.0)	24 (96.0)	58 (96.7)	21 (100.0)	14 (70.0)
Disposable gloves	210 (94.6)	31 (93.9)	40 (88.9)	16 (88.9)	24 (96.0)	58 (96.7)	21 (100.0)	20 (100.0)
Floor disinfectant	206 (92.8)	32 (97.0)	41 (91.1)	17 (94.4)	20 (80.0)	55 (91.7)	21 (100.0)	20 (100.0)
Surgical masks	220 (99.1)	33 (100.0)	43 (95.6)	18 (100.0)	25 (100.0)	60 (100.0)	21 (100.0)	20 (100.0)
Gowns/Aprons	218 (98.2)	33 (100.0)	43 (95.6)	18 (100.0)	25 (100.0)	58 (96.7)	21 (100.0)	20 (100.0)
Needle destroyer	159 (71.6)	18 (54.5)	31 (68.9)	16 (88.9)	17 (68.0)	44 (73.3)	20 (95.2)	13 (65.0)
Eye protection	196 (88.3)	24 (72.7)	36 (80.0)	16 (88.9)	25 (100.0)	54 (90.0)	21 (100.0)	20 (100.0)
Needle cutter	156 (70.3)	16 (48.5)	27 (60.0)	16 (88.9)	20 (80.0)	43 (71.7)	20 (95.2)	14 (70.0)
Hand hygiene enforced	134 (60.4)	13 (39.4)	34 (75.6)	14 (77.8)	25 (100.0)	28 (46.7)	9 (42.9)	11 (55.0)
Hand hygiene station	195 (87.8)	27 (81.8)	39 (86.7)	18 (100.0)	25 (100.0)	53 (88.3)	14 (66.7)	19 (95.0)
Entrance bin with lid	180 (81.1)	28 (84.8)	30 (66.7)	16 (88.9)	22 (88.0)	49 (81.7)	17 (81.0)	18 (90.0)

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
IPC signage	130 (58.6)	10 (30.3)	32 (71.1)	13 (72.2)	18 (72.0)	31 (51.7)	20 (95.2)	6 (30.0)
Handwashing posters	120 (54.1)	21 (63.6)	29 (64.4)	12 (66.7)	15 (60.0)	22 (36.7)	10 (47.6)	11 (55.0)
Mask use posters	77 (34.7)	16 (48.5)	19 (42.2)	9 (50.0)	12 (48.0)	11 (18.3)	4 (19.0)	6 (30.0)
Surfaces cleaned daily	218 (98.2)	33 (100.0)	42 (93.3)	18 (100.0)	25 (100.0)	59 (98.3)	21 (100.0)	20 (100.0)
Toilets clean	216 (97.3)	32 (97.0)	44 (97.8)	18 (100.0)	25 (100.0)	58 (96.7)	21 (100.0)	18 (90.0)
Toilet flushing water	206 (92.8)	33 (100.0)	41 (91.1)	17 (94.4)	25 (100.0)	56 (93.3)	18 (85.7)	16 (80.0)
Waste disposal per protocol	193 (86.9)	29 (87.9)	42 (93.3)	17 (94.4)	25 (100.0)	51 (85.0)	18 (85.7)	11 (55.0)

1n (%), % represents column %, % represents observed or reported availability

3.8 Leadership and governance

3.8.1 Health facility management committee and management practices

Table 21 presents information on the governance and facility-level management practices observed in primary health facilities across Nepal's provinces. Health Facility Operation and Management Committee (HFOMC) was formed in 85.1% of facilities, with high uptake in Sudurpaschim and Karnali. Orientation for HFOMC members had been conducted in nearly three-quarters of facilities (74.6%), though coverage was lower in some provinces such as Sudurpaschim (55.0%).

Routine meetings of the HFOMC were reported by 92.6% of facilities, with 65.7% holding meetings monthly or more frequently. Availability of a citizen charter was reported in 84.7% of facilities, typically displayed either outside in visible locations or inside in visible areas. Most facilities also had a client feedback system (82.4%) and established procedures to review feedback (86.9%).

Facility-level documentation and transparency tools were variably present: social maps were clearly displayed in 45.5% of facilities, and notice boards were available in 82.4%, although their placement and visibility varied considerably across provinces.

Table 22 Health Facility Operations and Management Committee and management practices in health facilities

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
HFOMC Committee Formed	189 (85.1)	25 (75.8)	35 (77.8)	16 (88.9)	17 (68.0)	56 (93.3)	20 (95.2)	20 (100.0)
HFOMC Orientation Received	141 (74.6)	17 (68.0)	30 (85.7)	12 (75.0)	16 (94.1)	35 (62.5)	20 (100.0)	11 (55.0)
Routine Meetings with Committee	175 (92.6)	23 (92.0)	33 (94.3)	15 (93.8)	17 (100.0)	52 (92.9)	20 (100.0)	15 (75.0)
Meeting Frequency								
Monthly or more frequently	115 (65.7)	11 (47.8)	28 (84.8)	9 (60.0)	11 (64.7)	25 (48.1)	18 (90.0)	13 (86.7)
Once every 2-3 months	50 (28.6)	11 (47.8)	4 (12.1)	5 (33.3)	6 (35.3)	20 (38.5)	2 (10.0)	2 (13.3)
Once every 4-6 months	10 (5.7)	1 (4.3)	1 (3.0)	1 (6.7)	0 (0.0)	7 (13.5)	0 (0.0)	0 (0.0)
Meeting in Last 3 Months	164 (86.8)	21 (84.0)	31 (88.6)	13 (81.3)	14 (82.4)	53 (94.6)	16 (80.0)	16 (80.0)
Citizen Charter available and clearly readable								
Client Feedback System	183 (82.4)	23 (69.7)	37 (82.2)	14 (77.8)	21 (84.0)	59 (98.3)	16 (76.2)	13 (65.0)
Social Map Available and clearly visible	101 (45.5)	9 (27.3)	10 (22.2)	12 (66.7)	16 (64.0)	28 (46.7)	15 (71.4)	11 (55.0)
Notice Board Available	183 (82.4)	25 (75.8)	35 (77.8)	17 (94.4)	21 (84.0)	48 (80.0)	21 (100.0)	16 (80.0)
In (%)								

3.9 Management Information system

Table 22 summarizes the availability, functionality, and staff capacity related to health facility management information systems (MIS) across Nepal's provinces. Use of Health Management Information System (HMIS) registers was reported by all facilities, while 97.7% had the Maternal and Child Health (MCH) register available. Nearly all facilities reported electronic data submission through DHIS2 (98.6%) and had a designated data reporter (95.9%), most of whom were trained (95.8%). Routine Data Quality Assessment (RDQA) had been conducted in 68.5% of facilities during the past year, with lower coverage in Koshi (39.4%) and Madhesh (55.6%) and higher in Karnali (90.5%) and Bagmati (83.3%).

In qualitative interviews, overall, health service providers stated that they use the HMIS system regularly to record and report data on MNH services. However, a service provider stated that due to a lack of recording field for deliveries outside health facilities, due to which it is difficult to track home deliveries.

"The Health Section team conducts situation assessments, maintains records and reporting, and monitors daily patient flow through the EHIRRS (Electronic Health Information Recording and Reporting System. Each health facility updates their data in the DHIS-2 system, with all records being updated by the 7th of each month." (Service provider, Surkhet, Karnali)

"There is no indicator in DHIS2 to enter information regarding deliveries at outside facilities. However, we collect verbal reports." (Service provider, Sindhuli, Bagmati province)

Table 23 Availability and practices of management information system in health facilities

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Uses HMIS Registers	222 (100)	33 (100.0)	45 (100.0)	18 (100.0)	25 (100.0)	60 (100.0)	21 (100.0)	20 (100.0)
MCH Register Available	217 (97.7)	32 (97.0)	45 (100.0)	18 (100.0)	22 (88.0)	60 (100.0)	21 (100.0)	19 (95.0)
Electronic Reporting (DHIS2)	219 (98.6)	33 (100.0)	44 (97.8)	18 (100.0)	25 (100.0)	60 (100.0)	21 (100.0)	18 (90.0)
Designated Data Reporter	213 (95.9)	30 (90.9)	45 (100.0)	17 (94.4)	25 (100.0)	56 (93.3)	21 (100.0)	19 (95.0)
RDQA in Last Year	152 (68.5)	13 (39.4)	25 (55.6)	15 (83.3)	19 (76.0)	44 (73.3)	19 (90.5)	17 (85.0)
LMIS System in Place	211 (95.0)	32 (97.0)	36 (80.0)	18 (100.0)	25 (100.0)	60 (100.0)	21 (100.0)	19 (95.0)
Logistic Supply System								
Pull system	60 (27.0)	9 (27.3)	5 (11.1)	3 (16.7)	6 (24.0)	11 (18.3)	7 (33.3)	19 (95.0)
Push system	8 (3.6)	2 (6.1)	4 (8.9)	0 (0.0)	1 (4.0)	0 (0.0)	0 (0.0)	1 (5.0)
Both	154 (69.4)	22 (66.7)	36 (80.0)	15 (83.3)	18 (72.0)	49 (81.7)	14 (66.7)	0 (0.0)
In (%)								

3.10 Laboratory and diagnostic service

Nationally, only 59% of assessed health facilities reported having an "E-category" laboratory. Provincial variation was notable, with availability highest in Lumbini (70%) and Koshi (73%), and lowest in Madhesh (38%).

Figure 28 and Table 23 show that critical lab infrastructure such as centrifuges, colorimeters, water baths, and micropipettes were widely observed in facilities that reported laboratory services. For example, over 90% of functional laboratories had centrifuges (93%), colorimeters (89%), and micropipettes (92%), though reported observations of these devices varied, with some facilities only reporting their presence without visual confirmation. VDRL shakers and hot air ovens—used for STI diagnostics and sterilization—were less consistently available, with 55% and 70% observed, respectively. Notably, incubators, vital for microbial cultures and neonatal support, were available in only 52% of facilities with reported lab services, with substantial gaps particularly in Sudurpaschim and Bagmati.

Refrigerators (92%) and test tubes (94%) were almost universally present among functioning labs, while power backup systems were only observed in 66% of facilities, posing a serious risk to sample integrity during outages. Basic infection control supplies such as gloves and masks were universally present in observed labs, which is encouraging. However, more specialized items like Petridishes (31%) and vacutainers (34%) were less commonly available, suggesting limitations in diagnostic capability.

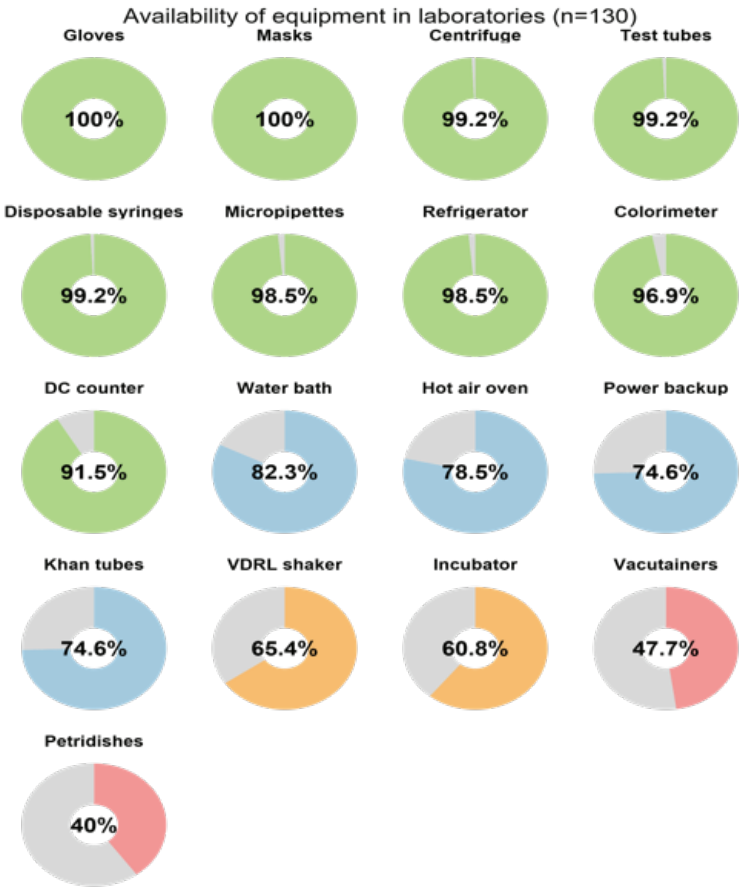

Figure 28 Availability of laboratory equipment in health facilities with laboratories

Table 24 Availability of laboratory equipment in health facilities (n=130)

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Centrifuge	129 (99.2)	24 (100.0)	17 (100.0)	9 (100.0)	14 (93.3)	42 (100.0)	12 (100.0)	11 (100.0)
Colorimeter	126 (96.9)	22 (91.7)	16 (94.1)	9 (100.0)	14 (93.3)	42 (100.0)	12 (100.0)	11 (100.0)
Water bath	107 (82.3)	21 (87.5)	15 (88.2)	8 (88.9)	14 (93.3)	33 (78.6)	10 (83.3)	6 (54.5)
VDRL shaker	85 (65.4)	13 (54.2)	16 (94.1)	6 (66.7)	9 (60.0)	25 (59.5)	10 (83.3)	6 (54.5)
Hot air oven	102 (78.5)	21 (87.5)	15 (88.2)	7 (77.8)	13 (86.7)	30 (71.4)	9 (75.0)	7 (63.6)
Incubator	79 (60.8)	14 (58.3)	15 (88.2)	7 (77.8)	10 (66.7)	20 (47.6)	11 (91.7)	2 (18.2)
Micropipettes	128 (98.5)	23 (95.8)	17 (100.0)	9 (100.0)	14 (93.3)	42 (100.0)	12 (100.0)	11 (100.0)
DC counter	119 (91.5)	23 (95.8)	15 (88.2)	7 (77.8)	13 (86.7)	40 (95.2)	12 (100.0)	9 (81.8)
Refrigerator	128 (98.5)	24 (100.0)	17 (100.0)	9 (100.0)	15 (100.0)	42 (100.0)	11 (91.7)	10 (90.9)
Power backup	97 (74.6)	20 (83.3)	16 (94.1)	6 (66.7)	10 (66.7)	32 (76.2)	9 (75.0)	4 (36.4)
Khan tubes	97 (74.6)	17 (70.8)	16 (94.1)	7 (77.8)	12 (80.0)	29 (69.0)	11 (91.7)	5 (45.5)
Test tubes	129 (99.2)	24 (100.0)	17 (100.0)	9 (100.0)	14 (93.3)	42 (100.0)	12 (100.0)	11 (100.0)
Petridishes	52 (40.0)	6 (25.0)	14 (82.4)	6 (66.7)	10 (66.7)	9 (21.4)	7 (58.3)	0 (0.0)
Disposable syringes	129 (99.2)	24 (100.0)	17 (100.0)	9 (100.0)	15 (100.0)	42 (100.0)	12 (100.0)	11 (100.0)
Vacutainers	62 (47.7)	8 (33.3)	14 (82.4)	7 (77.8)	9 (60.0)	14 (33.3)	8 (66.7)	2 (18.2)
Gloves	130 (100.0)	24 (100.0)	17 (100.0)	9 (100.0)	15 (100.0)	42 (100.0)	12 (100.0)	11 (100.0)
Masks	130 (100.0)	24 (100.0)	17 (100.0)	9 (100.0)	14 (93.3)	42 (100.0)	12 (100.0)	11 (100.0)

In (%), % represents column %, % represents observed or reported availability

3.11 Barriers and facilitators for the utilization of MNH services in birthing centers

3.11.1 Key barriers

3.11.1.1 Health system and service delivery gaps

a. Policy issues

Uncoordinated establishment of birthing centers:
Officials from federal and provincial Ministries of Health and Population (MoHP) shared that that local governments have unilaterally declared new birthing centers without prior needs assessments, availability of infrastructures, human resources, drug and equipment. This has led to inconsistent service quality, underutilized facilities, and infrastructural inadequacies.

Inadequate oversight:
MNH services provided by the birthing centers falls under the basic health services and is the responsibility of local government. However, the absence of coordination and oversight from provincial and federal authorities in establishment and operationalization birthing centers led to sub-optimal quality of MNH care and lack of monitoring and accountability.

Human resource challenges in birthing centers

A severe shortage of trained SBAs continues to hinder the provision of 24-hour delivery services. The federal government's conditional grant scheme covers salaries for 1,600 ANMs but this is insufficient given the number of birthing centers. Some provinces and local governments have allocated additional funds for ANM recruitment, yet systemic issues persist.

Furthermore, many ANMs shared that they had not received salaries aligned with the official government pay scale, and employment contracts are often inconsistent. Access to SBA training remains limited, and retention is problematic—trained ANMs frequently migrate to private sector facilities. Providers also reported burnout and skill gaps in managing obstetric complications, further compromising service delivery. Coaching and mentoring is the part of facility operation, planning, and

Limited supervision and quality assessment:
Routine supervision and quality assurance mechanisms are weak. Some of the birthing centers had not conducted Minimum Service Standard (MSS) assessments, and among those that have, many fail to achieve the recommended MSS score of 85% or higher. The preparation of action plan for quality improvement was lacking many cases. Further, the Local governments had not consistently provided oversight, further compounding quality assurance challenges.

b. Unavailability of 24-hour services

One of the most frequently mentioned barriers was the unavailability of 24-hour delivery and emergency services. In many facilities, particularly those in rural or resource-constrained settings, staffing limitations, power outages, and lack of essential supplies inhibit the ability to provide around-the-clock care. This is especially detrimental in MNH, where complications can arise unexpectedly, and immediate response is critical.

"Due to the shortage of human resources… we feel difficult to provide round-the-clock (24-hour) services which limits our capacity to deliver timely and continuous MNH care services." (Service provider, Bagmati province)

"The main issue here is that we don't have electricity 24 hours a day. Because of that, we are unable to provide night-time services."
(Service provider, Madhesh province)

These limitations compromise the reliability of institutional deliveries and undermine public confidence in local facilities, often prompting families to seek private or tertiary care only after delays.

c. Inadequate antenatal and postnatal Services

Routine ANC and PNC checkups—essential for early detection of complications and health education—are inconsistent or poorly structured in some areas. This inconsistency stems from both system-level limitations and staff availability.

"At the health facility level, there are sometimes gaps like the unavailability of 24-hour delivery services or the lack of routine antenatal checkups." (Service provider, Bagmati province)

The absence of comprehensive maternal monitoring diminishes the continuity of care, leaving pregnant and postpartum women vulnerable to preventable risks.

3.11.1.2. Staffing and human resource shortages

Across provinces, providers highlighted severe shortages of trained personnel, particularly Skilled Birth Attendants (SBAs). In many cases, only one staff member manages the entire MNH unit, making it impossible to maintain both facility-based care and community outreach.

"We are also here to visit communities, engage with mothers' groups, and raise awareness… however, due to limited human resources, our ability to reach the field and deliver these services is restricted." (Service provider, Bagmati province)

"We also have a shortage of Skilled Birth Attendant (SBA) trained staff. Ideally, two staff are required… but we only have one." (Service provider, Lumbini province)

This dual burden of clinical and outreach responsibilities leads to burnout, fragmented services, and missed opportunities for preventive interventions.

3.11.1 3. Physical infrastructure constraints

a. Inadequate space and buildings

Health workers expressed deep frustration with facility layouts, especially the lack of designated delivery and postnatal spaces. Without private, clean, and functional birthing areas, the quality of care and client dignity are both compromised.

"One significant challenge we face is our limited space… Expanding our facilities would greatly enhance our services." (Service provider, Gandaki province)

"We lack a proper building for the birthing center and maternity room." (Service provider, Lumbini province)

"Severe shortage of infrastructure; there's only one room for all activities." (FCHV, Madhesh Province)

b. Electricity and water issues

Infrastructural deficits go beyond space. Unreliable electricity, especially during night-time deliveries, and the lack of facility ownership over essential services like water create unsafe and unsanitary conditions for both mothers and staff.

"Most of the time, there is no electricity during deliveries." (Service provider, Lumbini province)

"We encounter issues related to our water supply, as we do not have ownership of this essential resource." (Service provider, Gandaki province)

"Water scarcity is a major issue affecting birthing center utilization."
(FCHV, Bagmati Province)

3.11.1 4. Supply chain deficiencies

Another systemic issue is the inconsistent supply of critical medicines and materials. Emergency drugs, antibiotics, and basic IPC tools are sometimes unavailable, affecting the delivery of essential and emergency obstetric care.

"Sometimes we run out of emergency drugs. So, due to that, we are unable to provide continuous services." (Service provider, Madhesh province)

"If we had better-quality supplies and equipment, we could improve services." (Service provider, Koshi province)

"Lack of blood and oxygen facilities causes referrals outside the community." (FCHV, Madhesh Province)

These shortages often force staff to ask patients to purchase medications privately, which many cannot afford, resulting in incomplete treatment and poor outcomes.

3.11.1.5. Transportation and referral barriers

Transportation during emergencies is a persistent bottleneck, especially in geographically remote regions. Inadequate ambulance coverage, coupled with poor road access, means that women in labor face dangerous delays.

"There are occasions when no vehicles are available… In those instances, we resort to requesting a stretcher… women have had to deliver their babies en route due to delays."
(Service provider, Gandaki province)

"Client does not agree to visit a higher center… due to financial problems." (Service provider, Lumbini province)

"Geographic challenges persist; women sometimes deliver on the way due to long distances." (FCHV, Sudurpaschim Province)

Even when referrals are necessary, financial constraints or mistrust in higher-level facilities discourage families from acting on provider advice.

3.11.1.6. Community trust and social dynamics

a. Discrimination and staff perception

In some regions, hierarchical attitudes and gender bias impact service uptake. Younger and female staff members often face skepticism from clients, which can undermine provider-patient relationships and affect care compliance.

"Clients often show more trust toward senior staff, while younger health workers like us may not be taken as seriously, despite our full commitment." (Service provider, Koshi province)

b. Lack of community engagement and awareness

Despite awareness campaigns, many community members remain disengaged. Misunderstandings about health programs, coupled with a lack of participation in meetings or mothers' groups, limit the effectiveness of outreach.

"We implement the program for them about awareness but they don't even try to understand… community members didn't join the meeting." (Service provider, Sudurpaschim province)

This gap between service delivery and community responsiveness creates friction and leaves health initiatives underutilized.

3.11.1.7. Financial constraints for clients

Economic hardship continues to be a defining barrier. Many families cannot afford to purchase prescribed medications, travel for referrals, or access private care when public services fall short.

"We advise them to purchase the medicines, [but] many are unable to do so due to financial constraints." (Service provider, Bagmati province)

"Ambulance service is available but not free, which is challenging for pregnant women." (FCHV, Madhesh Province)

3.11.2 Key facilitators supporting MNH service delivery

3.11.2.1 Incentive-based interventions

Programs offering financial or nutritional incentives have positively influenced maternal behavior,

especially among marginalized groups. These schemes serve dual purposes: improving health-seeking behavior and promoting nutrition.

"We encourage mothers to consume the eggs provided for their own nutritional needs… Regarding the 2,000-rupee incentive… this process also contributes to vital registration efforts." (Service provider, Bagmati province)

"Palika initiatives once have distributed the 'Poshan Package' to mothers."
(Service provider, Madhesh province)

"Maternal mortality is relatively high at 140 per lakh population. Efforts like provincial maternal safety programs are being made to reduce these rates."
(Province Health Directorate Representative, Madhesh province)

Such programs reinforce formal registration processes and strengthen the continuum of care.

3.11.2.2. Female Community Health Volunteer engagement

FCHVs remain one of the strongest community-based assets in Nepal's health system. Their roles in referrals, home visits, counseling, and mobilization are foundational to building trust and improving service reach.

"FCHVs go into the community, understand the situation, and refer many mothers to this health facility." (Service provider, Bagmati province)

"They provide home visits… they counsel about balanced diets, sanitation, and routine checkups for mother and child." (Service provider, Madhesh province)

Their embeddedness within the community allows them to operate where formal health infrastructure may not reach.

3.11.2.3. Supportive health facility operations

Facilities with functioning infrastructure and committed teams report smoother operations and higher service utilization. Effective teamwork and role clarity among staff enhance service efficiency.

"We are fortunate to have access to 24-hour delivery services… our staff members are well-coordinated and work effectively as a team." (Service provider, Gandaki province)

"There is regular ANC service along with lab services… insurance is available, and the lab services are affordable." (Service provider, Koshi province)

3.11.2.4. Community and municipal engagement

Local governance and political commitment have supported improvements in transportation and resource allocation. Collaborative efforts between health workers and local bodies facilitate problem-solving.

"Support from the community and elected representatives… is essential… transportation is only possible from higher level." (Service provider, Koshi province)

3.11.2.5. Capacity building and institutional learning

Ongoing training, supervision, and review mechanisms allow facilities to identify challenges, learn from data, and adapt services.

"Training of staff, infrastructure, MNH incentives, Nyano jhola, PNC home visit, FCHVs engagement… are enablers in improving MNH services." (Service provider, Lumbini province)

"Annual review is conducted, and challenges are noted for future planning." (Service provider, Karnali province)

These reflective practices strengthen institutional learning and responsiveness.

3.11.2.6. Media and awareness campaigns

Use of local radio, newspapers, and visual materials supports mass awareness and health literacy, particularly in areas where literacy rates are low.

"MNH services are promoted through local media such as radio and newspapers." (Service provider, Karnali province)

3.12 Minimum service standards for MNH services

Table 24 and Figure 29 outlines the availability, assessment, and implementation of Minimum Service Standards (MSS) across health facilities in Nepal. A copy of the MSS was available in 88.7% of facilities, with relatively consistent availability across provinces. MSS assessments were reported to have been conducted in the last fiscal year by 93.9% of facilities, with full coverage in Karnali and Sudurpaschim.

As shown in Figure 29 and 30, the mean MSS assessment score across facilities was 77.0 (SD 17.2), with provincial averages ranging from 71.8 in Madhesh to 81.4 in Bagmati. Nearly 61% of facilities scored within the 70–90 range, while 18.9% scored above 90. About 15.7% scored between 50–70, 4.9% fell below the threshold of 50.

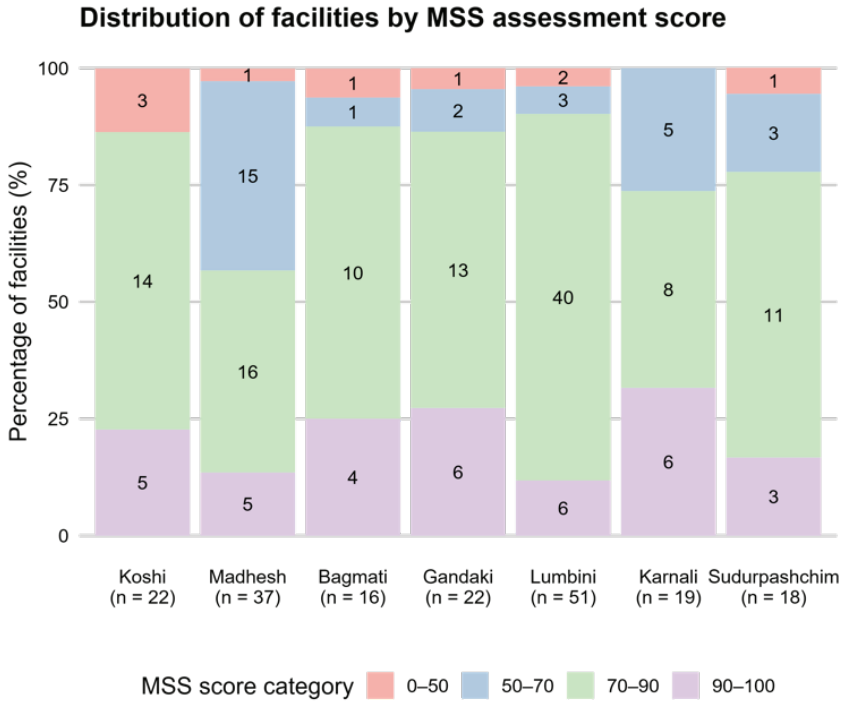

Figure 29. Distribution of MSS score categories of health facilities by Province (among those which conducted MSS in last fiscal year; n= 185)

The distribution of MSS scores illustrates variable performance across provinces, with some achieving notably higher compliance. Quality assurance action plans were in place in 83.8% of facilities, with the highest uptake in Karnali (100%) and the lowest in Koshi (51.5%). These findings reflect the extent to which MSS protocols and follow-up mechanisms have been institutionalized at the facility level across the federal context.

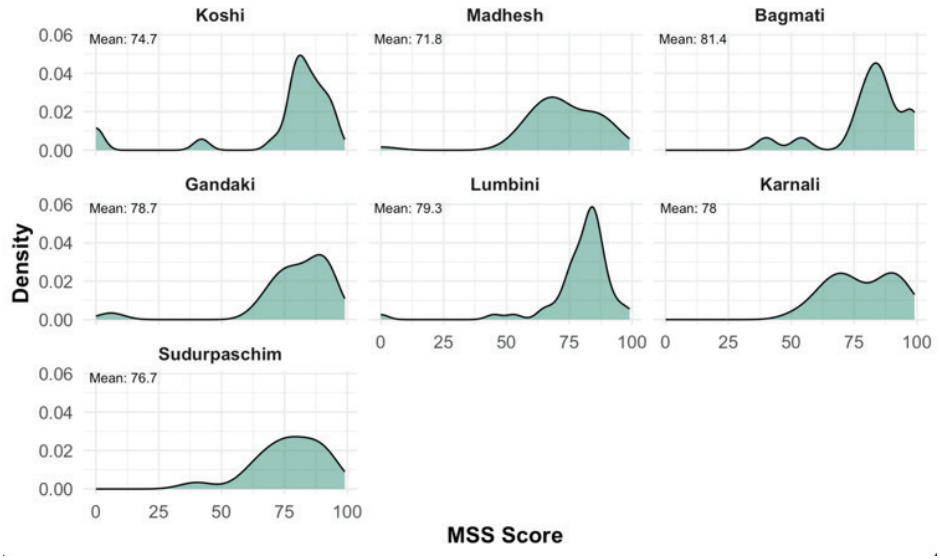

Figure 30 Distribution of last MSS score by Province

3.12.1 Utility and uptake of MSS tools at facility Level

Service providers across provinces demonstrated a broad understanding of Minimum Service Standards (MSS) as both a checklist and a planning tool. Facilities engaged in regular MSS scoring—typically bi-annually—used the results to monitor progress and lobby for resources from local governments. Several respondents mentioned tracking performance trends over time, identifying gaps, and preparing targeted improvement plans.

However, the quality of implementation varied. In high-performing municipalities, MSS assessments were used to initiate concrete upgrades in infrastructure, procure equipment, and deploy trained staff. In contrast, some remote facilities lacked technical guidance or follow-up after the scoring process, limiting the tool's potential to drive change.

"There is a biannual assessment of MSS. Previously, the score was 79%, and now it is 82%. We also check materials, if any are expired, we remove them. We also monitor cleanliness. Currently, an action plan has not been made. There are review meetings among the staff and with the Health Facility Operation and Management Committee (HFOMC). The municipality also conducts supervision and monitoring of the birthing center." (Service provider, Bagmati Province)

"We receive regular onsite coaching from district-level teams where experts come from the district office to observe and guide us on service delivery practices. They also conduct (MSS), which is usually done twice a year. During these visits, they assess our performance based on specific quality indicators, provide scoring, and offer feedback to help us improve. We also prepare action plan and different services/decisions were carry out accordingly to that." (Service provider, Gandaki province)

"The Minimum Service Standards program is successful; positive competition among health institutions for better scores." (PHO, Gandaki)

3.12.2 MSS as a mechanism for intergovernmental coordination and advocacy

The MSS tool has facilitated stronger communication between facility-level staff and municipal health leadership. Many respondents described how MSS indicators were embedded in annual health plans or tied to budget requests. Facilities with low scores in staffing or infection control used these data points to justify hiring additional SBAs or requesting autoclaves and washing machines.

Health Facility Operation and Management Committees (HFOMCs) played a mediating role in this advocacy chain, often compiling MSS data and relaying it to palika representatives. Where local governments were supportive, MSS results informed not only equipment procurement but also maintenance work, such as repainting delivery rooms or repairing roofs.

"According to bi-annual, as compared to other services action plan required to be developed and we are following the given guideline and we are receiving the services and facilities from the municipality. As the meeting is held and we following according to them. The audit is also done by the municipality as they visited the birthing center and monitored observed weekly." (Service provider, Sudurpaschim province)

Table 25 Minimum service standards for MNH service

Characteristic	Overall, N = 2221	Koshi, N = 331	Madhesh, N = 451	Bagmati, N = 181	Gandaki, N = 251	Lumbini, N = 601	Karnali, N = 211	Sudurpaschim, N = 201
Copy of Minimum Service Standards (MSS)	197 (88.7)	28 (84.8)	39 (86.7)	17 (94.4)	23 (92.0)	53 (88.3)	19 (90.5)	18 (90.0)
MSS Assessment Conducted in Last Fiscal Year	185 (93.9)	22 (78.6)	37 (94.9)	16 (94.1)	22 (95.7)	51 (96.2)	19 (100.0)	18 (100.0)
Latest MSS Assessment Score	77.0 (17.2)	74.7 (26.5)	71.8 (16.8)	81.4 (15.4)	78.7 (18.5)	79.3 (14.8)	78.0 (13.2)	76.7 (13.7)
MSS categories								
0–50	9 (4.9)	3 (13.6)	1 (2.7)	1 (6.3)	1 (4.5)	2 (3.9)	0 (0.0)	1 (5.6)
50–70	29 (15.7)	0 (0.0)	15 (40.5)	1 (6.3)	2 (9.1)	3 (5.9)	5 (26.3)	3 (16.7)
70–90	112 (60.5)	14 (63.6)	16 (43.2)	10 (62.5)	13 (59.1)	40 (78.4)	8 (42.1)	11 (61.1)
90–100	35 (18.9)	5 (22.7)	5 (13.5)	4 (25.0)	6 (27.3)	6 (11.8)	6 (31.6)	3 (16.7)
Quality Assurance Action Plan	186 (83.8)	17 (51.5)	39 (86.7)	17 (94.4)	24 (96.0)	53 (88.3)	21 (100.0)	15 (75.0)
Quality Assurance Activities	209 (94.1)	28 (84.8)	43 (95.6)	18 (100.0)	23 (92.0)	58 (96.7)	20 (95.2)	19 (95.0)
Quality Assurance Records	192 (91.9)	25 (89.3)	40 (93.0)	16 (88.9)	22 (95.7)	51 (87.9)	20 (100.0)	18 (94.7)
1n (%); Mean (SD)								

3.13 Perspectives on quality of MNH services of health planners, service providers, community volunteers, and beneficiary mothers

3.13.1 Access, delay, and structural constraints

In many rural and semi-urban settings across Nepal, barriers to access remain a central determinant of maternal and newborn health service quality. Despite the availability of skilled providers and institutional birthing centers, multiple delays — in decision-making, transportation, and referral compliance — compromise timely care. Health workers express concern about the lack of immediate responsiveness from families, especially in emergencies. A recurring issue is resistance to referrals, often influenced by socioeconomic limitations and cultural hesitancy. Families sometimes fail to recognize the severity of complications or express distrust toward peripheral centers, opting instead to wait or seek hospital care only when it becomes unavoidable.

Another pressing barrier is the reluctance of postpartum mothers to stay at health facilities post-delivery. This is frequently attributed to the absence of basic amenities such as food provision, which undermines facility-based recovery and observation protocols. Additionally, despite well-established referral systems, frontline health workers encounter refusal or delayed compliance, which undermines the quality and continuity of care.

“Once complications arise, referring them becomes really hard. Some don’t agree, some say they don’t have money, and others don’t want to come. The preparation stage still remains a challenge.” (Service Provider, Kavre, Bagmati Province)

“Postpartum mothers are unwilling to stay at the facility for 24 hours after delivery. Due to the lack of food arrangements... they do not want to stay.” (Service Provider, Banke, Lumbini Province)

“Sometimes complicated cases arrive and, despite our efforts, families blame the health facility for poor service.” (Service Provider, Karnali Province)

"ANC, institutional delivery, and PNC visits are significantly increasing. Yet, neonatal mortality is still a concern due to delays in decision-making, especially in remote areas."
(MNH Focal Point, Gandaki Province)

3.13.2 Community awareness and preparedness

Awareness of MNH services varies across communities, with some areas demonstrating significant engagement while others lag behind due to low literacy, cultural norms, or work-life conflicts. The FCHVs play a pivotal role in educating expectant mothers about antenatal visits, dietary requirements, hygiene, and institutional delivery benefits. However, several providers note a gap between knowledge dissemination and behavioral uptake, particularly with the new ANC protocol recommending eight visits. Many women, due to agricultural labor or household obligations, find it challenging to attend these sessions.

Birth preparedness also emerges as inconsistent. While some mothers make active efforts to save money, buy baby clothes, and plan hospital deliveries, others do so only after delivery or

not at all. For example, a few mothers forego checkups entirely, guided by generational beliefs or anecdotal community assurances that "nothing happened before, so nothing will happen now."

Despite these challenges, some positive shifts are noted. Improved coordination with FCHVs, use of ambulances, and increased infrastructure have allowed smoother transitions for some communities. Yet, the legacy of mistrust, combined with uneven service satisfaction, continues to fuel healthcare navigation away from local services and toward perceived "better" options.

At the community level, despite the organization of awareness programs and mother group meetings, participation often remains limited. Cultural practices around home deliveries, perceptions about unnecessary medical interventions, and logistical barriers such as transport contribute to this resistance.

"We tell them—if they have some money, keep it ready. Wash and prepare clean clothes, maintain hygiene." (FCHV, Siraha, Madhesh Province)

"There is still a need for awareness and public education. They lack awareness about the 4 ANC visit 8 ANC visits as per protocol. They don't feel this is mandatory." (Service Provider, Madhesh Province)

"Previously, it was said to get check-ups four times, but now it's eight times. Because of this, some women feel it's more troublesome." (Service Provider, Kailali, Sudurpaschim)

"I bought clothes for the baby, saved money, and prepared food... Yes, we didn't have any complaints."
(Service Seeker, Makwanpur, Bagmati Province)

"About four or five cases per year show up where the women have not done any routine checkups—not even once after becoming pregnant." (Service Provider, Dhanusha, Madhesh Province)

"Community awareness is significantly lower in the southern belt with predominantly Muslim populations." (MNH Focal Person, Lumbini Province)

"Poor demand generation (is there). Traditional treatment practices persist; need for interaction with traditional healers." (PHO, Sudurpaschim Province)

"In the Musahar community, there is minimal engagement in educational or health activities." (FCHV, Lumbini Province)

"Better coordination between FCHVs, mothers' groups, and nursing staff during meetings and training sessions is needed." (FCHV, Lumbini Province)

3.13.3 Trust, perceptions, and the role of social identity

Trust in the healthcare system is a complex and layered construct, influenced not only by the perceived competence of providers but also by deeply embedded social and cultural histories. Across several provinces, a marked preference for doctors and hospitals over health posts was

evident. This stems from a belief that doctors — especially in private or tertiary settings — are more skilled and reliable. As a result, health posts are seen as transitional or secondary options, visited only for vaccinations or non-critical issues.

"People don't come here for services. They think it's better to go to higher-level hospitals or service centers." (Service Provider, Bagmati Province)

"They always try to visit the hospital and they thought the doctors of hospital are more skilled." (Service Provider, Sudurpaschim Province)

"There is a perception that check-ups should be done through doctors and gynecologists, due to which people prefer to go to private hospitals." (Service Provider, Koshi Province)

"We have observed that ethnic backgrounds slightly influence home delivery cases… higher among the Chepang community." (Service Provider, Bagmati Province)

"Vehicles reach most places now. People prefer going where there are doctors. That's the general tendency." (Service Provider, Sudurpaschim Province)

" ..when we visit for PNC if the baby gets sick, they blame the health worker. When they visit the health post, they are not satisfied with the services and they always try to visit the hospital and they thought the doctors of hospital are more skilled rather than the health worker of health post." (Service provider, Sudurpaschim Province)

"Persistent skepticism among people about quality of services at birthing centers, unrealistic expectations from families (is there)." (DHO Representative, Gandak Province)

"Despite good preparation, community trust issues exist—patients prefer referral to higher-level facilities even when local centers are capable."(Provincial Health Directorate, Bagmati Province)

3.13.4 The role and capacity of FCHVs

The role of FCHVs in Nepal has undergone a significant shift over the years, but their capacity has not kept pace with evolving community needs. Both providers and the FCHVs themselves acknowledge that most have only received basic training with no recent upgrades or continuing education opportunities. Without regular and advanced capacity-building interventions, their potential as community educators remains underutilized. Strengthening training and support structures could not only revitalize their role but also improve maternal and newborn health outcomes by bridging the widening gap between service availability and community engagement.

"We strongly encourage pregnant women to seek immediate medical attention as soon as labor pains begin." (FCHV, Bagmati Province)

"Regular mothers' group meetings encourage institutional deliveries by promoting incentives and information sharing." (FCHV, Bagmati Province)

"We conduct monthly mothers' group meetings, though attendance fluctuates due to lack of incentives." (FCHV, Lumbini Province)

"FCHVs rarely receive any trainings. Times have changed, new mothers are now educated which has also changed the role of FCHVs… Now they act as a medium to relay information about when certain programs are being conducted rather than encourage pregnant women to give birth at health facilities." (Service Provider, Tehrathum, Koshi Province)

"FCHVs have only received basic training, and no additional training has been provided over the past year. If more frequent and advanced training opportunities were available for FCHVs, it would enhance their learning and lead to more effective community health education." (FCHV, Karnali Province)

"I haven't received basic training yet; we rely mostly on experience." (FCHV, Lumbini Province)

"We haven't received any training since the lockdown; it's been nine years since the last training." (FCHV, Madhesh Province)

3.13.5 Quality of MNH services

The quality of MNH services across Nepal remains highly variable, with systemic challenges persisting alongside localized successes. Numerous stakeholders, from provincial health authorities to frontline service providers and community health volunteers, highlighted critical gaps in birthing center readiness. Widespread shortages of essential medicines, equipment (e.g., baby warmers and ultrasound), and trained human resources have been reported, particularly in newly established birthing centers following federalization. Concerns are compounded by inadequate staffing for 24-hour services, lack of residential facilities for nurses, and weak infrastructure, which directly compromise service quality. District and provincial health officials stressed that rather than proliferating new centers, investments should prioritize upgrading and maintaining the quality of existing facilities to ensure effectiveness. These institutional limitations are mirrored by complaints from FCHVs and community members, who cite negligence and poor management as reasons for distrust and delayed care-seeking.

Yet, alongside these concerns, many mothers and FCHVs also recount positive experiences. In areas with better staffing and infrastructure, service users report feeling safe and well-cared for, citing respectful treatment, clear counseling, and strong breastfeeding support. For instance, in Rupandehi and Darchula, mothers expressed satisfaction with eight full antenatal checkups and compassionate care from nurses. In Jajarkot, staff even provided food and emotional support during a prolonged hospital stay. However, these promising accounts are tempered by persistent disparities in some districts where poor sanitation, lack of diagnostic services, and limited availability of medications continue to undermine the overall quality of care.

"Equipment shortages and poor management directly affect service quality. Only one nurse managing 24-hour services is difficult; residential quarters and adequate staffing arrangements are needed (to maintain quality)." (PHO, Bagmati)

"Many birthing centers lack readiness, essential medicines, equipment like baby warmers, and quality ANC counselling, severely affecting neonatal outcomes."
(Provincial Health Directorate, Sudurpaschim Province)

"Instead of building new centers unnecessarily, resources should focus on improving the quality and

effectiveness of existing facilities." (DHO Representative, Gorkha)

"Quality service provision and trained human resources remain major challenges; birthing centers often lack both, hindering service delivery."(Provincial Health Directorate, Lumbini Province)

"New birthing centers established after federalism generally have lower quality due to lack of infrastructure, SBA-trained staff, and essential instruments." ."(Provincial Health Directorate, Karnali Province)

"People complain about negligence at the health facility, which discourages them from seeking timely care." (FCHV, Lumbini Province)

"There is a facility for everything in this health post—trained nurses, lab facilities, ultrasound, ambulance. Overall, the service is good." (FCHV, Madhesh Province)

"Mothers want to deliver here because the facilities are good, and the sisters (nurses) are experienced. Out of 100, only one or two may prefer to deliver outside." (FCHV, Lumbini Province)

“I felt safe and everything was good. The health post services were of good quality, and staff were well-trained to handle complications.” (Service user, Koshi Province)

“We are very satisfied with the work of the nurses. They provide care very well and motivate us while delivering services. They also informed us that it is necessary to do 8 pregnancy check-ups during pregnancy.” (Service user, Darchula, Sudurpaschim Province)

“I received adequate support from health workers—breastfeeding, postpartum care, everything was good. Staff behavior was respectful and kind.” (Service user, Rupandehi, Lumbini Province)

“All the staff supported me with food, other arrangements, and care for both me and my baby. The nurses provided respectful treatment and proper care.” (Service user, Jajarkot, Karnali Province)

“Services were good but lab services were not available. Some medicines had to be bought from outside. Nurses were capable, but there is room to improve facilities.” (Service user, Sunsari, Koshi Province)

“There was only one staff at the birthing center during my delivery. I was scared whether she could manage everything. Also, beds were small and sanitation not good.” (Service user, Saptari, Madhesh Province)

“Most staff were respectful, but one nurse shouted and ignored us at night during labor pain. That was frightening.” (Service user, Saptari, Madhesh Province)

“There’s no lab, no X-ray. We must go to another town even for basic services.” (Service users, Multiple districts)

“Medicines were not fully available. We had to buy many from outside. The health post lacks a proper resting room and basic facilities.” (Service user, Kailali, Sudurpaschim Province)

4. Conclusion and Recommendations

4.1 Conclusions

A. Facility Assessment

I. General Readiness:

While assessing the basic amenities and general readiness, only about two-thirds of facilities reporting functional power and reported availability of functional computers, with a few facilities in Sudurpaschim reporting non-availability. Running water and functional toilets were also available in almost all the health facilities. For emergency management, two in ten health facilities lacked functional stretchers, and around half had access to a working ambulance, with low availability in Koshi and Madhesh province. Staff were still thoughtful about the mother's intention of not coming to the health facility for delivery even if the ambulance and transportation allowance is available. While placenta pits were available in most facilities, one in 10 had absence indicating missed infection control standards.

Regarding available infrastructure in the centers, less than half of the facilities met the recommended minimum of three rooms, with the proportion lowest in Sudurpaschim and highest in Koshi. Alarmingly, 44.1% of centers reported no dedicated rooms for maternity related services. Staff were having issues as they do not have quarters for living and providing 24 hours services and not getting any additional allowance for the duty.

II. Service Delivery:

ANC, delivery, and PNC services were universal in all health facilities with some exception. However, only around two thirds of the facilities reported the ability to identify, manage, and refer the pregnancy related complications. While, only half of the health facilities in Madhesh province reported identifying and referring cases without management capability. Among key ANC tests, urine protein and glucose tests were directly available and valid in approximately 57% of facilities. Further, hemoglobin testing was available and valid in only 51% of facilities. In mountain region, women were receiving incentives with the additional support from Palika. For instance, in Darchula, pregnant women who complete eight ANC check-ups and deliver in the facility, receive an incentive, which amounts to NRs. 3800 [likely combining national ANC/ delivery incentive + transport allowance]. Additionally, there's a local initiative called "Upamayor Koseli" with a value of NRs 2000. Regarding the availability of delivery service, a 24-hour staff duty schedule was maintained in 85.1% of facilities, with full coverage, while Karnali has low. Partograph use was nearly universal, suggesting strong adherence to labor monitoring protocols. Discharge practice improved as 76.6% of facilities discharged mothers after 24 hours. Early discharge is high in Madhesh. For PNC, one in ten facilities reported conducting a complete physical examination. For newborn care, only two thirds of the facilities had dedicated newborn care corner.

III. Equipment and medicines:

Regarding availability of equipment in birthing center, almost all facilities had a delivery bed, a significant proportion lacked the required number of delivery sets (≥3), with only 59.9% meeting the benchmark. Some of the lacked items were manual suction machines both electric and manual options. Most facilities had at least one oxygen mask, but oxygen cylinders (≥2) were present in only 22.1% of centers.

Only 60.8% of facilities having two or more, and by poor coverage of penguin suction devices (48.6%). Assessment of availably of essential medicine shows that less than half of the facilities had the recommended stock of oxytocin (36.5% had ≥30 vials) and ergometrine (only 21.2% had ≥5 ampoules). Availability of antihypertensives and anticonvulsants was also suboptimal: just 19.4% had the recommended ≥50 vials of magnesium sulphate, and 51.4% had ≥5 tablets of nifedipine. Emergency drugs and adjunctive therapies, such as calcium gluconate, adrenaline, dexamethasone, and xylocaine, were inconsistently stocked.

IV. Availability of Human Resources and their capacity:

Among the health facilities assessed, 86.0% reported having a health worker available on-site 24 hours a day. Regarding their training status: only 72.5% had personnel who had received specific training in ANC/PNC service delivery. Senior/Staff Nurses (100.0%), Senior Health Assistants (99.1%), Cleaners (100.0%), Public Health Inspectors (96.6%), Office Assistants (97.9%), and Laboratory Technicians (98.6%) showed the highest fulfilment where sanctioned. Senior/Auxiliary Health Workers (82.9%), SBA-trained ANMs (91.7%), Staff Nurses (91.5%), and Health Assistants (87.0%) were generally well represented but with provincial variation. Lower proportions were observed for SBA-trained Staff Nurses (75.0%), Pharmacists (100.0% where sanctioned), Medical Recorders (100.0% where sanctioned), Accountants (100.0% where sanctioned), Store Keepers (100.0% where sanctioned), and ASBA-trained Doctors (100.0% where sanctioned), with many facilities lacking sanctioned posts for these roles.

Further, the proportion of facilities with recent (past 24 months) SBA training was just 10.8%, although most facilities had received it more than two years ago. Moreover, only 21.2% reported receiving neonatal resuscitation training in the past two years and just 12.6% trained on specialized newborn care. Human resource gaps and lack of training remain a recurring issue across Nepal's birthing centers as the Palika fulfil the gaps with contractual staff. While some centers benefit from regular staffing and skilled birth attendants (SBAs), many continue to operate with minimal human resources. In multiple interviews, health workers emphasized the pressure of working 24-hour shifts without sufficient allowances. Moreover, in several cases, deliveries were successfully managed by ANMs even in the absence of SBA training, although this raised concerns about quality and capacity. Coaching and mentoring was effective but the capacity of district for conducting such services is limited to the targeted birthing centers only.

V. IPC and waste management:

Only 19.4% of birthing centers met the requirement of four or more waste buckets, and one-third (33.3%) lacked the recommended minimum of two puncture-proof sharps containers. Core IPC materials such as surgical masks, gowns/aprons, and disposable gloves were observed in over 75% of facilities nationwide. Basic IPC infrastructure such as hand hygiene stations (69.8% observed) and colour-coded waste bins (88.3% observed) was present in most facilities, but signage and visual cues lagged significantly. Waste disposal per protocol was observed in just 55.9% of facilities overall, falling to 35.0% in Sudurpaschim and 43.3% in Lumbini. Perhaps most concerning, active enforcement of hand hygiene was observed in fewer than one-third of birthing centers (29.7%), with over 39.6% having no system in place.

VI. Governance

Most facilities reported the availability of HFOMCs and their routine meetings across 92.6% of facilities, with 65.7% holding meetings monthly or more frequently. Facility-level documentation

and transparency tools were variably present: social maps were clearly displayed in 45.5% of facilities, and notice boards were available in 82.4%, although their placement and visibility varied considerably across provinces. External supervision within the last six months was reported by 86.9% of facilities, with full coverage in Madhesh and Karnali, and lowest in Bagmati (66.7%). Most supervision was conducted by municipalities (94.8%), followed by health offices (52.8%), while engagement from provincial or federal authorities remained limited. MSS assessment report was available in 88.7% of facilities, The mean MSS assessment score across facilities was 77.0 (SD 17.2), with provincial averages ranging from 71.8 in Madhesh to 81.4 in Bagmati. Nearly 61% of facilities scored within the 70–90 range, while 18.9% scored above 90. A smaller proportion (15.7%) scored between 50–70, and only 4.9% fell below the threshold of 50.

VII. Information management:

Availability of the HMIS indicator booklet was reported in 84.2% of facilities, with some provincial variation. Routine Data Quality Assessment (RDQA) had been conducted in 68.5% of facilities during the past year, with lower coverage in Koshi (39.4%) and Madhesh (55.6%) and higher in Karnali (90.5%) and Bagmati (83.3%).

VIII. Lab services:

Overall, 59% of assessed health facilities reported having an "E-category" laboratory. Provincial variation was notable, with availability highest in Lumbini (70%) and Koshi (73%), and lowest in Madhesh (38%). Critical lab infrastructure such as centrifuges, colorimeters, water baths, and micropipettes were widely observed in facilities that reported laboratory services.

B. Perspectives of the stakeholders and beneficiaries

I. Perceived barriers

One of the most frequently mentioned barriers was the unavailability of 24-hour delivery and emergency services. In many facilities, particularly those in rural or resource-constrained settings, staffing limitations, power outages, and lack of essential supplies inhibit the ability to provide around-the-clock care. This is especially detrimental in MNH, where complications can arise unexpectedly, and immediate response is critical.

Across provinces, providers highlighted severe shortages of trained personnel, particularly SBAs. In many cases, only one staff member manages the entire MNH unit, making it impossible to maintain both facility-based care and community outreach. Health workers expressed deep frustration with facility layouts, especially the lack of designated delivery and postnatal spaces. Without private, clean, and functional birthing areas, the quality of care and client dignity are both compromised. Another systemic issue is the inconsistent supply of critical medicines and materials. Emergency drugs, antibiotics, and basic IPC tools are sometimes unavailable, affecting the delivery of essential and emergency obstetric care. Transportation during emergencies is a persistent bottleneck, especially in geographically remote regions. Inadequate ambulance coverage, coupled with poor road access, means that women in labor face dangerous delays. In some regions, hierarchical attitudes and gender bias impact service uptake. Younger and female staff members often face skepticism from clients, which can undermine provider-patient relationships and affect care compliance. Despite awareness campaigns, many community members remain disengaged. Misunderstandings about health programs, coupled with a lack of participation in meetings or mothers' groups, limit the effectiveness of outreach. Many families cannot afford to purchase prescribed medications, travel for referrals, or access private care

when public services fall short. Underutilization of birthing centers for delivery is remained concern because of home delivery or lack of trustworthiness of the public to deliver nearby institution. For community mobilization and awareness, mothers reported lack of effective mothers' group meeting in the absence of health workers.

II. Perceived facilitators supporting MNH service delivery

Palika initiatives for financial or nutritional incentives have positively influenced maternal behavior, especially among marginalized groups. These schemes serve dual purposes: improving health-seeking behavior and promoting nutrition. FCHVs remain one of the strongest community-based assets in Nepal's health system. Their roles in referrals, home visits, counseling, and mobilization are foundational to building trust and improving service reach. Facilities with functioning infrastructure and committed teams report smoother operations and higher service utilization. Effective teamwork and role clarity among staff enhance service efficiency. Local governance and political commitment have supported improvements in transportation and resource allocation. Collaborative efforts between health workers and local bodies facilitate problem-solving. Ongoing training, supervision, and review mechanisms allow facilities to identify challenges, learn from data, and adapt services. Use of local radio, newspapers, and visual materials supports mass awareness and health literacy, particularly in areas where literacy rates are low.

4.2 Recommendations

Table 26 Issues found and recommendations of the study

Issues	Findings	Recommendations
Policy issues and gaps	Local governments have unilaterally declared new birthing centers without prior needs assessments and service capacity in terms of infrastructure, human resources, drugs and amenities.	There should be mechanism to oversight the process of declaration of birthing centers after rigorous assessment in coordination with district/province/federal entity
	Underutilized birthing centers with low coverage and quality	Birthing centers should be consolidated in strategically located, with adequate infrastructure, human resources, and rooms
Lack of trained SBA	Birthing center faces severe shortage of Skilled Birth Attendants (SBAs) that led to hinder the provision of 24-hour delivery services. The federal government's conditional grant scheme covers salaries for 1,600 Auxiliary Nurse Midwives (ANMs), but this is insufficient given the number of birthing centers	Local/provincial governments may need to allocate the budget for the salary of ANMs to complement the federal conditional grant.
	Many contracted ANMs had not received SBA training but they are the frontline service providers	Local governments need to coordinate with provincial health training center to provide SBA training to the staff
	Inadequate coaching and mentoring. More than 80% of the service providers received MNH related training prior to 24 months.	Provide SBA training to the newly recruited staff along with essential training for MNH care including coaching and mentoring
Inadequate birthing center infrastructure	Only 41% of birthing centers met the recommended standard of having three separate rooms (ANC, delivery, PNC), with Sudurpaschim lowest at 35% and Koshi highest at 49%. *"Our health facility is so small, narrow, and there isn't even space to keep the equipment."*	Local levels may need to coordinate with federal or provincial governments to ensure adequate rooms as per the standards of birthing center prior to declaration of birthing center

Issues	Findings	Recommendations
Lack of dedicated maternity room	Nearly half (44%) had no dedicated maternity room, so services were often in shared space. *"Waiting rooms, there are only two beds. If three or four come consecutively, it becomes difficult for us."*	Ensure all birthing centers have dedicated maternity rooms and waiting areas as per MSS standards.
Poor water and electricity reliability	91% reported 24-hour water supply, yet some remote centers faced intermittent outages. 81% had electricity 24/7, with Karnali at only 67%. *"There is no water facility..."*	Ensure manage water and electricity supply in the center while assessing and designating birthing centers
Lack of ambulance/ emergency transport and geographical inaccessibility	Just 53% had ambulance access, with Koshi at 33% and Madhesh at 45%. *"There are occasions when no vehicles are available… In those instances, we resort to requesting a stretcher… women have had to deliver their babies en route due to delays."* *"Even with new roads, reaching centers during monsoon remains impossible."*	Equip all birthing centers with functional ambulance services and develop alternative transport solutions for remote areas services to reduce delays in accessing care.
Lack of maternity waiting homes	Only 63% had maternity waiting homes for at-risk or remote women, with Sudurpaschim at 35% and Gandaki at 84%.	Expand maternity waiting homes, prioritizing provinces with lowest coverage.
Inadequate infection prevention and control	A placenta pit for medical waste disposal was absent in 10% of centers.	Ensure all centers have proper infection prevention infrastructure and regular IPC training.
Inadequate ANC diagnostics	Urine protein and glucose tests were available in 57% of centers; one-quarter never had them. Hemoglobin testing was in 51%, low in Bagmati (39%) and Madhesh (38%). Syphilis testing kits were in 46% of centers; 30% had never offered them. *"There's no lab, no X-ray. We must go to another town even for basic services." (Service users, Multiple districts)*	Equip all centers with essential ANC diagnostic tools and supplies; monitor regular usage. Non-invasive hemoglobin testing devices would be helpful in those areas where testing is not available For severe Anemia single-dose IV Iron (Ferric carboxymaltose can be added in the ANC components Further, Maternal Micronutrient Supplements for Maternal Nutrition is also crucial

Issues	Findings	Recommendations
Inadequate ANC services (supplements)	Iron and folic acid supplements were provided; Calcium was in 77% of centers.	Ensure full range of ANC supplements is available and provided at all centers.
Inadequate SBA training and roster	A 24/7 Skilled Birth Attendant (SBA) roster existed in 85% of centers, with Sudurpaschim at 100% and Karnali at 57%.	Provide regular SBA and in-service training, including for contract-based staff, with ongoing mentoring and coaching AI handheld ultrasound devices would be helpful for SBA to detect high risk pregnancies and fetal anomalies
Lack of clinical protocols and guidelines	Only half of centers had the national clinical protocol manual on site, and 58% had emergency obstetric guidelines.	Distribute updated clinical protocols and guidelines to all centers and ensure staff are oriented.
Gaps in delivery	24-hour staff duty schedule was maintained in 85.1% of facilities Essential emergency obstetric care (EOC) job aids were available in 58.1% The availability of episiotomy sets (≥2) was inadequate in one-third of centers, particularly in Madhesh (37.8%) and Sudurpaschim (25.0%). Cervical tear repair sets were observed in 73.4% of facilities	Ensure the availability of staff for 24 hours with the provision of residential quarter in the health facilities PPH Drape would be helpful for better PPH management as PPH is the leading cause of maternal mortality. For quality of normal delivery, the essential job aid, delivery should be stocked in the recommended amount.

Issues	Findings	Recommendations
Newborn care gaps	A designated newborn corner was present in 67.6% of facilities Resuscitation sets were available in 85.6% of facilities and 68.9% had resuscitation tables only 60.8% of facilities having bag and mask sets with the number of two or more and 48.6% had penguin suction devices Recommended stock of antibiotics was lacking, 38.3% injectable ampicillin and 41.4% gentamycin The coverage of Vitamin K1 injection was 74.5% and newborn growth monitoring was 79.5%	Establish newborn care corner for essential newborn care equipped with resuscitation sets and tables and bag and masks, including penguin suction devices Low-cost CPAP (Continuous Positive Airway Pressure) machines would be helpful managing respiratory distress in neonates and addressing maternal sleep apnea at least in the facility, where Special Newborn Care service available. To treat infection, antibiotics with syringe and normal saline should be stocked in the recommended amount Newborn growth monitoring should be arranged with use of baby weighing scale.
Stock-outs of essential medicines	Facilities were lacking timely disbursement of key essential medicines such as oxytocin and magnesium sulfates, ergometrine	Implement or strengthen electronic logistics management to prevent medicine stock-outs. Coordinate health section of the local level or district for maintaining adequate stock of medicine
Early discharge and poor postnatal care	Early discharge before 24 hours postpartum occurred in 23% of centers, highest in Madhesh and Sudurpaschim at 40%.	Enforce minimum postnatal stay guidelines and expand postnatal care capacity.
Low utilization of birthing centers	"Institutional delivery is at 56%…Significant numbers (of women) prefer (to deliver in)outside hospitals..." "Overall MNH indicators have improved; however, some remain challenging. Institutional delivery is around 60%."	Mechanisms should be developed/strengthen the link between communities and health facilities to build credibility, trust, and increase the use of basic maternal and newborn health services. Community awareness programs are still needed to reduce home deliveries and increase institutional deliveries.
Home delivery is still prevalent	While conducting FGDs and KII, certain marginalized group of people have practice of home delivery, missed after few ANCs	Counseling on ANC and home visit for health education and birth preparedness

5. Annexes

Annex 1: List of Selected birthing centers

Province	District	Total Palika	Name of Palika	Type	Name of Birthing Center
Koshi	Jhapa	15	Budhashanti	Rural Municipality	Shantinagar HP
			Arjundhara	Municipality	Sanischare PHC
			Haldibari	Rural Municipality	Jalthal HP
			Gauradaha	Rural Municipality	Gauradaha HP
			Baradarshi	Rural Municipality	Dangibari HP
			Jhapa	Rural Municipality	Tangandubba BHSC
			Kamal	Rural Municipality	Topgachchi HP
	Sunsari	11	Barju	Rural Municipality	Chimdi HP
			Gadhi	Rural Municipality	Satarjhora PHC
			Harinagar	Rural Municipality	Harinagar PHC
			Dewanganj	Rural Municipality	Kaptanganj HP
			Barah	Municipality	Prakashpur HP
			Ramdhuni	Municipality	BhokrahaNarsing RM- Narsingh HP
			Duhabi	Municipality	Sonapur HP
	Morang	17	Jahada	Rural Municipality	Budhanagar HP
			Sunbarshi	Rural Municipality	Dainiya HP
			Letang	Municipality	Letang PHC
			Sundarharaicha	Municipality	Haraicha PHC
			Budhiganga	Rural Municipality	Tankisinuwari HP
			Gramthan	Rural Municipality	Banigama HP
			Urlabari	Municipality	Miklajung RM-Tandi HP
	Ilam	10	Rong	Rural Municipality	Erautar HP

Province	District	Total Palika	Name of Palika	Type	Name of Birthing Center
			Suryodaya	Municipality	Shreeantu HP
			Ilam	Municipality	Sakhejung HP
			Chalachuli	Rural Municipality	Peltimari CHU
	Panchthar	8	Phidim	Municipality	Kaphalbote HP
			Kummayak	Rural Municipality	Ranigaun HP
			Kummayak	Rural Municipality	Tumweba RM-Mauwa HP
			Tumwewa	Rural Municipality	Mauwa HP
	Terhathum		Chhatthar	Rural Municipality	Phakchamara HP
			Chhatthar	Rural Municipality	Okhare HP
			Laligurans	Municipality	Solma HP
			Laligurans	Municipality	Basnatpur PHC
Madhesh	Saptari	18	Hanuman Nagar Kankalini	Municipality	Hanumannagar HP
			Chhinamasta	Rural Municipality	Sakhada HP
			Rupani	Rural Municipality	Tirhauta HP
			Bode Barsain	Municipality	Bode Barsain HP
			Tilathi Koiladi	Rural Municipality	Launiya HP
			Dakneshwari	Municipality	Patthargada HP
			Surunga	Municipality	Paschim Pipra HP
	Siraha	17	Karjanha	Municipality	Gautari HP
			Sakhuwanankarti	Rural Municipality	Mouwahi HP
			Bhagwanpur	Rural Municipality	Inaruwa HP
			Dhangadimai	Municipality	Bishnupurkatti HP
			Lahan	Municipality	Charapatti HP
	Dhanusha	18	Ganeshman Charnath	Municipality	Godar HP
			Sahidnagar	Municipality	Yadukuha PHC Dhanusha
			Laxminiya	Municipality	Sinurjhora HP
	Mahottari	18	Loharpatti	Municipality	Loharpatti PHC

Province	District	Total Palika	Name of Palika	Type	Name of Birthing Center
			Pipra	Rural Municipality	Pipra PHC
			Gaushal	Municipality	Ramnagar HP
			Matihani	Rural Municipality	Matihani HP
			Jaleshawar	Municipality	Ankar HP
	Sarlahi	18	Malangwa	Municipality	Bishnu RM-Simra HP
			Chakarghata	Rural Municipality	Khoriya HP
			Hariwan	Municipality	Sasapur HP
			Bagmati	Municipality	Karmaiya HP
			Chandranagar	Rural Municipality	Kamad HP
			Haripur	Municipality	Haripur PHC
			Lalbandi	Municipality	Kabilashi Municipality-Jamuniya PHC
	Rautahat	18	Gaur	Municipality	Gaur HP
			Rajdevi	Municipality	Basantpur HP
			Ishnath	Municipality	Auraiya HP
			Guruda	Municipality	Mahamadapur HP
			Brindawan	Municipality	Bishrampur HP
			Chandrapur	Municipality	Matiauna (Dumariya) HP
	Bara	16	Jitpur Simara	Sub-Metro	Jitpur HP
			Mahagadimai	Municipality	Ganj Bhawanipur PHC
			Nijgadh	Municipality	Nijgadh PHC
			Baragadhi	Rural Municipality	Khopwa HP
			Kalaiya	Sub-Metro	Bhodaha HP
			Kolhabi	Municipality	Prasona HP
	Parsa	14	Dhobini	Rural Municipality	Langadi HP
			Bindabasini	Rural Municipality	Sambhunath Municipality-Mohanpur HP
			Pokhariya	Municipality	Baramajhiya HP/ Saptari District
			Birgunj	Metro	Lipanibirta HP

Province	District	Total Palika	Name of Palika	Type	Name of Birthing Center
			Sakhuwa Prasauni	Rural Municipality	Kalika RM- Murali HP
			Pakahamainpur	Rural Municipality	Pakahamainpur HP
Bagmati	Kavre	13	Panchakhal	Municipality	Deuvumi Baluwa HP
			Panauti	Municipality	Panauti HP
			Panauti	Municipality	Kushadevi HP
	Lalitpur	6	Konjyosom	Rural Municipality	Bhardev HP
			Godawari	Municipality	Lele PHC
			Bagamti	Rural Municipality	Ashrang HP
	Makwanpur	10	Makwanpur Gadhi	Rural Municipality	Makwanpurgadhi HP
			Manahari	Rural Municipality	Basantpur HP
			Bhimphedi		Bhaise HP
			Bakaiya	Rural Municipality	Manthali HP
			Thaha	Municipality	Palung PHC
			Indrasarowar	Rural Municipality	Kulekhani HP
	Suindupalchowk	12	Helambu	Rural Municipality	Mahankal HP
			Indrawati	Rural Municipality	Simpalkavre HP
	Sindhuli	9	kamalamai	Municipality	Ranibas HP
			Dudhauli	Municipality	Dudhouli HP
			Sunkoshi	Rural Municipality	Kuseswor Dumja HP
			Golanjor	Rural Municipality	Bhimeshwar HP
Gandaki	Nawalparasi East	8	Bungdikali	Rural Municipality	Rakuwa Dedhgaun PHCC
			Trivenisusta	Municipality	Hupsekot RM-Deurali HP
			Hupsekot	Rural Municipality	Hupsekot HP
	Gorkha	11	Shahid Lakhan	Rural Municipality	Manakamana BHSC
			Gandaki	Rural Municipality	Bhumlichowk HP

Province	District	Total Palika	Name of Palika	Type	Name of Birthing Center
			Bhimsen	Rural Municipality	Borlang HP
			Bhimsen	Rural Municipality	Dhawa HP
			Gorkha	Municipality	Palungtar Municipality-Baddanda HP
			Siranchowk	Municipality	Dharapani HP
			Gorkha	Municipality	Finam HP
	Syangja	11	Putalibazar	Municipality	Kolma HP
			Putalibazar	Municipality	Pauwegaude hP
			Arjun Chaupari	Municipality	ArjunChaupari HP
			Waling	Rural Municipality	Garau PHC
			Phedikhola	Rural Municipality	Fedikhola HP
	Baglung	10	Baglung	Municipality	Narayansthan HP
			Baglung	Municipality	Amalachaur HP
			Galkot	Municipality	Hatiya HP
			Kathekhola	Rural Municipality	Lekhani HP
			Nishikhola	Rural Municipality	Devisthan HP
			Nishikhola	Rural Municipality	Nishi HP
			Jaimini	Municipality	Jaidi HP
	Myagdi	6	Beni	Municipality	Singa HP
			Annapuran	Rural Municipality	Bhurung Tatopani HP
			Raghuganga	Rural Municipality	Rakhupipple HP
Lumbini	Rukum East	4	Putha Uttaranga	Rural Municipality	Hukam HP
			Bhume	Rural Municipality	Mahat HP
	Rolpa		Rolpa	Rural Municipality	Khumel HP
			Sukidaha	Rural Municipality	Pakhapani HP
			Maadi	Rural Municipality	Talawang HP

Province	District	Total Palika	Name of Palika	Type	Name of Birthing Center
			Triveni	Rural Municipality	Nuwagaon HP
			Runtigadhi	Rural Municipality	Holeri PHC
	Dang	10	Banglachuli	Rural Municipality	Hansipur HP
			Ghorahi	Sub-Metro	Hapur HP
			Tulsipur	Sub-Metro	Bijauri HP
			Dangisharan	Rural Municipality	Hekuli HP
			Gadhawa	Rural Municipality	Gangapraspur HP
	Pyuthan	9	Swargdwari	Rural Municipality	Gothiwang HP
			Jhimruk	Rural Municipality	Okharkot Health Post
			Pyuthan	Municipality	Sapdanda Health Post
			Mandawi	Rural Municipality	Deisthan Health Post
			Mallarani	Rural Municipality	Khalanga PHC
	Gulmi		Resunga	Municipality	Simichaur
			Gulmidurbar	Rural Municipality	Darbardevisthan HP
			Chatrakot	Rural Municipality	Kharjyang HP
			Musikot	Municipality	Arlangkot HP
	Arghakhachi	6	Chatradev	Rural Municipality	Arghatosh HP
			Sandhikharka	Municipality	Argha HP
			Bhumikasthan	Municipality	Dharapani HP
			Panini	Rural Municipality	Pokharathok HP
	Palpa	10	Tansen	Municipality	Argali HP
			Bagnaskali	Rural Municipality	Nayar Namatales HP
			Mathagadi	Rural Municipality	Bahadurpur HP
			Tinau	Rural Municipality	Kachal HP
	Nawalparasi West	7	Susta	Rural Municipality	Pakalihawa HP

Province	District	Total Palika	Name of Palika	Type	Name of Birthing Center
			Pratappur	Rural Municipality	Pratappur HP
			Sarwal	Rural Municipality	Manari HP
			Sunwal	Rural Municipality	Sunwal HP
			Palinandan	Rural Municipality	Palhi PHC
	Rupandehi	16	Sainamaina	Municipality	Paroha HP
			Rohini	Rural Municiaplity	Bagaha HP
			Omsatiya	Rural Municipality	Basantpur HP
			Devdaha	Municipality	Devadaha HP
			Gaidahawa	Rural Municipality	Suryapura HP
			Tilotama	Municipality	Aanandban HP
			Mayadevi	Rural Municipality	Kamahariya HP
	Kapilvastu	10	Mayadevi	Rural Municipality	Pakadi HP
			Buddhabhumi	Municipality	Jayanagar HP
			Yashodhara	Rural Municipality	Yashodhara Basic Hospital
			Shivraj	Municipality	Shivgadhi HP
			Banganga	Municipality	Kopawa HP
			Shhudodhan	Rural Municipality	Labani HP
			Kapilbastu	Municipality	Tilaurakot HP
	Banke	8	Janaki	Rural Municipality	Ganapur HP
			Kohalpur	Municipality	Shamsergunj HP
			Khajura	Rural Municipality	Sitapur HP
			Nepalgunj	Sub-Metro	Bhawaniyapur HP
			Duduwa	Rural Municipality	Betahani HP
			Baijnath	Rural Municiaplity	Chisapani HP
	Bardiya	8	Gulariya	Municipality	Mathura Haridwar HP
			Barbardiya	Municipality	Magaragadi HP

Province	District	Total Palika	Name of Palika	Type	Name of Birthing Center
			Geruwa	Rural Municipality	Patabhar HP
			Thakur Baba	Municipality	Thakudwara HP
			Basgadhi	Rural Municipality	Motipur HP
			Badhaiyatal	Rural Municipality	Kalika HP
Karnali	Kalikot	9	Khadachakra	Municipality	Dahafatgaun HP
			Tilagufa	Municipality	Jubitha HP
			Kalika	Rural Municipality	Mugraha HP/ Kalika HP
			Mahawai	Rural Municipality	Gela HP
	Jajarkot	7	Barekot	Rural Municipality	Ramidanda HP
			Barekot	Rural Municipality	Sakla HP
			Bheri	Municipality	Kudu HP
			Tribeni Nalgadh	Municipality	Dalli PHC
	Surkhet	9	Birendranagar	Municipality	Jarbuta HP
			Lekbeshi	Municipality	Lekfarsa HP
			Bheriganga	Municipality	Chhinchu HP
			Simta	Rural Municipality	Rakam HP
			Barahatal	Rural Municipality	Kunathari HP
			Gurbhakot	Rural Municipality	Sahare HP
			Bheriganga	Municipality	Uttarganga HP
	Dailekh	6	Dungeshwar	Rural Municipality	Belpata HP
			Narayan	Municipality	Bhawani HP
			Aathbiskot	Municipality	Namyal HP
	Jumla	8	Chandannath	Municipality	Talium HP
			Tila	Rural Municipality	Kudari HP
			Tatopani	Rural Municipality	Tatopani HP
Sudurpaschim	Kanchanpur	9	Krishnapur	Municipality	Krishnapur HP
			Shuklaphat	Municipality	Jhalari HP
			Belauri	Municipality	Laxmipur HP

Province	District	Total Palika	Name of Palika	Type	Name of Birthing Center
			Krishnapur	Municipality	Raikwar Bichawa HP
			Bhimdatt	Municipality	Brahmdev UHC
			Laljhadi	Rural Municipality	Shankarpur HP
			Laljahdi	Rural Municipality	Chandewa HP
			Beldadi	Rural Municipality	Rauteli Bichawa HP
	Baitadi		Sunarya	Rural Municipality	Rauleshwar HP
			Patan	Municipality	Basantpur HP
			Dasarathchand	Municipality	Darsharath chanda HP
			Melauli	Municipality	Bishalpur HP
	Darchula		Mahakali	Municipality	Khalanga HP
			Mahakali	Municipality	Katai HP
			Shailyashikhar	Municipality	Bohorigaun HP
			Shailyashikhar	Municipality	Gwani HP
	Kailali		Ghodaghodi	Rural Municipality	Pahalmanpur HP
			Godawari	Municipality	Badeha HP
			Tikapur	Municipality	Narayanpur HP
			Kailari	Rural Municiaplity	Gadariya HP

Annex 2: Quantitative tools

(Instruction: The inventory should be completed by observing the facility and through discussion with the In-charge/staff of the health facility.)

1. Facility information

SN	Questions	Response Category	Remarks
101	Province		
102	District		
103	Local Level	Rural Municipality Municipality	Mention the type of municipality
104	Ward number		
105	Name of the health facility		
106	Type of health facility	Primary health care center	
		Health post	
		Community health Unit	
		Urban health center	
107	Enumerator's name		
108	Date of data collection		
109	Start time		
110	End time		
111	Total number of providers interviewed in the facility	….	This can be revised upon completion of the interview

Names of the respondents	Designation	Contact Number

2. General Service Availability

SN	Questions	Response Category	Remarks
201	Does this facility offer any of the following client services? In other words, is there any location in this facility where the clients can receive any of the following services?	1. Yes 2. No 1. Yes, but respondent not available	
202	Any family planning services-including modern fertility awareness methods (natural family planning), male or female surgical sterilization	1. Yes 2. No 1. Yes, but respondent not available	
203	Antenatal care (ANC) services	1. Yes 2. No 1. Yes, but respondent not available	
204	Services for the prevention of mother-to-child transmission of HIV, either with ANC or delivery services	1. Yes 2. No 1. Yes, but respondent not available	
205	Delivery and Newborn care	1. Yes 2. No 1. Yes, but respondent not available	
206	Diagnosis or treatment of STIs, excluding HIV	1. Yes 2. No 1. Yes, but respondent not available	
207	HIV testing and / or counseling services	1. Yes 2. No 1. Yes, but respondent not available	
209	HIV/AIDS antiretroviral prescription or antiretroviral treatment follow-up services	1. Yes 2. No 1. Yes, but respondent not available	

SN	Questions	Response Category	Remarks
210	Cesarean delivery (Cesarean section)	1. Yes 2. No 1. Yes, but respondent not available	
211	Blood transfusion services	1. Yes 2. No 1. Yes, but respondent not available	
212	Abortion related services	1. Yes 2. No 1. Yes, but respondent not available	
213	Postnatal newborn services	1. Yes 2. No 1. Yes, but respondent not available	
214	Screening of Utero vaginal prolapse	1. Yes 2. No 1. Yes, but respondent not available	
215	Surgical management of Utero vaginal prolapse (Applicable in district and above hospital)	1. Yes 2. No 1. Yes, but respondent not available	
217	Screening of Obstetric fistula	1. Yes 2. No 1. Yes, but respondent not available	
218	Screening of cervical Cancer	1. Yes 2. No 1. Yes, but respondent not available	
219	Management of cervical Cancer	1. Yes 2. No 1. Yes, but respondent not available	

SN	Questions	Response Category	Remarks
220	Screening of breast Cancer	1. Yes 2. No 1. Yes, but respondent not available	
221	Identification, counselling and referral of person with disability	1. Yes 2. No 1. Yes, but respondent not available	
222	Geriatric health promotion services	1. Yes 2. No 1. Yes, but respondent not available	
223	Adolescent friendly services	1. Yes 2. No 1. Yes, but respondent not available	
224	Health promotion for existing and emerging health conditions	1. Yes 2. No 1. Yes, but respondent not available	
225	Free health services for targeted groups	1. Yes 2. No 1. Yes, but respondent not available	
226	Own Pharmacy	1. Yes 2. No 1. Yes, but respondent not available	

SN	Questions	Response Category	Remarks
227	Visual Inspection with acetic acid (VIA) test available from this facility	1. Yes 2. No 1. Yes, but respondent not available	
227	Visual Inspection with acetic acid (VIA) test available from this facility	1. Yes 2. No 1. Yes, but respondent not available	

3. Governance

SN	Questions	Response Category	Remarks
301	Did this facility receive any external supervision/ monitoring, from the federal, provincial or the municipal level in the last 6 months?	1. Yes 2. No 3. Don't Know	Ye Review monitoring report
302	If yes, who visited to provide monitoring/ supervision support to your health facility?	1. Municipality 2. Health office 3. Provincial health directorate 4. Provincial MoHP/MoSD 5. Federal MoHP 6. Others (please) specify	Mention the designation of the person
303	When was the last time a supervisor from outside this facility came here on a supervisory/monitoring visit?	….	
304	Was it within the last 6 months or more than 6 months ago?	1. Within the last 6 months 2. More than 6 months ago	

SN	Questions	Response Category	Remarks
305	During the past 6 months, how frequently has this facility received a visit from supervisory/ monitoring authorities?	1. Randomly/no routine 2. Weekly 3. Monthly 4. Every two months 5. Once in three months 6. Once in four months 7. Others (please specify)	
306	The last time during the past 6 months that a supervisor from outside the facility visited, did he or she do any of the following:		
307	Use a checklist to assess the quality of available health services data?	1. Yes 2. No 3. Don't know	
308	Discuss performance of the facility based on available health services data?	1. Yes 2. No 3. Don't know	
309	Help the facility make any decisions based on available health services data?	1. Yes 2. No 3. Don't know	
310	Did she/he prepare an action plan or a follow up plan?	1. Yes 2. No 3. Don't know	
311	Does this facility have routine facility management meetings (staff meeting)	1. Yes 2. No	
312	How frequently do these facility management meeting take place?	1. Monthly or more frequently 2. Once every 2-3 months 3. Once every 4-6 months 4. Less frequently than every 6 months 5. Don't know	
313	Does the facility maintain official records of facility management meetings?	1. Yes 2. No, records not maintained	
314	Did the facility make any action plan based on what was discussed at the last meeting and covered in this report?	1. Yes 2. No 3. Don't know	

SN	Questions	Response Category	Remarks
316	Has the facility taken any follow-up action regarding the decisions made during the last meeting?	1. Yes 2. No 3. Don't know	
317	Does this facility routinely carry out quality assurance activities? For example, facility-wide review of mortality, or periodic audit of registers or Minimum Service Standards (MSS).	1. Yes 2. No 3. Don't know	
318	Is there an official record of any quality assurance activities carried out during the last fiscal year?	1. Yes 2. No	
319	Do you have the quality assurance guidelines?	1. Yes 2. No 3. Don't know	
320	Do you have copy of Minimum Service Standards (MSS)?	1. Yes 2. No 3. Don't know	
321	Did you conduct MSS assessment in last fiscal year?	1. Yes 2. No 3. Don't know	
322	If yes then, What was the score of last assessment?	1. Less than 50% 2. 50-70% 3. 70-85% 4. 85-100%	Less than 50%
323	Do you have a quality assurance action plan?	1. Yes 2. No 3. Don't know	

4. Management Functions of the Health Facility/HFOMC

SN	Questions	Response Category	Remarks
401	Does this facility have a health facility Operation (HFOMC) and management committee?	1. Yes 2. No 3. Don't know	
402	Did the management committee (HFOMC) received orientation?	1. Yes 2. No 3. Don't know	
403	Are there any routine meetings about facility activities or management issues that include both facility staff and community members?	1. Yes 2. No 3. Don't know	

SN	Questions	Response Category	Remarks
404	How frequently are routine meetings held with both facility staff and community members?	1. Monthly or more frequently 2. Every 2-3 months 3. Every 4-6 months 4. Less frequently than every 6 months 5. Don't know	
405	Was the management committee (HFOMC) meeting held in last 3 months?	1. Yes 2. No	Check the meeting minute from the last 6 months
	How many members are there in total 1. Total 2. Male 3. Female		
406	Does this facility have HFOMC guidelines (2075)?	1. Yes 2. No 3. Don't know	
407	Does this health facility have a citizen charter?	1. Yes, clearly readable 2. Yes, but not clearly readable 3. No	
408	Where is the citizen charter placed?	1. Outside the building – visible place 2. Outside building – not visible place 3. Inside building-visible place 4. Inside building-not visible place	
409	Does this health facility have a complaint box?	1. Yes, easily accessible 2. Yes, difficult to access 3. No	
410	Where is the complaint box placed?	1. Outside building 2. Inside building	

SN	Questions	Response Category	Remarks
411	Does this health facility have a social map?	1. Yes, clearly readable 2. Yes, but not clearly readable 3. No	
412	Where is the social map placed?	1. Outside the building – visible place 2. Outside building – not visible place 3. Inside building- visible place 4. Inside building- not visible place	
413	Does the health facility have notice board?	1. Yes 2. No	
414	Where is the notice board placed?	1. Inside the building 2. Outside the building	
415	Does this facility have any system for collecting clients' opinions / feedback about the health facility or its services?	1. Yes 2. No	
416	Please tell me all the methods that this facility uses to A elicit client opinion / feedback. (Multiple response questions)	1. Suggestion box 2. Client survey form 3. Client interview form 4. Official meeting with community leaders 5. Informal discussion with clients or the community 6. Email 7. Letters from client/ community 8. Others (please specify) 9. Don't know	
417	Is there a procedure for reviewing or reporting on clients' opinion / feedback?	1. Yes 2. No 3. Don't know	

5. Information Management System

SN	Questions	Response Category	Remarks
501	Does this facility use HMIS recording registers?	1. Yes 2. No	
502	Does this facility practice electronic/online reporting (DHIS 2)?	1. Yes 2. No	
503	Does this facility have a designated person, who is responsible for health services data reporting in this facility?	1. Yes 2. No	
504	Has the responsible person for health services data reporting received formal training on recording and reporting?	1. Yes 2. No 2. Don't No	
506	Does this health facility have a copy of the "HMIS Indicators 2070" booklet available in this facility?	1. Yes 2. No	
507	Did this health facility do routine data quality assessment (RDQA) in last one year?	1. Yes 2. No	
508	Has this health facility displayed updated key health services data in the health facility premises in a visible place for the public?	1. Yes 2. No	
509	Does this facility have a system in place to regularly manage health LMIS data?	1. Yes 2. No	
510	Is the designated person formally trained on logistic management?	1. Yes 2. No 3. Don't No	
511	Do this health facility use eLMIS system	1. Yes 2. No 2. Don't No	
512	If yes, is the designated person trained on eLMIS	1. Yes 2. No	
513	Which logistic supply system does this facility practice?	1. Pull system 2. Push system 3. Both	

6. Human Resources

SN	Questions	Response Category	Remarks
601	Is there a health care worker present at the facility at all times, or officially on call for the facility at all times (24 hours a day) for emergencies?	1. Yes, 24 hrs staff. 2. No, 24 hrs staff	

For each of the following position, please write the answer in appropriate column. Note: Positions with (*) mark are not applicable for Health Post and (**) marks are not applicable for PHCC and below. If the position is not applicable for a particular facility, circle '97' and skip to the next position.

Position	1. No. Sanctioned	2. No. filled-in	3. Number currently working			4. Available 24 hours on duty (at least one person)		5. Not applicable	6. Remarks
			3.1 Govt.	3.2 HFOMC/ Ward	3.3 Other sources	Yes	No		
5. Sr./ Medical Officer*						1	2	97	
6. ASBA trained doctor *									
7. Public Health Officer									
8. Public Health Inspector						1	2	97	
9. Sr./ Staff Nurse						1	2	97	
10. SBA trained staff nurse*						1	2	97	
11. Sr./Health Assistant						1	2	97	
12. Sr./Auxiliary Health Worker						1	2	97	
13. Sr./Auxiliary Nurse Midwife						1	2	97	
14. SBA trained ANM						1	2	97	
17. Lab Technician/Lab assistant *						1	2	97	
18. Radiologist/X-ray Technician **						1	2	97	
19. Pharmacist **						1	2	97	
20. Medical Recorder **						1	2	97	
21. Accountant** *						1	2	97	
22. Office assistant						1	1	97	
23. Cleaner						1	1	97	
24. Store Keeper						1	1	97	

SN	Questions	Response Category	Remarks
602	In your current position, and as a part of your work for this facility, do you personally do any HMIS,eLMIS related work?	1. Yes 2. No	
603		Yes, within past 24 months	Yes, over 24 months ago
604	HMIS online reporting		
605	eLMIS training		
606	Basic Logistic training		
607	Revised HMIS or reporting		

7. Basic amenitie

Domain	SN	Tracer Item	Response
Basic Amenities	A	Power (electricity OR solar power OR generator)	1. Available and functional 2. Available but nonfunctional 3. Not available
	B	Running water source in facility premises	1. Available and functional 2. Available but nonfunctional 3. Not available
	C	Computer	1. Available and functional 2. Available but nonfunctional 3. Not available
	D	Internet facility	1. Available and functional 2. Available but nonfunctional 3. Not available
	E	Data backup system	1. Available and functional 2. Available but nonfunctional 3. Not available
	F	Email services	1. Available and functional 2. Available but nonfunctional 3. Not available
	G	Own building	1. Yes 2. No
	H	Room with auditory and visual privacy for patient consultations	1. Available and functional 2. Available but nonfunctional 3. Not available
	I	Toilet for Clients	1. Available and functional 2. Available but nonfunctional 3. Not available
	J	Means of Communication (telephone, mobile)	1. Available and functional 2. Available but nonfunctional 3. Not available

Domain	SN	Tracer Item	Response
	K	Emergency Transport (Stretcher, ambulance, etc)	1. Available and functional 2. Available but nonfunctional 3. Not available
	1.	Available and functional	1. Available and functional 2. Available but nonfunctional 3. Not available

8. Basic Supplies and Equipment

			Available			Functioning		
			Observed	Reported Not seen	Not available	Yes	No	DK
Basic Equipment	A	Adult weighing scale	1	2	3	1	2	98
	B	Salter Scale	1	2	3	1	2	98
	C	Digital Thermometer	1	2	3	1	2	98
	D	Stethoscope	1	2	3	1	2	98
	E	BP instrument	1	2	3	1	2	98
	F	Examination light (Flashlight OK)	1	2	3	1	2	98
	H	Delivery bed	1	2	3	1	2	98
	I	Delivery pack [5]	1	2	3	1	2	98
	J	Neonatal bag and mask	1	2	3	1	2	98
	K	Partograph [6]	1	2	3	1	2	98
	L	Manual vacuum extractor	1	2	3	1	2	98
	M	Vacuum aspiration kit (MVA kit) [7]	1	2	3	1	2	98
	N	Wheelchair	1	2	3	1	2	98

[5] *Either the facility has a sterile delivery pack available at the delivery site or else all of the following individual equipment must be present: cord clamp, episiotomy scissors, scissors (or blade) to cut cord, suture material with needle, and needle holder and 4-piece wrapper.*

[6] *A blank partograph at the service site*

[7] *Facility has a functioning vacuum aspirator or else MVA kit available*

9. Infrastructure, Equipment and Supplies in the Birthing Center

SN	Basic Requirement	Minimum Required Number	Available status	Available as per guideline
A	Physical Infrastructure			
	At least three rooms (one pre-natal, one delivery and another postnatal	3		
	Examination room/nursing station (As per the standards of Management Division	1		
	Antenatal/postnatal room containing 2 beds with water proof mattress and pillow	1		
	Labour room with 24 hour electricity and water supply (back up)	1		
	Toilet for staffs and clients	2		
	Placenta pit	1		
	Delivery/labor room	1		
	Bedside tools/bench for visitors	2		
	Bedside locker	3		
	Staff room/corner	1		
	Table	1		
	Chair	3		
	Wooden rack (pigeon hole)	1		
	Steel cupboard	1		
	Water tank (at least 1000 liter capacity)	1		
	24-hour supply of electricity			
	24-hour water supply			
B	Equipment and Instruments for Delivery Room			
	Delivery bed with water proof mattress and pillow	1		
	Delivery set	3		
	Episiotomy set	2		
	Cervical tear repair set	1		
	Foot step	1		
	Mattress (waterproof rexin) and pillow	1		
	Sunmica covered wooden table	1		
	Suction Machine for mother	1		
	Suction tube (disposable) big and small size	1		
	Baby Suction with disposable suction tube	20		
	Oxygen Cannula and Mask (big and small size)	11/		
	IV stand	1		
	Peri light	1		
	Oxygen cylinder	2		
	BP instruments	1 set		
	Stethoscope	1		
	Silver fetoscope	1		

SN	Basic Requirement	Minimum Required Number	Available status	Available as per guideline
	Measuring tape	1		
	Emergency drug cupboard	1		
	Cheatle forceps with jar	2		
	Instrument trolley	1		
	Drums big size - 3 and small size - 2	5		
	Vacuum set	1		
	MVA set	1		
	MRP set	1		
	Wall clock			
	Resuscitation bag and mask (baby size - 0 -1)	1		
	Resuscitation table with water proof mattress	1		
	Resuscitation set	1		
	Baby blanket	2		
	Dust bins	3		
	Linen			
	Bed sheet and pillow case	6 pc each		
	Makintosh (1.5X1.5 meter)	6		
	Bed screen	1		
	Plastic Appron	3		
	Gum boot	2 pairs		
	Slippers	3 pairs		
	Torch light	1		
	Suture set	1		
C	Equipment and Instruments for New Born Care			
	Cord clamp	2		
	Baby wrapper	12		
	Digital pan weighing machine	1		
	Resuscitation table with wrapper	1		
	Room thermometer	1		
	Baby stethoscope	1		
	Penguin suction	2		
	Bag and mask (2 size mask 0 -1)	2		
	Identification tag	4		
	Sterile gloves	1 box		
	1 ml syringe	1 box		
	KMC wrapper	4 m cloth		
	Room heater	1		
	Glucometer	1 with stripe		
D	Materials for Infection Prevention			
	Bata for chlorine (red, green, blue) - 10L	3		

SN	Basic Requirement	Minimum Required Number	Available status	Available as per guideline
	Plastic jug 1 liter	1		
	Virex solution	10		
	Autoclave machine medium size	1		
	Bucket with cover for carrying placenta	1		
	Bucket for collection of waste	4		
	Puncture proof container	2		
	Plastic bucket with tap	1		
	Momo pot (two-layer boiler)	1		
E	Drugs and Utilities			
	Inj Oxytocin 10 IU	30 amp		
	Inj Ergomertrin	5 amp		
	Cap. Nifedipine 5 mg, 10 mg	5 strip		
	Inj Magnesium sulphate (50%)	50 amp		
	Inj Calcium glunate	5 amp		
	Inj Xylocaine 1%	5 vial		
	Inj Adrenaline	5 amp		
	Inj Dexamethasone	5 amp		
	Inj Gentamycin 40 mg	5 vial		
	Cholrhexidine Gel 4%	100		
	Vitamin K1 injection	1		
	Syringe 20cc-5, 10cc-10, 5cc-20, 3 cc-30	65		
	Inj RL-10, NS-10, DNS-5, Dextrose-5	30		
	IV set	10		
	IV canula-16 gauze-5/18 guaze-5	10		
	Butterfly canula	20		
	Foleyes catheter - 3, plain catheter - 5	8		
	Urobag	3		
	Surgical gloves	1 box		
	Gloves utility	3 pairs		
	Examination gloves	2 box		
	Chromic catgut no 1,3/8th circle needle	10 pcs		
	Cotton big roll	3 roll		
	Gauze	3 thaan		
F	New Born Emergency Kit	1		
	10% dextrose normal saline			
	Inj Ampicillin			
	Inj Gentamycin			
	Phenobarbitone			
	IV Canula 24F			
	Syringe 5 ml/10 ml			

11. Service Delivery
11. Antenatal Care

SN	Questions	Response Category	Remark
1101	Are antenatal care services available in this health facility?	1. Yes 2. No 2. Don't No	
1102	How many days in a month are antenatal care services offered at this facility? USE A 4-WEEK MONTH TO CALCULATE # OF DAYS	NUMBER OF DAYS/MONTH….	
1103	How many days in a month are ANC specific PHC outreach clinic conducted from this facility? Use a 4-week moth to calculate # of days		
1104	Do ANC provider provide any of the following services to pregnant women as part of the routine ANC?		
1104_a	Iron supplements	1. Yes 2. No	
1104_b	Folic acid supplementation	1. Yes 2. No	
1104_c	Tetanus Diphtheria vaccination	1. Yes 2. No	
1104_d	Albendazole	1. Yes 2. No	
1104_e	Misoprostol/ Matri Surakchyya Chakki	1. Yes 2. No	
1104_f	Combined iron and folic acid	1. Yes 2. No	
1104_g	Calcium	1. Yes 2. No	
1104_h	CHX(Navi malam)	1. Yes 2. No	
1105	Are vaccinations provided in this health facility?	1. Yes 2. No	

SN	Questions	Response Category	Remark
1106	How many days in a month is Td vaccination provided through outreach from this facility? USE A 4-WEEK MONTH TO CALCULATE # OF DAYS	Number of days/months	
1107	Is tetanus diphtheria vaccination available on all days that ANC services are available in this facility?	1. Yes 2. Not all ANC Days	
1108	Do ANC providers in this facility provide any of the following tests from this site to pregnant women / clients as part of ANC? IF YES, ASK TO SEE THE TEST KIT OR EQUIPMENT. IF TEST NOT DONE IN ANC, PROBE TO DETERMINE IF THE TEST IS DONE ELSEWHERE IN THE FACILITY CHECK TO SEE IF AT LEAST ONE TEST KIT OF EACH TEST IS VALID/ UNEXPIRED		
1111	As part of ANC services, please tell me if providers in this facility provide the following services to ANC clients		
1111_a	Counseling on recommended minimum of 8 ANC visits for each pregnancy	1. Yes 2. No	
1111_b	Counseling on birth preparedness or preparation for delivery	1.	
1111_c	Counseling about family planning	1. Yes 2. No	
1111_d	Counseling about HIV/AIDS	1. Yes 2. No	
1111_e	Counseling about use of LLIN to prevent mosquito bites and malaria	1. Yes 2. No	
1111_f	Counseling about breastfeeding	1. Yes 2. No	
1111_g	Counseling about newborn care	1. Yes 2. No	

		Observed Available		Not observed		
		At least one valid	Available none valid	None available today	No, never available	Available elsewhere in facility
1109_a	Urine protein test	1	2	3	4	5
1109_b	Urine glucose test	1	2	3	4	5
1109_c	Hemoglobin test	1	2	3	4	5
1109_d	Syphilis rapid diagnostic test	1	2	3	4	5
1109_e	Blood glucose test	1	2	3	4	5
1109_f	Blood grouping	1	2	3	4	5
1109_g	Urine pregnancy test	1	2	3	4	5
1109_h	HIV test					

SN	Questions	Response Category	Remark
1111_h	Counseling on postnatal care visits	1. Yes 2. No	
1111_i	Counseling on danger signs	1. Yes 2. No	
1111_j	Counseling about nutrition	1. Yes 2. No	
1112	What do ANC providers in this facility do if client has pregnancy related complications like pregnancy induced hypertension, APH, eclampsia?	1. Identify manage 2. Identify and refer 3. Identify, manage and refer 4. Unable to identify complication	
1113	Do ANC providers in this facility diagnose and treat suspected STIs,	1. Diagnose and treat STIs 2. Diagnose but refer elsewhere for treatment 3. Refer elsewhere in facility for diagnosis and treatment 4. Refer outside facility for diagnosis and treatment 5. No diagnosis/ treatment/referral	
1114	Do ANC providers in this facility diagnose and treat suspected or are suspected HIV clients referred to another provider or location for diagnosis and treatment?	1. Diagnose and treat STIs 2. Diagnose but refer elsewhere for treatment 3. Refer elsewhere in facility for diagnosis and treatment 4. Refer outside facility for diagnosis and treatment 5. No diagnosis/ treatment/referral	
1115.	ANC services more		

SN	Questions	Response Category	Remark
1115_a	Weighing of clients	1. Activity observed 2. Activity reported not seen 3. Activity not routinely done 4. Don't know	
1115_b	Taking blood pressure	1. Activity observed 2. Activity reported not seen 3. Activity not routinely done 4. Don't know	
1115_c	Conducting health education/counselling	1. Activity observed 2. Activity reported not seen 3. Activity not routinely done 4. Don't know	
1115_d	Urine test for protein	1. Activity observed 2. Activity reported not seen 3. Activity not routinely done 4. Don't know	
1115_e	Blood test for anemia	1. Activity observed 2. Activity reported not seen 3. Activity not routinely done 4. Don't know	
1115_f	Malaria rapid diagnostic testing	1. Activity observed 2. Activity reported not seen 3. Activity not routinely done 4. Don't know	
1115_g	HIV testing and counseling (HTC) for pregnant women	1. Activity observed 2. Activity reported not seen 3. Activity not routinely done 4. Don't know	
1115_h	Measuring client's height	1. Activity observed 2. Activity reported not seen 3. Activity not routinely done 4. Don't know	
1115_i	Ultrasound	1. Activity observed 2. Activity reported not seen 3. Activity not routinely done 4. Don't know	

12. Delivery and Newborn Care

SN	Questions	Response Category	Remarks
1201	Does this health facility have delivery and newborn care services?	1. Yes 2. No	
1202	Is a person skilled in conducting deliveries present at the facility today or on call at all times (24 hours a day), including weekends, to provide care? Specifically, I am referring to Gynecologist and Obstetrician, MD in General Practice (GP), Medical Officers, Nurses, Auxiliary Nurse Midwives and Midwives	1. Yes 2. No	
1203	Is there a duty schedule or call list for 24-hr staff assignment?	1. Yes 2. No	
1204	May I see a duty schedule or call list for 24-hr staff assignment?	1. Observed 2. Reported, not seen	
1205	Do you have the national medical standard volume III available in the service site? (NMS Vol III)	1. Yes 2. No	
1207	Do you have EOC job aid?	1. Yes 2. No	
1208	May I see the EOC job aid?	1. Observed 2. Reported, not seen	
1209	Does this facility have newborn corner?	1. Yes 2. No	
1210	Does this facility practice Kangaroo Mother Care for low-birth-weight babies?	1. Yes 2. No	
2111	Is there a separate room or space for Kangaroo Mother Care or is it integrated into the main postnatal ward?	1. Yes, separate room 2. No, integrated	
1212	Do providers of delivery services in this facility use partograph to monitor labor and delivery?	1. Yes 2. No use of partograph	
1213	Are partographs used routinely (for all cases) or selectively (only for some cases) to monitor labor and delivery in this facility?	1. Routinely 2. Selectively	

SN	Questions	Response Category	Remarks
1214	May I see partograph filled for last delivery case?	1. Observed 2. Reported, not seen	
1215	How many dedicated functional maternity beds are available in this facility?	1. Number of dedicated maternity beds…… 2. Don't know	
1216	How many functional dedicated delivery beds are available in this facility?	1. Number of dedicated maternity beds…… 2. Don't know	
1217	When does this facility usually discharge the mother after normal delivery?	1. After 24 hours 2. Before 24 hours	
1218	What are the reasons of discharging normal delivery before 24 hours?	1. Have limited beds 2. Clients don't want to stay for 24 hours 3. Overload of the cases 4. Others (please specify)	
1219	Does the facility conduct regular review all maternal or newborn deaths (MPDSR)?	1. Yes 2. No, does not participate	
1220	May I see the maternal/new born death form (MPSDR)?	1. Observed 2. Reported, not seen	
1221	Are reviews done for mothers only, newborns only, or both mothers and newborns (MPDSR)?	1. For mothers only 2. For newborns only 3. For both mothers and newborns	
1222	How often are reviews of maternal deaths done (MPDSR)?	1. Every week….. 2. Only when the cases occur 3. Don't know	

SN	Questions	Response Category	Remarks
1223	Following a maternal death, how much time elapses before a maternal death review is done?	1. Within 72 hours 2. After 72 hours 3. Varies from case to case 4. Don't know	If 2or3, go to
1224	How often are reviews of perinatal deaths done?	1. Every week (…..) 2. Only when case occurs 3. Always with maternal reviews 4. Don't know	

13. Postnatal Care

1301	Does this facility provide PNC services to mothers and new-born?			
	1st visit within 24 hours (y/n)	2nd visit: Day 3 (48–72 hours) (y/n)	3rd visit between 7-14 days (y/n)	4th visit in 42nd days (y/n)
		…	…	..
1302	What type of services are provided to Post partum mothers?	....	Please describe the PNC services that are provided to mothers and newborn in three episodes.	

14. Staff Training Status (Ask with service provider only)

SN	Questions	Response Category			Remarks
1401	In your current position, and as a part of your work for this facility, do you personally provide any antenatal care or postnatal care services? If Yes, probe and indicate which services are provided	1. Yes, postnata 2. Yes, antenatal 3. Yes, both 4. No, neither			
1402	Have you received any in-service training, training updates or refresher training on topics related to antenatal care or postnatal care?	1. Yes 2. No			
1403	Have you received any in-service training, training updates or refresher training in any of the following topics? If YES, was the training, training updates or refresher training within the past 24 months or more than 24 months ago?				
		Yes, within past 24 months	Yes, over 24 months ago	No, in-service training or updates	
1404_a	ANC screening (e.g. blood pressure, urine glucose and protein)	1	2	3	
1404_b	Counseling for ANC (e.g. nutrition, FP and newborn care)	1	2	3	
1404_c	Complications of pregnancy and their management	1	2	3	
1404_d	Nutritional assessment of the pregnant woman, such as Body Mass Index calculation	1	2	3	
1404_e	Other training on ANC or postnatal care (specify)	1	2	3	

SN	Questions	Response Category			Remarks
1405	In your current position, and as a part of your work for this facility, do you personally provide any services that are specifically geared toward preventing mother-to-child transmission of HIV? IF YES, ASK: Which specific services do you provide? INDICATE WHICH OF THE LISTED SERVICES ARE PROVIDED AND PROBE: Anything else?	1. Preventive counseling 2. HIV test counseling 3. Conduct HIV test 4. Provide ARV to mother 5. Provide ARV to infant 6. No PMTCT services			
1406	Have you received any in-service training, training updates or refresher training on topics related to maternal and/or newborn health and HIV/AIDS?	1. Yes 2. No			
1407	Have you received any in-service training, training updates or refresher training in any of the following topics [READ TOPIC] IF YES: Was the training, training update or refresher training within the past 24 months or more than 24 months ago?				
1408	Prevention of mother-to-child transmission (PMTCT) of HIV	Yes, within past 24 months	Yes, over 24 months ago	No, in-service training or updates	

SN	Questions	Response Category			Remarks
1409	In your current position, and as a part of your work for this facility, do you personally provide delivery services? By that I mean conducting the actual delivery of newborns?	1. Yes 2. No			
1410	How long have you been providing delivery services?	Months….			
1411	During the past 6 months, approximately how many deliverables have you conducted as the main provider (include deliveries conducted for private practice and for facility?	Total deliveries			
1412	When was the last time you used a partograph?	1. Never 2. Within past week 3. Within past month 4. Within past 6 months 5. Over 6 months ago			
1413	Have you received any in-service training, training updates or refresher training on topics related to delivery care?	1. Yes 2. No			
1415	Have you received any in-service training, training updates or refresher training in any of the following topics? If YES, was the training, training updates or refresher training within the past 24 months or more than 24 months ago?				

SN	Questions	Response Category			Remarks
		Yes, within past 24 months	Yes, over 24 months ago	No, in-service training or updates	
1415_a	SBA Integrated Management of Pregnancy and Childbirth (IMPAC)	1	2	3	
1415_b	ASBA Comprehensive Emergency Obstetric Care (CEmOC)	1	2	3	
1415_c	Routine care during labor and normal vaginal delivery	1	2	3	
1415_d	Active Management of Third Stage of Labor (ASTSL)	1	2	3	
1415_e	MNH Update Emergency obstetric care (EmOC)/ Lifesaving skills (LSS) – in general	1	2	3	
1415_f	Post abortion care (PAC)	1	2	3	
1415_g	Special delivery care practices for preventing mother-to-child transmission of HIV	1	2	3	
1415_h	Comprehensive abortion care (CAC) by MVA	1	2	3	
1415_i	Medical abortion (MA)	1	2	3	
1415_j	Other training on delivery care (please specify)	1	2	3	
1416	Have you received any in-service training, training updates or refresher training on topics related to newborn care?	1. Yes 2. No			
1417	Have you received any in-service training, training updates or refresher training in any of the following topics?				
	Topics	Yes, within past 24 months	Yes, over 24 months ago	No, in-service training or updates	

SN	Questions	Response Category			Remarks
1417_a	Neonatal resuscitation using bag and mask	1	2	3	
1417_b	Early and exclusive breastfeeding	1	2	3	
1417_c	Newborn infection management (including injectable antibiotics)	1	2	3	
1417_d	Thermal care (including immediate drying and skin-to-skin care)	1	2	3	
1417_e	Sterile cord cutting and appropriate cord care	1	2	3	
1417_f	Kangaroo Mother Care (KMC) for low-birth-weight babies	1	2	3	
1417_g	Specialized Newborn Care	1	2	3	
1417_h	Other training on newborn care (specify)	1	2	3	

15. Infection Prevention Control Practices

SN	Requirements	Minimum Standard (MS)	MS Met (Y/N)		
A	Training and Protocols on IPC	▪ Is there an IPC protocol?	1. Yes 2. No		
		▪ Are health worker/office assistant trained on IPC measures?	1. Yes 2. No		
B	Health facility entrance (Observe first, if not possible, then ask the most appropriate personnel of the health facility)		**Observed**	**Reported not seen**	**Not available**
		Alcohol based hand rub	1	2	3
		Colour coded plastic bins			
		Disposable latex gloves	1	2	3
		Disinfectant (Chlorine, Alcohol)	1	2	3
		for floor	1	2	3
		Surgical masks	1	2	3

		Gowns/Aprons	1	2	3
		Needle destroyer	1	2	3
		Eye Protection (Goggles or face protection)	1	2	3
		Needle cutter	1	2	3
		All persons visiting the facility (staffs, patients, visitors) only allowed entry after performing hand hygiene (hand washing)?	1	2	3
			Observed	**Reported not seen**	**Not available**
		Functioning hand hygiene station (soap and sufficient water for hand hygiene)?	1	2	3
		Bin with lid at entrance	1	2	3
		Adequate signage on IPC measures,	1	2	3
		Educational posters on hand washing	1	2	3
		Educational posters on mask use	1	2	3
		Education poster on respiratory hygiene	1	2	3
C					
	Environmental cleaning	Surface are cleaned and disinfected regularly (floors, desk, chair) (everyday)?	1	2	3
		Toilet facilities are clean	1	2	3
		Sufficient water for flushing toilets	1	2	3
		Waste is stored and disposed of according to protocol?	1	2	3

16. Public Health Emergencies

SN	Questions	Response category	Remarks
1601	Does this facility have dedicated triage room/ area?	1. Yes 2. No	
1602	Does this facility have isolation room for infectious diseases?	1. Yes 2. No	
1603	Does this facility have Rapid Response Team?	1. Yes 2. No	
	How many members are trained	….	

17. Lab Services

	Laboratory Equipment (E category Lab) (if lab service is available)			
	Centrifuge			
	Colorimeter			
	Water bath			
	VDRL shaker			
	Hot air oven			
	Incubator			
	Micropipettes			
	DC Counter			
	Refrigerator			
	Power backup			
	Khan tubes			
	Test tubes			
	Petridishes			
	Disposable syringes			
	Vacutainers			
	Gloves			
	Masks			

Annex 3: Topic Guides for Key Informants and Focus Group Discussion Guides

3.1 Topic Guide for Policymakers, Planners, Program Managers at Palika level, District Health Office, and Provincial Health Office/Ministry of Health/Social Development

1. **Could you please describe the current situation of maternal and newborn health services in your Provinces/District/Palika/ Health facility? How do you see the access and utilization of birthing center?**

कृपया तपाईको मातहत रहेका प्रदेशर जिल्लार पालिकामा मातृ तथा नवजात शिशु स्वास्थ्य सेवाको वर्तमान अवस्था कस्तो छ बताई दिनुहोस ?प्रसुती केन्द्रहरुबाट उपलब्ध प्रसुति सेवामा पहुच र यसको उपयोगीताको अवस्था कस्तो छ ?

Probe: Access and utilization of ANC-checkup, institution delivery, and PNC checkup for post-partum mothers and newborn

(तपाइको मातहत रहेका प्रसुती केन्द्रहरुमा गर्भवती जाच सेवा, संस्थागत प्रसुति सेवा र सुत्केरी जांच सेवा र नवजात शिशु स्वास्थ्य सेवाको पहुच र उपयोगीता कस्तो छ ?)

If the birthing centers in the Palika/district/province have low utilization of delivery services, what are the reasons? What can be done to improve access and utilization of MNH services at birthing centers?
(यदी सुरक्षित प्रसुति सेवा को उपयोगीतामा कमी छ भने के के कारणहरु हुन सक्छन् ? प्रसुति सेवाको पहुच र उपयोगीतामा वृधी गर्न के के सुधार गर्न सकिन्छ होला?) यसका लागि तपाईंको संस्थाबाट के कस्ता पहलहरु भएका छन् ?

2. **What policy frameworks, strategic plans, and programs are currently in place to support maternal and newborn health services in birthing centers?**

Probe: Local, district, provincial, and federal level policies; innovative programs or strategies being implemented; any recent policy changes or initiatives
तपाईको मातहत रहेका प्रदेशर जिल्ला र पालिकामा मातृ तथा नवजात शिशु स्वास्थ्य सेवाको गुणस्तर वृधी गर्न निती, योजना, कार्यक्रम तथा नवीन प्रयासहरु भएका छन् रु

3. **What is the status of service availability and readiness for essential MNH care in birthing centers of your Palika/district/province?**
प्रसुति केन्द्रबाट प्रदान गरी मातृ तथा नवजात शिशु स्वास्थ्य सेवाको उपलब्धता र तयारीपनको अवस्था के छ ?

Probe: Human resources availability, training status, equipment, medicine, infrastructures, infection prevention and control, etc.
(जनशक्तिको उपलब्धता, तालिमको अवस्था, कोचिंग/मेन्टरिंग, सामाग्री, औषधी, भौतिक संरचना, संक्रमण नियन्त्रण आदीको अवस्था)

Probe: If there are not adequate infrastructures, supply and human resources, how are the services managed? Support from municipality, provinces, other NGOs etc.

(यदी प्रयाप्त मात्रामा तालिम प्राप्त जनशक्ती, भौतिक पुर्वाधार,औषधी उपकरण उपलब्ध छैन भने कसरी सेवाको व्यवस्थापन गर्नुभएको छ ? तपाईको संस्थाले प्रसुति केन्द्रको मातृ तथा नवजात शिशु स्वास्थ्य सेवाको गुणस्तर वृद्धी गर्न के कस्ता आर्थिक तथा प्राविधिक सहयोग गर्नुभएको छ ? अन्य संस्थाहरुको पनि कस्तो सहकार्य रहे का छ ?

4. How do you ensure the quality of services provided for MNH care in birthing centers?

(प्रसुति केन्द्रबाट प्रदान गरीएको मातृ तथा नवजात शिशु स्वास्थ्य सेवाको गुणस्तर सुनिश्चित कसरी गर्नुहुन्छ ?)

Probe: Supervision and monitoring mechanisms; quality assurance protocols; frequency of supervisory visits; documentation and reporting systems; Bi-annual assessment of Minimum Service Standards and preparation of action plan based on this, review of service in the health facilities

तपाईको मातहत रहेका प्रसुती केन्द्रहरुमा अर्धवार्षिक रुपमा न्युनतम सेवा मापदण्डको आधारमा मुल्याकंन गर्ने र कार्ययोजना बनाउने, स्वास्थ्य संस्थामा सेवाको समिक्षा गर्ने, नगरपालिका, जिल्ला, प्रदेश र संघबाट अनुगमन गर्ने)

Implementation of coaching and mentoring initiatives for birthing center staff;other approaches to capacity building

5. Could you describe the status of Maternal and Perinatal Death Surveillance and Response (MPDSR) implementation in your area?

Probe: MPDSR committee formation and functionality; death review process; response mechanisms; challenges in implementation; recommendations for improvement

तपाईंको क्षेत्रमा मातृ तथा नवजात शिशु मृत्यु अनुगमन र प्रतिक्रिया (MPDSR) कार्यान्वयनको अवस्थाको बारेमा बताईदिनुहोस ?

- MPDSR समिति गठन र कार्यक्षमता
- मृत्यु समीक्षाको प्रक्रिया
- प्रतिक्रिया संयन्त्रहरु
- कार्यान्वयनका चनौतीहरु
- सुधारका लागि सिफारिसहरु

6. What are the key barriers both supply side and demand side in improving MNH services?

(माातृ तथा नवजात शिशु स्वास्थ्य सेवाको अवस्था सुधार गर्नकोलागि स्वास्थ्य संस्थास्तर (आपुर्ति पक्ष) र समुदाय स्तरमा माग पक्षमा) के कस्ता अवरोध तथा चुनौतीहरु छन ?)

Probe: Supply side barriers: lack of delivery service 24 hours, regular services of ANC checkup, lab testing facilities, referral challenges service load, non-availability of required medicine, staff etc.?

(स्वास्थ्य संस्था स्तर: २४ सै घण्टा प्रसुती सेवा उपलब्ध नहुनु, नियमित गर्भवती जांच सेवा उपलब्ध नहुनु, प्रयोगशाल सेवा उपलब्ध नहुनु ,प्रेषण सेवामा समस्या, आवश्यक औषधीहरुको उपलब्धता नहुनु, दक्ष जनजशक्तिको अभाव आदी)

How are you addressing these barriers? (यी अवरोधहरुलाई कसरी सम्बोधन गरीरहनु भएको छ ?)

Demand side barriers: lack of Awareness, mother's group meeting, lack of transportation, birth preparedness, FCHVs training lack etc.
(समुदाय स्तर(माग पक्षका) अवरोधहरु: सचेतानाको कमी, स्वास्थ्य आमा समुहको बैठक नवस्ने साथै नियमीत छलफल नर्गने, यातायातको अभाव, जन्मपुर्वको तयारी नहुनु, सामुदायीक महिला स्वास्थ्य स्वयंसेविकाहरुलाई तालिमको अभाव आदी)

7. What are the enablers in improving MNH services?
(मातृ स्वास्थ्य सेवाको सुधारका लागि सहयोगी तत्वहरु के के छन ?)

Probe: MNH incentives, community home visits, MNH awareness, Palika initiatives, Provincial initiatives
(मातृ स्वास्थ्य सेवाको लागि प्रोत्साहन भत्ता, सामुदायीक घरभेट कार्यक्रम, मातृ तथा नवजात शिशु स्वास्थ्य सेवाको बारेमा जनचेतना, पालिकाहरुले गरेका नयां सुरुवातहरु आदी)

8. What opportunities and challenges do you see in improving quality and coverage on MNH care in birthing centers?
(प्रसुति केन्द्रहरुमा मातृ तथा नवजात शिशु स्वास्थ्य सेवाहरुको गुणस्तर र यसको पहुच अभिवृधी गर्नको लागि के कस्ता अवसर र चुनौतीहरु देख्नुहुन्छ ?

9. What can be done in improving birthing center services in your area? Please suggest.
(तपाईको पालिका वा जिल्ला, वा प्रदेशमा प्रसुति केन्द्रहरुको मातृ तथा नवजात शिशु स्वास्थ्य सेवाहरुको गुणस्तर र यसको पहुच अभिवृदी गर्नका लागि के के गर्न सकिन्छ?

3.2 Topic Guide for Health Section Chief at Palika, Chief of Health Office at District/Public Health Nurse/Health Post In charge, Skilled Birth Attendant

1. Could you please describe the current situation maternal and newborn health services in your Palika/district/health facility? How do you see the access and utilization of birthing center?
(कृपया तपाईको जिल्लारपालिकारस्वास्थ्य संस्थामा मातृ तथा नवजात शिशु स्वास्थ्य सेवाको वर्तमान अवस्था कस्तो छ बताई दिनुहोस? प्रसुति सेवामा पहुच र यसको उपयोगीताको अवस्था कस्तो छ ?

Probe: Access and utilization of ANC-checkup, institution delivery, and PNC checkup for post-partum mothers and newborn
(तपाइको स्वास्थ्य संस्थामा गर्भवती जाच सेवा, संस्थागत प्रसुति सेवा र सुत्केरी जांच सेवा र नवजात शिशु स्वास्थ्य सेवाको पहुच र उपयोगीता कस्तो छ ?)

If the birthing center has low utilization of delivery services, what are the reasons? What can be done to improve access and utilization of MNH services at birthing centers?
(यदी सुरक्षित प्रसुति सेवा को उपयोगीतामा कमी छ भने के के कारणहरु हुन सक्छन् ? प्रसुति सेवाको पहुच र उपयोगीतामा वृधी गर्न के के सुधार गर्न सकिन्छ होला?)

2. What is the status of service availability and readiness for essential MNH care in birthing centers?
प्रसुति केन्द्रबाट प्रदान गरी मातृ तथा नवजात शिशु स्वास्थ्य सेवाको उपलब्धता र तयारीपनको अवस्था के छ ?

Probe: Human resources availability, training status, equipment, medicine, infrastructures, infection prevention and control, etc.
(जनशक्तिको उपलब्धता, तालिमको अवस्था, सामाग्री, औषधी, भौतिक संरचना, संक्रमण नियन्त्रण आदीको अवस्था)

Probe: If there are not adequate infrastructures, supply and human resources, how are the services managed? Support from municipality, provinces, other NGOs etc.
(यदी प्रयाप्त मात्रामा तालिम प्राप्त जनशक्ती, भौतिक पुर्वाधार,औषधी उपकरण उपलब्ध छैन भने कसरी सेवाको व्यवस्थापन गर्नुभएको छ ? यस प्रसुति केन्द्रमा नगरपालिका, प्रदेश र अन्य संघसंस्थाहरुको सहयोग कस्तो छ ?

3. **How do you ensure the quality of services provided for MNH care in birthing centers?**
(प्रसुति केन्द्रबाट प्रदान गरीएको मातृ तथा नवजात शिशु स्वास्थ्य सेवाको गुणस्तर सुनिश्चित कसरी गर्नुहुन्छ ?)

Probe: Bi-annual assessment of Minimum Service Standards and preparation of action plan based on this, review of service in the health facilities, monitoring from the municipality, district, province, federal
(अर्धवार्षिक रुपमा न्युनतम सेवा मापदण्डको आधारमा मुल्याकंन गर्ने र कार्ययोजना बनाउने, स्वास्थ्य संस्थामा सेवाको समिक्षा गर्ने, नगरपालिका, जिल्ला, प्रदेश र संघबाट अनुगमन गर्ने)

4. **What are the key barriers both supply side and demand side in improving MNH services?**
(माातृ तथा नवजात शिशु स्वास्थ्य सेवाको अवस्था सुधार गर्नकोलागि स्वास्थ्य संस्थास्तर (आपुर्ति पक्ष) र समुदाय स्तरमा (माग पक्षमा) के कस्ता अवरोध तथा चुनौतीहरु छन ?)

Probe: Supply side barriers: lack of delivery service 24 hours, regular services of ANC checkup, lab testing facilities, referral challenges service load, non-availability of required medicine, staff etc.?
(स्वास्थ्य संस्था स्तर: २४ सै घण्टा प्रसुती सेवा उपलब्ध नहुनु, नियमित गर्भवती जांच सेवा उपलब्ध नहुनु, प्रयोगशाल सेवा उपलब्ध नहुनु ,प्रेषण सेवामा समस्या, आवश्यक औषधीहरुको उपलब्धता नहुनु, दक्ष जनजशक्तिको अभाव आदी)

How are you addressing these barriers?
(यी अवरोधहरुलाई कसरी सम्बोधन गरीरहनु भएको छ ?)

Demand side barriers: lack of Awareness, mother's group meeting, lack of transportation, birth preparedness, FCHVs training lack etc.
(समुदाय स्तर(माग पक्षका) अवरोधहरु: सचेतानाको कमी, स्वास्थ्य आमा समुहको बैठक नवस्ने साथै नियमीत छलफल नर्गाने, यातायातको अभाव, जन्मपुर्वको तयारी नहुनु, सामुदायीक महिला स्वास्थ्य स्वयंसेविकाहरुलाई तालिमको अभाव आदी)

5. **What are the enablers in improving MNH services? -**
मातृ स्वास्थ्य सेवाको सुधारका लागि सहयोगी तत्वहरु के के छन ?)

Probe: MNH incentives, community home visits, MNH awareness, Palika initiatives,
(मातृ स्वास्थ्य सेवाको लागि प्रोत्साहन भत्ता, सामुदायीक घरभेट कार्यक्रम, मातृ तथा नवजात शिशु स्वास्थ्य सेवाको बारेमा जनचेतना, पालिकाहरुले गरेका नयां सुरुवातहरु आदी)

6. **What opportunities and challenges do you see in improving quality and coverage on MNH care in birthing centers?**
(प्रसुति केन्द्रहरुमा मातृ तथा नवजात शिशु स्वास्थ्य सेवाहरुको गुणस्तर र यसको पहुच अभिवृधी गर्नको लागि के कस्ता अवसर र चुनौतीहरु देख्नुहुन्छ ?)

7. **What can be done in improving birthing center services in your Palika and district? Please suggest.**
(तपाईको पालिका वा जिल्लामा प्रसुति केन्द्रहरुको मातृ तथा नवजात शिशु स्वास्थ्य सेवाहरुको गुणस्तर र यसको पहुच अभिवृदी गर्नकालागि के के गर्न सकिन्छ?

3.3 Topic Guides for Female Community Health Volunteers (FCHVs)

1. **In your community, what types of maternal and newborn health services are available? - For example: Antenatal care services, institutional delivery services, and postnatal care services for maternal and newborn health. In your opinion, what challenges exist in the implementation of these services? How can these challenges be addressed?**
(तपाईंको समुदायमा मातृ तथा नवजात शिशु स्वास्थ्य सेवाहरु कस्ता उपलब्ध छन?- जस्तै: प्रसुति पुर्व स्वास्थ्य सेवा, संस्थागत प्रसुति सेवा र मातृ तथा नवजात शिशुका लागि प्रसुति पश्चात सेवा। तपाईंको विचारमा यी सेवाहरुको कार्यान्वयनमा के के चुनौतीहरु छन? ती चुनौतीहरुलाई कसरी सम्बोधन गर्न सकिन्छ?)

2. **Have you received any training related to maternal and newborn health? What did you learn from that training? Did it help you to identify maternal and newborn health problems? If you see any health problems in mothers or newborns in the community, where and how do you refer them?**
(मातृ तथा नवजात शिशु स्वास्थ्य सम्बन्धी कुनै तालिम लिनुभएको छ? त्यो तालिमबाट तपाईंले के के सिक्नुभयो? के उक्त तालिमले तपाईंलाई मातृ तथा नवजात शिशु स्वास्थ्य समस्या पहिचान गर्न मद्दत गर्यो? यदि सम'दायमा आमा वा नवजात शिश'को स्वास्थ्यमा समस्या देख्न'भयो भने कहाँ र कसरी प्रेषण गर्नुहुन्छ?)

3. **From your experience, what is the situation of resources and facilities for maternal and newborn health services?**

- For example: Adequacy of health workers, availability of medicines, equipment, financial resources, infrastructure, transportation facilities, and coordination with other stakeholders. If there is a lack of medicines, equipment, or skilled health workers, how are the services managed? How is the involvement of municipality, ward, and other local bodies?
(तपाईंको अनुभवअनुसार मातृ तथा नवजात शिशु स्वास्थ्य सेवाका स्रोत र सुविधाको स्थिति कस्तो छ?- जस्तै: स्वास्थ्यकर्मीको उपलब्धता, औषधि, उपकरण, वितीय स्रोत, पुर्वाधार, यातायात सुविधा, अन्य सरोकारवालास□गको समन्वय। यदि औषधि, उपकरण वा सीपय'क्त स्वास्थ्यकर्मीको अभाव छ भने सेवाहरु कसरी सञ्चालन ह'न्छन? नगरपालिकाको, वडाको र अन्य स्थानीय निकायहरुको संलग्नता कस्तो छ?)

4. **What are the challenges and barriers to providing maternal and newborn health services in health facilities? - For example: Lack of 24-hour delivery services, lack of institutional delivery services, lack of emergency obstetric care services, inadequate equipment, lack of referral mechanisms, poor coordination, and lack of skilled health workers. How can these issues be addressed?**

स्वास्थ्य संस्थामा मातृ तथा नवजात शिश' स्वास्थ्य सेवा प्रदान गर्न के के च'नौती र अवरोधहरू छन?
जस्तै: २४ घण्टा प्रसुति सेवा अभाव, संस्थागत प्रसुति सेवा अभाव, आकस्मिक प्रसुति सेवाको अभाव, अपर्याप्त उपकरण, रेफरल प्रणालीको कमी, कमजोर समन्वय, सीपय'क्त स्वास्थ्यकर्मीको कमी। यी समस्याहरूलाई कसरी समाधान गर्न सकिन्छ?

5. **In the community, what are the challenges and barriers? - For example: Lack of awareness among pregnant women, difficulty in reaching health facilities, lack of transportation, influence of traditional beliefs, home delivery, delay in seeking care, lack of antenatal check-ups.**
(समुदायमा के के च'नौती र अवरोधहरू छन?- जस्तै: गर्भवती महिलामा जागरूकताको अभाव, स्वास्थ्य संस्थामा पुग्न कठिनाइ, यातायातको अभाव, परम्परागत विश्वासको प्रभाव, घरमै प्रसुति, उपचार खोज्न ढिलाइ, प्रसुति पुर्व स्वास्थ्य परीक्षणको अभाव।)

7. **What activities are carried out for the promotion of maternal health services? - For example: Health education for pregnant women, community awareness programs, home visits for maternal and newborn health, counseling provided by health workers.**
(मातृ स्वास्थ्य सेवाको प्रवर्द्धनका लागि के के गतिविधिहरू सञ्चालन गरिन्छ?- जस्तै: गर्भवती महिलाका लागि स्वास्थ्य शिक्षा, सामुदायिक सचेतना कार्यक्रम, मातृ तथा नवजात शिश' स्वास्थ्यका लागि घरमै भ्रमण, स्वास्थ्यकर्मीहरुले प्रदान गरेको परामर्श।)

8. **In your community, what are the opportunities for maternal and newborn health services and how can they be utilized effectively?**
(तपाईंको समुदायमा मातृ तथा नवजात शिशु स्वास्थ्य सेवाका अवसरहरू के के छन् र तिनीहरुको प्रभावकारी उपयोगका लागि के के गर्न सकिन्छ?)

3.4 Focus Group Discussion (FGD) Guide to mothers having children below 2 years of age.

1. Knowledge and Practices on Antenatal Check-up

1.1 **Why it is important to go for ANC check-up? Do you know any danger signs of pregnancy so that we need to go for ANC check-up?**
(गर्भवती जांच गर्न किन आवश्यक छ ? तपाईलाई गर्भवती को समयमा देखा पर्ने खतराका चिन्हहरु जसको लागि स्वास्थ्य संस्थामा जचाउन जानुपर्छ भन्ने बारेमा थाहा छ ?)

1.2 **Have you received ANC services and counseling from the nearest health facilities. If not received, why?**
(तपाईले तपाईको नजिकको स्वास्थ्य बाट अन्तिम पटकको गर्भवती को समयमा गर्भवती जांच तथा पर ामर्श सेवा प्राप्त गर्नुभएको थियो ? यदि प्राप्त गर्नुभएको थिएन भने किन गर्नुभएन ?)

1.3 **What kind of services did you receive when you were pregnant for the last child? Eg. Iron tablet supplementation, USG, fundus height measurement, urine pregnancy test, blood test etc. Who checked your ANC? Are you satisfied with the services that you received for ANC?**
(तपाईले तपाईको अन्तिम पटक गर्भवती हुदा तपाईले स्वास्थ्य संस्थाबाट के के सेवा प्राप्त गनुभयो ? जस्तै आईरन चक्की, अल्ट्रा साउण्ड सेवा, पेटको उचाई नाप्ने, पिसाव जांच गर्ने, रगत जाच आदी। तपाईको गर्भजांच कसले गरेको थियो ? तपाईले प्राप्त गरेको गर्भवती जाच सेवा प्रति सन्तुष्ट हुनुभयो ?)

1.4 **Do you know how frequently a mother needs to visit for ANC? Wha is the timing of ANC visits?**
(गर्भवतीको समयमा कति पटक गर्भजाच गर्नुपर्छ भनेर तपाइँलाइ थाहा छ ? कति समयको फरकमा गर्भजाँच गर्नुपर्दछ ?)

1.5 **Did you plan for birth preparedness during your last pregnancy? What did you do? If not why did not you do those?**
(तपाईले तपाईको अन्तिम पटकको गर्भवती भएको बेला बच्चा जन्मको पुर्वतयारी गर्नुभएको थियो ? त्यतीवेला के के तयारी गर्नुभएको थियो ? यदी कुनै तयारी गर्नुभएको थिएन भने किन गर्नुभएको थिएन ?)

1.6 Did you receive incentives for ANC visits when you delivered a last child
(तपाई अन्तिम पटक स्वास्थ्य संस्थामा सुत्केरी हुदा पुर्व प्रसुती गरेको सहितको सुत्केरी भत्ता पाउनुभएको थियो ?)

2. Delivery, newborn care, and post-natal care

2.1. **Are you aware of the danger signs of delivery? Have you experienced any danger signs? How have you managed those? At home or went to health facilities?**
(तपाईलाई सुत्केरी अवस्थामा देखा पर्ने खतराका लक्षण चिन्हका बारेमा जानकारी छ? तपाईले कुनै खतराका लक्षण चिन्हहरु भएको अनुभव गर्नुभएको छ ? तिनीहरुलाई कसरी व्यवस्थापन गर्नुभयो? त्यस्तो बेला घरमै व्यवस्थापन गर्नुभएको की स्वास्थ्य संस्थामा जानुभयो ?)

2.2. Where did you deliver the last child? Home? Why didn't you go the health facility? If in Facility, how did you manage to go for health facility? If you had complications, were you referred from the nearest health facility?
(तपाईलाई तपाईको अन्तिम बच्चा हुदा कहां सुत्केरी हुनभएको थियो ? घरमा? यदी घरमा हो भने किन सवस्थ्य संस्थामा जानुभएन? यदी स्वास्थ्य संस्थामा जन्माउनुभएको थियो भने स्वास्थ्य संस्थासम्म कसरी जानुभयो वा कसरी पुग्नुभयो? यदी त्यतीवेला तपाईलाई जटीलता देखीएको थियो भने तपाईलाई स्वास्थ्य संस्थाबाट प्रेणण गरेको थियो ?)

2.3. If mothers in your community do not go to the health facility for delivery, what are the reasons? What can be done to promote institutional delivery?
(यदी तपाईलाईको समुदायका आमाहरु प्रसुतिको समयामा स्वास्थ्य संस्थामा बच्चा जन्माउन जानुहुन्न भने के कारणले जानुहुन्न ? संस्थागत सुत्केरीलाई बढवा दिन के गर्नसकिन्छ होला ?)

2.4. Who were the service providers during your last delivery? Are you satisfied the services that you received? If not why?
(तपाई अन्तिम पटक सुत्केरी हुदा तपाईलाई कसले प्रसुति गराउनुभएको थियो ? के तपाई उनीहरुको से वाबाट सन्तुष्ट हुनुभएको थियो ? यदी हुनुभएको थिएन भने किन ?)

2.5. Did you stay at least 24 hours of birth at the health facility? Have you experienced any complications when you get discharged from the health facility?
(तपाई अन्तिम पटक प्रसुति हुदा कम्तिमा पनी २४ घण्टा प्रसुति पछी स्वास्थ्य संस्थामा बस्नुभएको थियो ? तपाई स्वास्थ्य संस्थाबाट घर आईसकेपछी कुनै जटिलताहरु भएको अनुभव गर्नुभएको थियो ?)

2.6. Did you receive any incentives after delivery?
(तपाई अन्तिम पटक प्रसुति हुदा प्रसुति प्रश्चात सुत्केरी भत्ता पाउनुभएको थियो ?)

2.7. Was your newborn checked and provided essential newborn care? Breathing, kangaroo mother care, weight taken, wrapped with the clothes, support for breast feeding etc.
(तपाई अन्तिम पटक सुत्केरी हुदा तपाईको नवशिशु लाइ जाच गर्ने र अतिआवश्यक सेवा प्रदान गरिएको थियो? स्वास फेर्न सहजीकरण, मायाको अंगालो, तौल नापेको, न्यानो कपडाले बेरेर राखेको साथ स्तनपान गराउनको लागि सहयोग आदी।)

2.8. Have you gone for PNC at 3rd day, 7-14th day, and 42nd day after delivery?
(तपाई अन्तिम पटक सुत्केरी हुदा तपाईले सुत्केरी भएको तेस्रो दिनमा, ७ देखी १४ औ दिनमा र ४२ औ दिनमा सुत्केरी जांच गराउनु भएको थियो ?)

2.9. Did anyone from health facilities visited to you and your child during post-partum period? What service did you receive at home?
(तपाई अन्तिम पटक सुत्केरी भएको ४२ दिन भित्रमा स्वास्थ्य संस्थाको कुनै कर्मचारीले तपाई र तपाईको बच्चालाई भेट गरेका थिए? त्यतीवेला तपाईले के के सेवा प्राप्त गर्नुभयो ?)

2.10 Have you experienced your and your child's complication during post-partum period?
(तपाई अन्तिम पटक सुत्केरी भएको ४२ दिन भित्रमा तपाई र तपाईको वच्चाले कुनै जटीलताको अनुभव गर्नुभएको थियो ?)

2.11 How was your experience with pain management and postpartum care?
(तपाई अन्तिम पटक प्रसुति हुदा प्रसुति व्यथाको व्यवस्थापन र उत्तर प्रशुति सेवाको अनुभव कस्तो रहयो ?)

3. Challenges and Barriers

3.1 What were the biggest challenges you faced during pregnancy, delivery, or postpartum care?
(तपाई अन्तिम पटकको गर्भवती, प्रसुति हुदा र उत्तर प्रशुति समयमा के कस्ता चुनौतीहरु सामना गर्नुभयो ?)

3.2. Were there any financial or social barriers that prevented you from receiving care?
(तपाईलाइ अन्तिम पटकको गर्भवती तथा प्रसुति हुदा सेवा प्राप्त गर्नमा आर्थिक अथवा समाजिक कारणले रोकेको थियो ?)

4. Perception on service quality and readiness

4.1 Did you feel safe and comfortable giving birth at your nearest birthing center?
(तपाई अन्तिम पटक प्रसुति हुनजादा तपाईले आफुलाई सुरक्षित र सहज भएको महसुस गर्नुभएको थियो ?)

Probe: Adequate room, trained staff, cleaning facility, waiting room, examination room, privacy, respectful maternity care
(पर्याप्त कोठा, तालिम प्राप्त कर्मचारी, सफा गर्ने स'विधा, प्रस'ती पुर्व को प्रतिक्षालय जाँच गर्ने कोठा, गोपनीयता, सम्मानजनक प्रसुति सेवा, औषधि, परामर्श)

4.2 Were the medicine, equipment, infection prevention and lab services available while in your last delivery and newborn care? If not, what were done by the health facilities to manage managing those?
(तपाई अन्तिम पटक प्रसुति हुदा वा नवशिशुको स्याहारको समयमा मा तपाईलाई आवश्यक पर्ने औषधी उपकरण, संक्रमण नियन्त्रण र प्रयोगशाला सेवा उपलब्ध गराईएको थियो ? यदी थिएन भने, स्वास्थ्य सस्थाबाट के गरीएको थियो ?)

4.3. Have you ever experienced or heard about mistreatment or disrespect at the birthing center?
(तपाई प्रसुति केन्द्रमा कार्यरत कर्मचारीहरुले तपाईलाई अपमान गरेको वा नराम्रो व्यवहार गरेको अनुभव गर्नु भएको छ ?)

4.4 Do you think health workers are well-trained and capable of handling complications?
(तपाईलाइ प्रसुति केन्द्रमा कार्यरत कर्मचारीहरु राम्रो तालिम प्राप्त हुनुहुन्छ र कुनै जटिलता भएमा सहजै व्यवस्थापन गर्नुहुन्छ भन्ने लाग्छ?)

4.5 For improvement of quality, access, availability, and utilization of MNH services at birthing center, what are the areas that can be done? Please suggest.
(प्रसुति केन्द्रबाट प्रदान गरीने मातृ तथा नवशिशु सेवाको गुणस्तर, पहुचता, उपलब्धता र उपयोगीतामा अभिवृद्दी गर्नको लागि कुन कुन क्षेत्रमा सुधार गनुपर्छहोला कृपया सल्लाह दिनुहोला ?)

Probe: Respectful maternity care, reduced waiting time, adequate room, Availability of staff for 24 hours, Awareness to those left behind, post-partum home visit, training to health workers etc.

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