



Comprehensive Newborn Care Package: Taking a Pulse of Implementation Status and Bottlenecks in Bangladesh

Key Finding Report

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Abbreviations

ACS	Antenatal Corticosteroids
ANC	Antenatal Care
ARI	Acute Respiratory Infection
CC	Community Clinic
CNCP	Comprehensive Newborn Care Package
CPAP	Continuous Positive Airway Pressure
CS	Caesarean section
DGFP	Directorate General of Family Planning
DGHS	Directorate General of Health Services
DH	District Hospital
DHIS2	District Health Information Software 2
ECG	Electrocardiogram
EmONC	Emergency Obstetric and Newborn Care
ENC	Essential Newborn Care
ETAT	Emergency Triage Assessment and Treatment
HR	Heart Rate
IFA	Iron and Folic Acid
IM	Intramuscular
IMCI	Integrated Management of Childhood Illness
IV	Intravenous
MCWC	Mother and Child Welfare Center
MO	Medical Officer
NIBP	Non-invasive Blood Pressure
NNHP	National Newborn Health Program
PH	Private Hospital
RR	Respiratory Rate
SCANU	Special Care Newborn Unit
SOP	Standard Operating Procedure
SpO2	Oxygen Saturation
Temp	Temperature
UHC	Upazilla Health Complex
UHFWC	Union Health & Family Welfare Center
USC	Union Sub Center

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1. Introduction

1.1 Background

In 2019, newborn mortality constituted a significant global health concern, with 2.4 million newborns succumbing to various preventable causes. Notably, 39% of these tragic deaths occurred within the eight South Asian countries, including Bangladesh. These fatalities predominantly resulted from complications associated with preterm birth, birth asphyxia or trauma, pneumonia, congenital anomalies, diarrhea, and malaria—conditions that are largely preventable or treatable. Simple and cost-effective interventions such as immunization, adequate nutrition, access to safe water, and the provision of quality care by trained healthcare providers hold the potential to address these pressing issues.

Regrettably, there remains a dearth of comprehensive evidence concerning the current state of readiness and functionality of health facilities with respect to key newborn interventions in Bangladesh. Similarly, information regarding the quality of newborn care services offered by various public health facilities is scarce. Furthermore, the absence of a robust quality of care monitoring system for newborn interventions has led to considerable gaps within the DHIS2 reporting system, hampering the policymaker's ability to make timely and informed decisions to enhance facility-specific newborn care readiness and practices.

Additionally, the utilization and application of the national readiness monitoring checklist have fallen short of optimal levels. Furthermore, substantial knowledge gaps persist regarding the challenges faced by frontline healthcare providers in implementing and operating newborn care programs effectively.

Recognizing the urgency of addressing these critical issues, healthcare providers across Bangladesh have undergone training in the Comprehensive Newborn Care Package (CNCP). Health facilities have also received essential equipment and logistical support to ensure their readiness in providing essential newborn interventions at the facility level. The deployment of Kangaroo Mother Care (KMC) and the establishment of Special Care Newborn Units (SCANUs) in 390 and 59 health facilities, respectively, represent significant steps forward.

In collaboration with the National Newborn Health Program (NNHP), a comprehensive national assessment has been undertaken to evaluate the current status of newborn care interventions across selected public health facilities in Bangladesh. This report aims to present preliminary findings concerning the availability, readiness, and functionality of health facilities regarding maternal and newborn health and child health services. Through this report, we endeavor to shed light on the current landscape of newborn care in Bangladesh and provide insights that can guide future policy and programmatic efforts to reduce newborn mortality.

1.2 Objectives

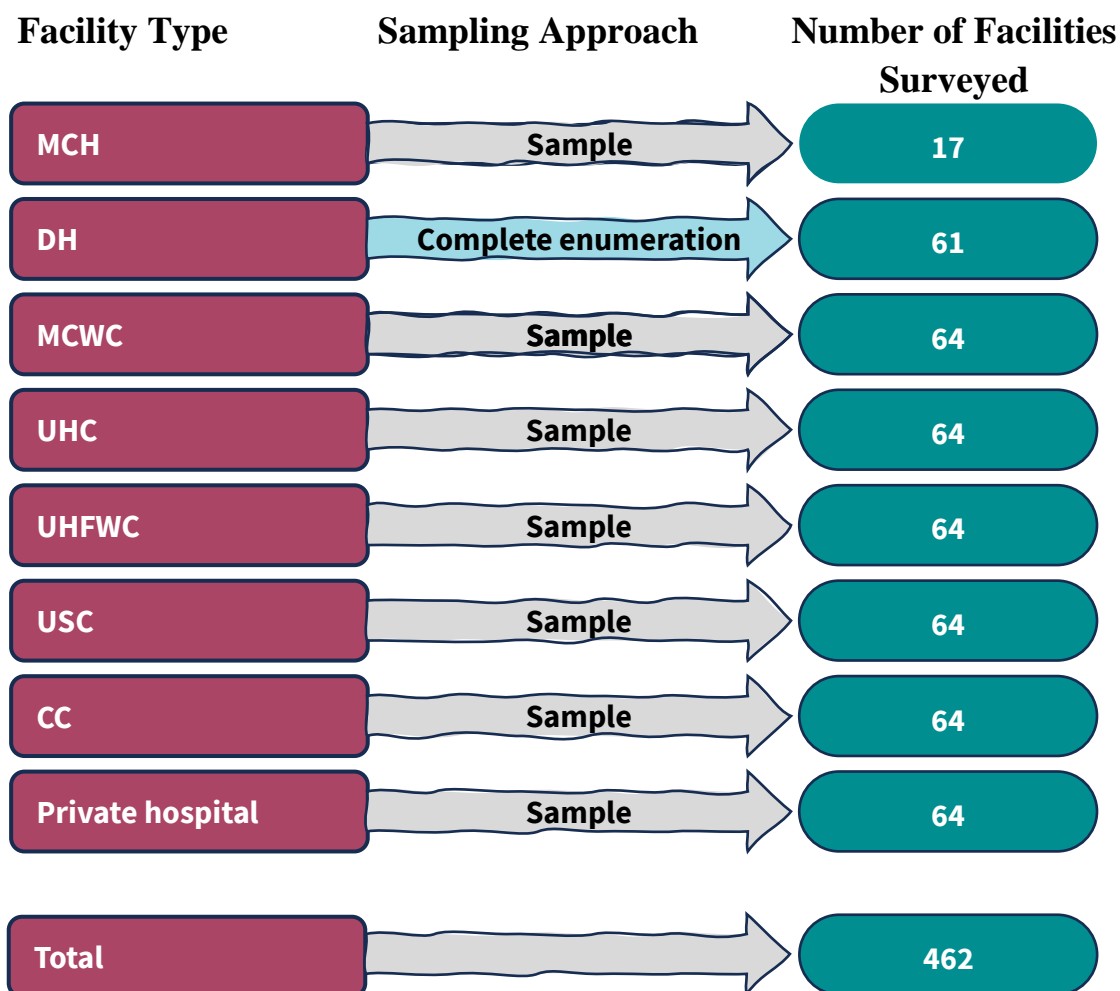
The main objectives of the ‘Evaluation of current status of implementation and practices of Comprehensive Newborn Care Package in Bangladesh’ were-

- To assess the availability of newborn services in the health facilities
- To explore the readiness of the health facilities providing newborn services
- To assess the functionality of the health facilities providing newborn services

2. Survey Implementation

2.1 Sampling Design

- The Evaluation of current status of implementation and practices of Comprehensive Newborn Care Package in Bangladesh is a study in Bangladesh that looked at 462 health facilities. We also visited 230 more facilities outside the main survey to do census on KMC and SCANU facilities.
- We wanted to make sure we included all kinds of hospitals and health centers in all 64 districts of the country. This means we looked at public hospitals like Medical College and Hospitals, District Hospitals, Mother and Child Welfare Centers, Upazila Health Complexes, Union Health and Family Welfare Centers, Union Sub-centers, and Community Clinics. We also looked at private facilities that have at least 10 beds.
- For the study, the sample constituted of complete enumeration of DHs and randomly picked one facility from different types like Medical College and Hospitals, Mother and Child Welfare Centers, Upazila Health Complexes, Union Health and Family Welfare Centers, Union Sub-centers, Community Clinics, and Private Hospitals in each district.



2.2 Data Collection Methods

- The ‘Evaluation of current status of implementation and practices of Comprehensive Newborn Care Package in Bangladesh’ employed a structured data collection tool known as the Facility Inventory questionnaire.
- This questionnaire was designed to gather information about the health facilities' readiness, availability, and functionality in providing essential newborn healthcare services. It aimed to capture details regarding the presence and condition of specific items required for these services, the support systems in place (such as logistics, maintenance, and management), and the overall infrastructure of the facilities, including the environment in which services are delivered. During data collection, the survey team interviewed individuals who possessed the most comprehensive knowledge about each facility and its services. This information included the number of staff members working in each facility and their training levels.

- The questionnaire was organized into sections, each focusing on a different aspect of healthcare, including Antenatal Care (ANC), Postnatal Care (PNC), Normal Delivery, Cesarean Section, Integrated Management of Childhood Illness (IMCI) and outdoor sick child management, indoor sick child management, Special Care Newborn Unit (SCANU), and Kangaroo Mother Care (KMC). This structured approach ensured that a comprehensive assessment of newborn care services was conducted across the surveyed health facilities.

2.3 Training

- A group of 30 medical doctors was assembled for the purpose of collecting data and underwent an extensive Three-day training program.
- After each training session, feedback sessions were conducted to address any potential challenges that might arise during the data collection process. Trainees were encouraged to ask questions, and practical examples were provided to assist them in overcoming difficulties.
- During this period, the entire data collection process, including the questionnaire and manuals, was reviewed.
- Following the completion of their training, the doctors were subjected to further assessment.
- On January 26, a preparatory meeting was convened prior to the field implementation of the CNCP at icddr,b. Logistics were distributed, and a coordination meeting was held on January 29, 2023, to establish the data collection schedule for the first phase.

2.4 Data Collection

- Data collection was conducted nationwide in four phases, commencing on January 30 and concluding on March 16, 2023.
- The progress of each phase is summarized in the table below:

Sl. No.	Phase	Start Date	End Date	Status
1	Phase-I	January 30	February 02	Completed
2	Phase-II	February 07	February 16	Completed
3	Phase-III	February 19	March 07	Completed
4	Phase-IV	March 11	March 16	Completed

- Quality assurance was upheld through the involvement of 2 master trainers and 3 quality monitoring officers. These officers made unannounced visits to ensure data quality.
- Continuous monitoring by quality assurance officers, oversight from the technical team, and the unwavering commitment of data collectors ensured the successful completion of data collection while maintaining data quality.

2.5 Sample of Health Facilities and Outcomes

- Data were successfully collected from 462 facilities including 290 facilities out of survey sample for the purpose of census in KMC and SCANU facilities.

3. Antenatal Care (ANC) Services

Key Findings

- The availability of ANC services was universal (99%) among public health facilities in The Evaluation of current status of implementation and practices of Comprehensive Newborn Care Package in Bangladesh (Figure 3.1)
- Almost all type of facilities including PHs, universally provides counselling to mothers regarding danger sign (maternal and neonatal). Though, MCHs, USCs, CCs and PHs provides counseling to mothers on KMC for prematurity and LBW is low, around 70-73%. Almost all type of facilities including PHs, universally provides counselling to mothers regarding breastfeeding excluding the MCHs (77%). Not only that, MCHs are the lowest (59%) in counseling mothers on the use of 7.1% Chlorhexidine (CHX) for cord care, where other types of facilities stand between 81-95% except PHs, which stand at 77%, still 18% more than MCHs. (Figure 3.2)
- The availability of the Safkotha Flip chart in public health facilities varies between 29-61%, lowest in MCHs and USCs. (Figure 3.3)
- Except for the CC (89%), almost all the public health facilities have ANC registers (94-100%). (Figure 3.3)
- Private facilities are least likely to have Safkotha Flip chart (2%) and ANC registers (5%). (Figure 3.3)
- Excluding private facilities (90%), all the public health facilities are close to universal (97-100%) in case of providing Iron and Folic acid supplementation. (Figure 3.4)
- Among the public health facilities, DHs, UHCs, and CCs are near to universal (97-98%) in providing Tetanus toxoid vaccine services, whereas MCHs, MCWC, and UHFWCs vary between 78-88%. PHs comprise the lowest in this service, 70%. (Figure 3.4)

3.1 Availability of Antenatal Care (ANC) Services

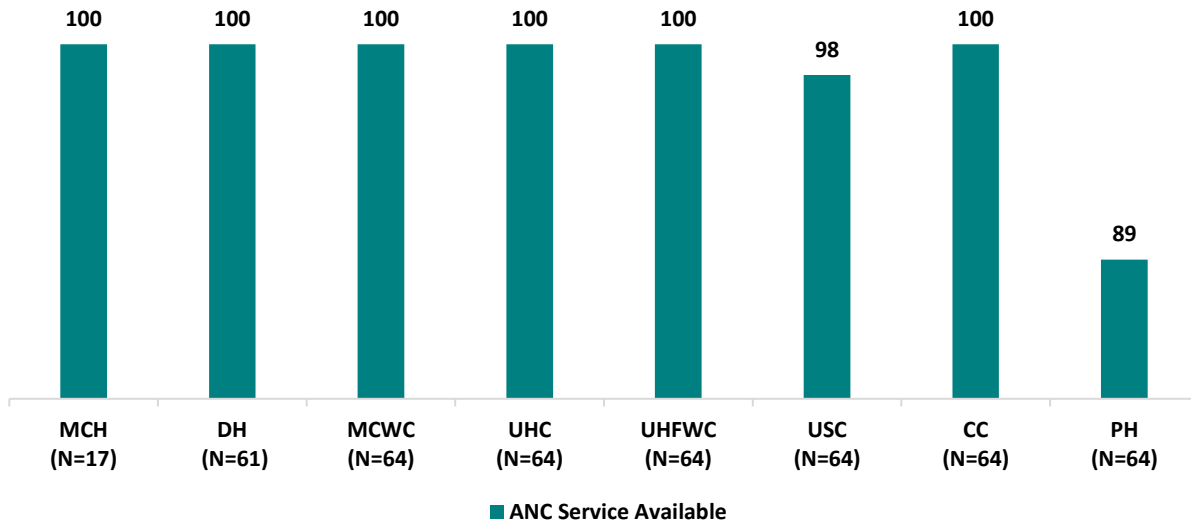


Figure 3.1 Availability of ANC services in health facilities, by facility type, presented in %

3.2 Components of ANC counseling among facilities providing ANC services

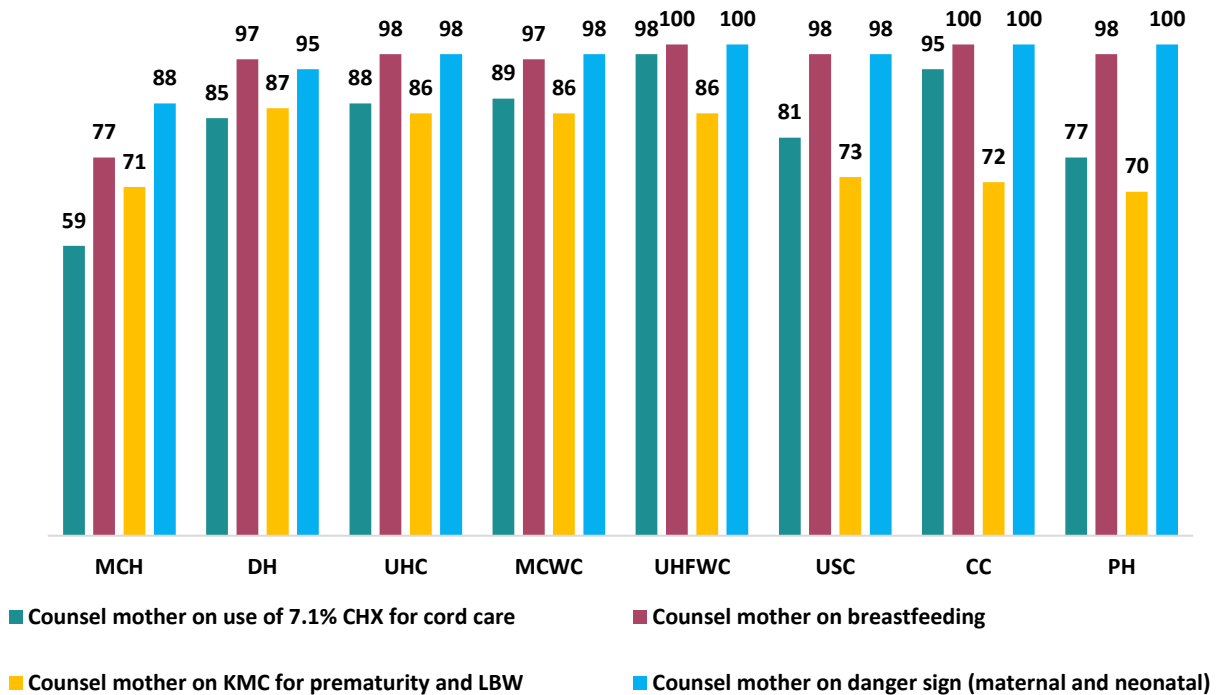


Figure 3.2 Components of ANC counseling, among facilities providing ANC services, presented in %

3.3 Availability of ANC job aids

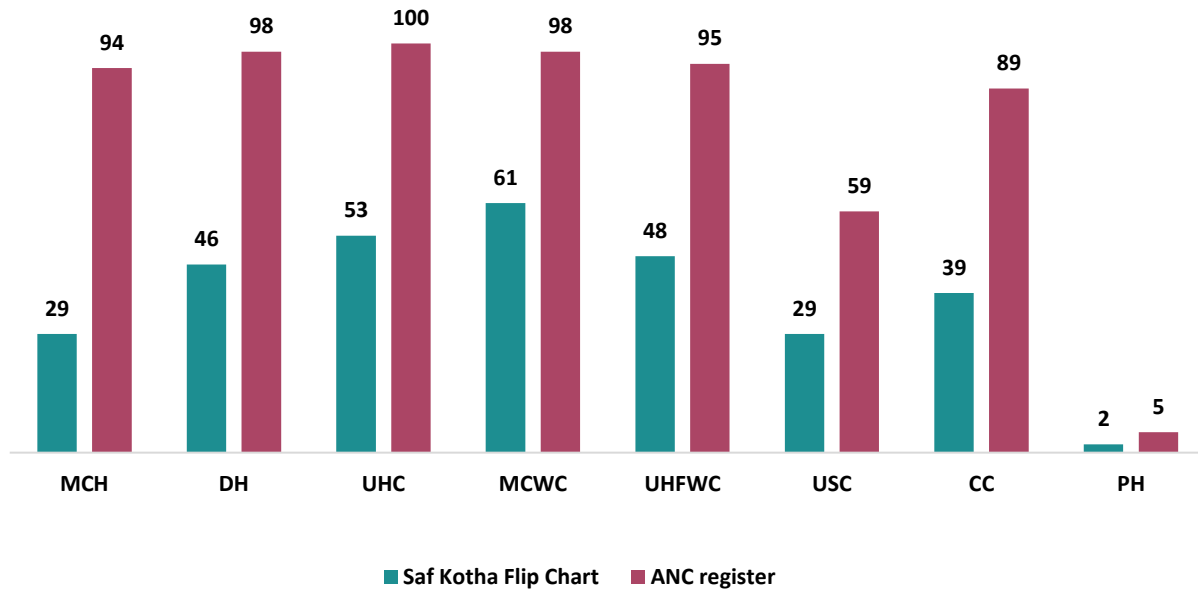


Figure 3.3 Availability of ANC job aids, among facilities providing ANC services, presented in %

3.4 Services provided in the last three months, among facilities providing ANC services

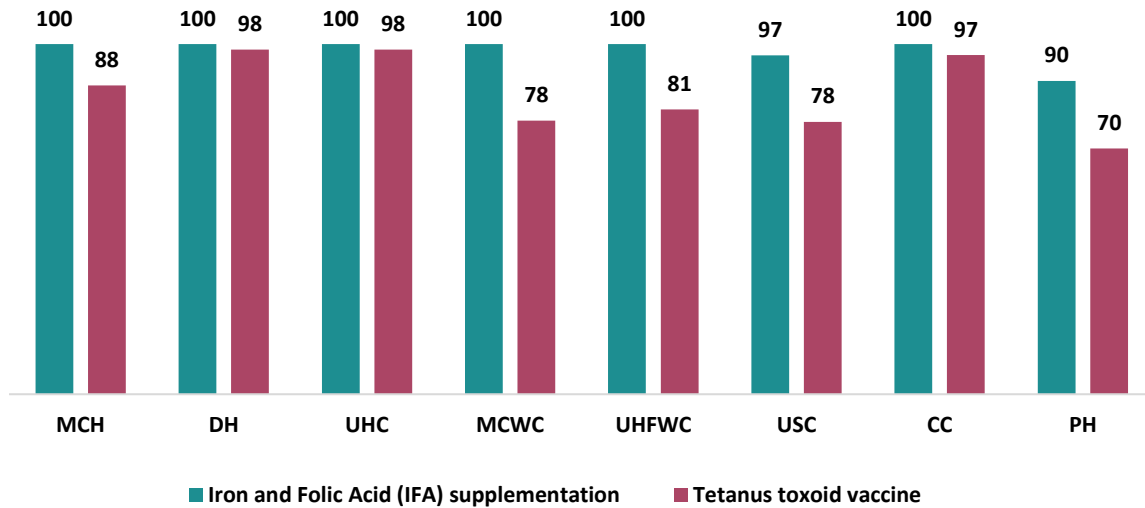


Figure 3.4 IFA & Tetanus toxoid vaccines provided in the last three months, among facilities providing ANC services, presented in %

4. Normal Delivery Services

Key Findings

- The availability of Normal Delivery services was found universal (98-100%) among upper tier public health facilities (MCHs, DHs, MCWCs, UHCs) in Comprehensive Newborn Care Package (CNCP): Country Survey 2023 (Figure 4.1)
- Designated tables or trolleys for newborn care are widely available at MCHs and DHs, with almost universal coverage at 94% and 92%. UHCs and MCWCs maintain respectable rates at 83% and 84%. In contrast, UHFWCs, USCs, and CCs offer lower availability, ranging from 39% to 67%. Private Hospitals (PHs) fall in the middle with a rate of 73%. Functioning baby weighing scales are broadly accessible, with universal coverage at 94%, 98%, 95% and 98% in MCHs, DHs, UHCs & MCWCs. Union level facilities, USC and CCs including the PHs ranging from 56-75%. Warm cloth availability varies, with MCHs and DHs slightly lower at 59% and 55%, and PHs maintaining balance at 54%. USC, UHFWC and UHC ranging from 11% to 33% with 0% availability in CCs. (Figure 4.2)
- DHs and MCHs offer universal access to cord clamps or threads (98% and 94%). UHCs & PHs ranged from 78% - 89%. MCWC has only 22% while, UHFWCs, USCs and CCs stands with 0 availability of cord clamps or threads. Tools for cord cutting are almost universally available at UHCs, MCWCs, DHs, and USCs (97-100%), CCs, PHs and MCHs range from 67%-82%. Only UHCs have universal availability of 7.1% Chlorhexidine, while MCHs, DHs, MCWCs, UHFWCs, USCs, and PHs range from 46% to 84%, with 0 availability in CCs. (Figure 4.3)
- MCHs, DHs, UHCs and MCWCs have universal access to penguin sucker/suction bulb, whether UHFWCs, USCs and PHs ranged from 70% to 85%, with only 17% in CCs. Regarding suction apparatus availability, MCHs, DHs, UHCs, MCWCs and PHs ranged from 49% to 88%, while UHFWCs, USCs and CCs have only 0% to 19%. MCHs, DHs, MCWCs, UHCs and UHFWCs have excellent universal availability of functioning Ambu bag and mask, even USCs and PHs have 72% and 80% availability respectively, while CCs have only 17%. Availability of penguin sucker/suction bulb or, suction apparatus And, functioning Ambu bag and mask, this condition is fulfilled greatly by MCHs, DHs, MCWCs, UHCs universally, UHFWCs, USCs and PHs ranged from 67% to 85%. CCs fail this condition to meet miserably with 0%. (Figure 4.4)
- MCWCs, UHFWCs, USCs, and PHs maintain the highest value of delivery register which ranged from 65% to 75%; while MCHs, DHs, UHCs, and CCs have delivery registers ranged from 33% to 43%. For EmONC register, MCHs, DHs, and UHCs have registers ranged from 53% to 66%; where MCWCs, UHFWCs, USCs maintain registers ranged

from 21% to 35%, and only 2% PHs have EmONC register. CCs fail to maintain the availability of EmONC register with 0%. 6% MCHs, 10% UHFWCs, 67% CCs, and 23% PHs are identified as not having any registers. (Figure 4.5)

- MCHs and DHs excel in providing antibiotics for PROM (100%) and ACS for preterm birth (88-95%). UHCs and MCWCs offer antibiotics for PROM (80-89%) and ACS (56-66%). PHs show good performance in antibiotics for PROM (75%) and ACS (66%). (Figure 4.6)

4.1 Availability of Normal Delivery Services

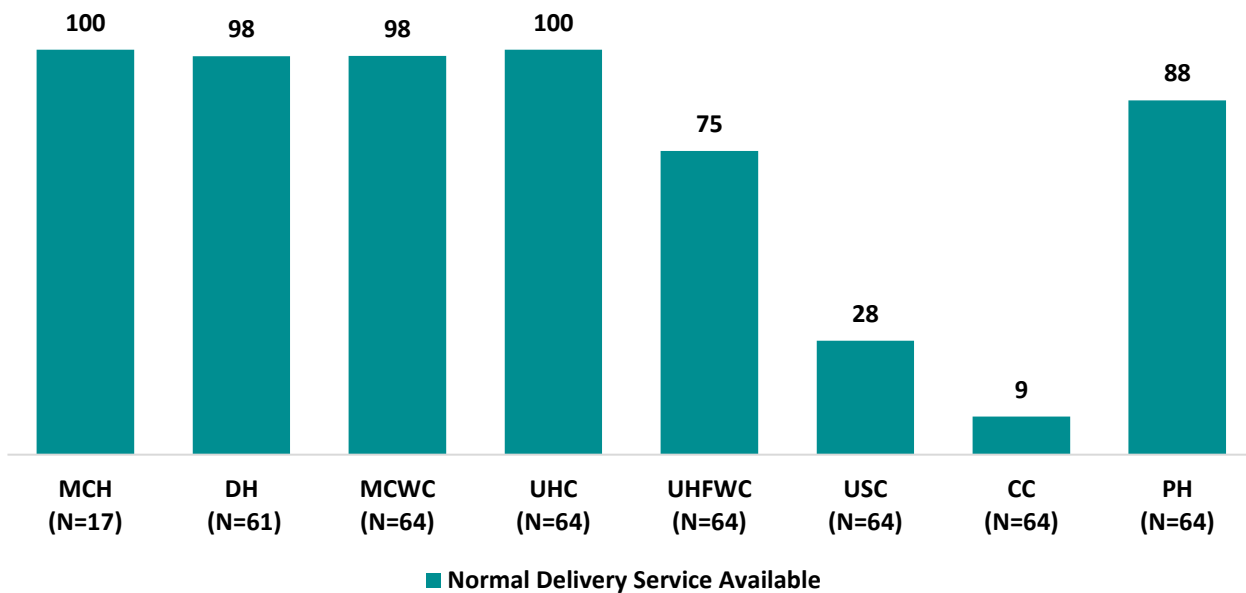


Fig 4.1: Availability of NVD services in health facilities, by facility type, presented in %

4.2 Availability of equipment/logistics to provide ENC

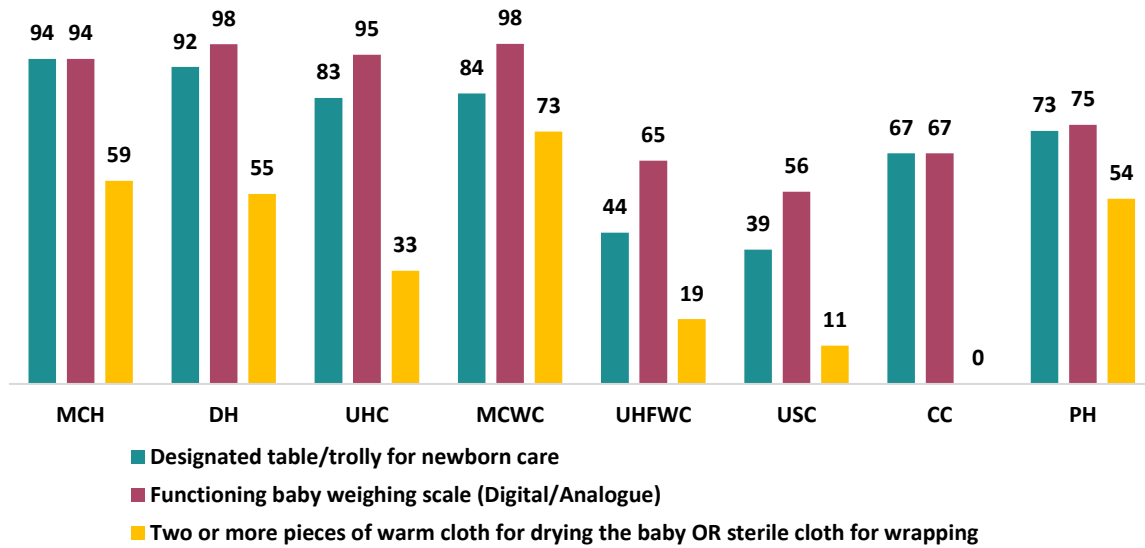


Fig: 4.2: Availability of equipment/logistics to provide ENC, among facilities providing NVD services, presented in %

4.3 Availability of equipment/logistics to provide ENC

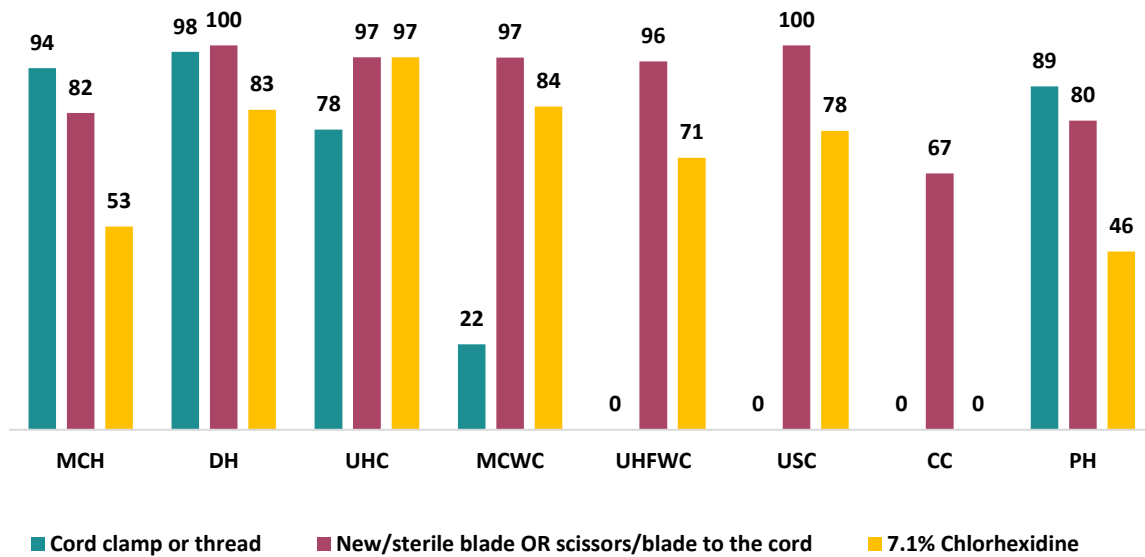


Fig 4.3: Availability of equipment/logistics to provide ENC, among facilities providing NVD services, presented in %

4.4 Availability of equipment/logistics to provide resuscitation

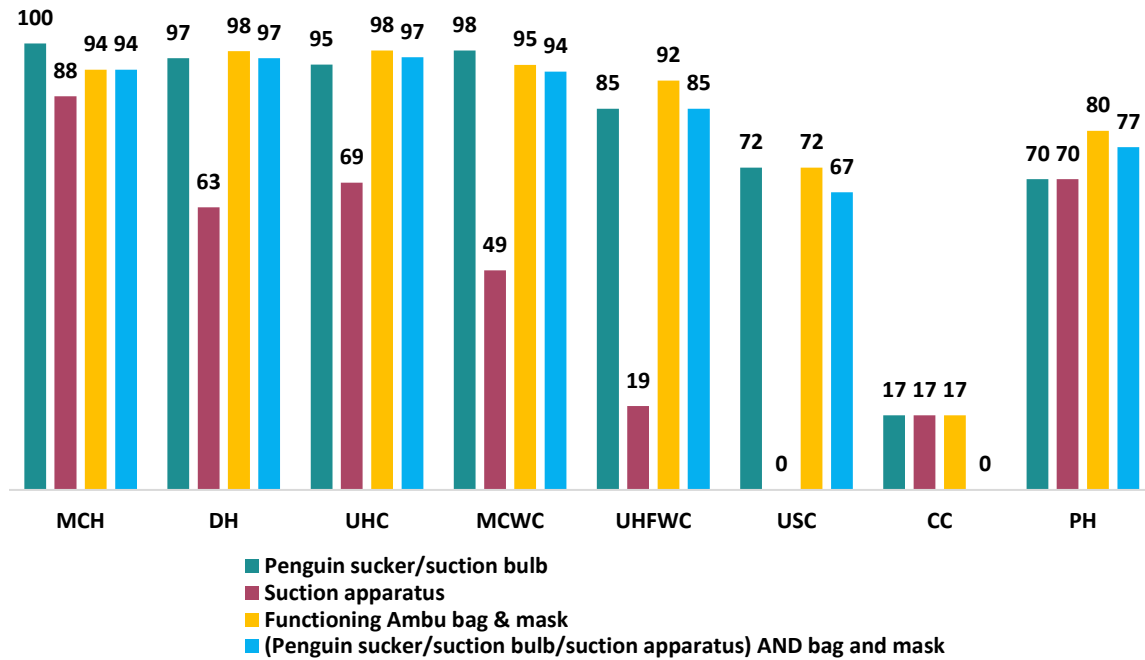


Fig: 4.4: Availability of equipment/logistics to provide resuscitation, among facilities providing NVD services, presented in %

4.5 Availability of service register

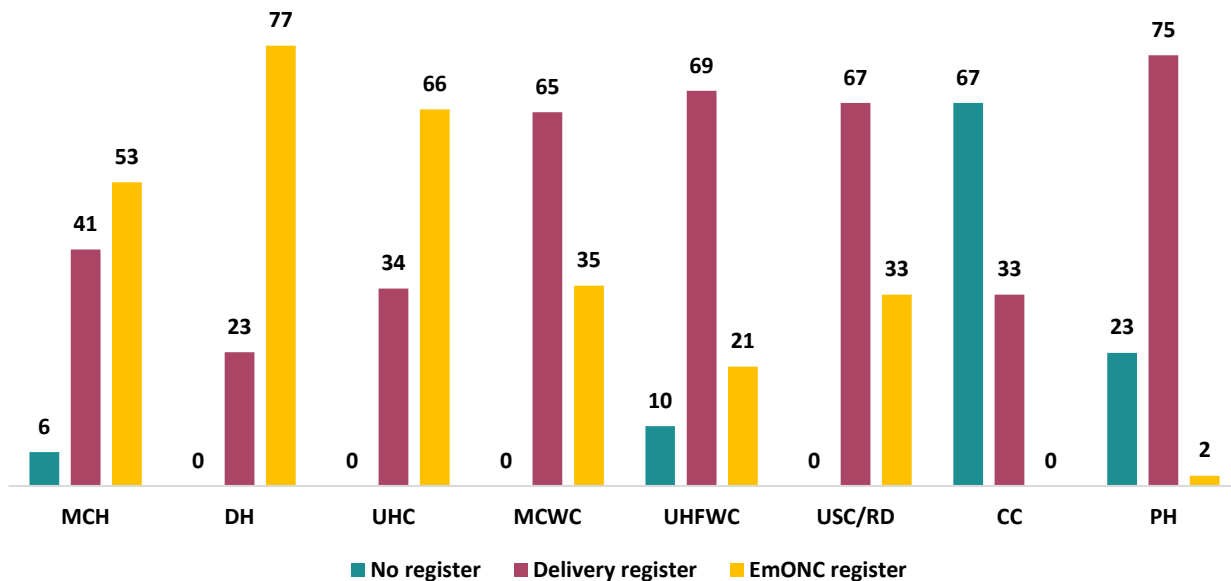


Fig: 4.5: Availability of service register, among facilities providing NVD services, presented in%

4.6 Services provided in the last three months

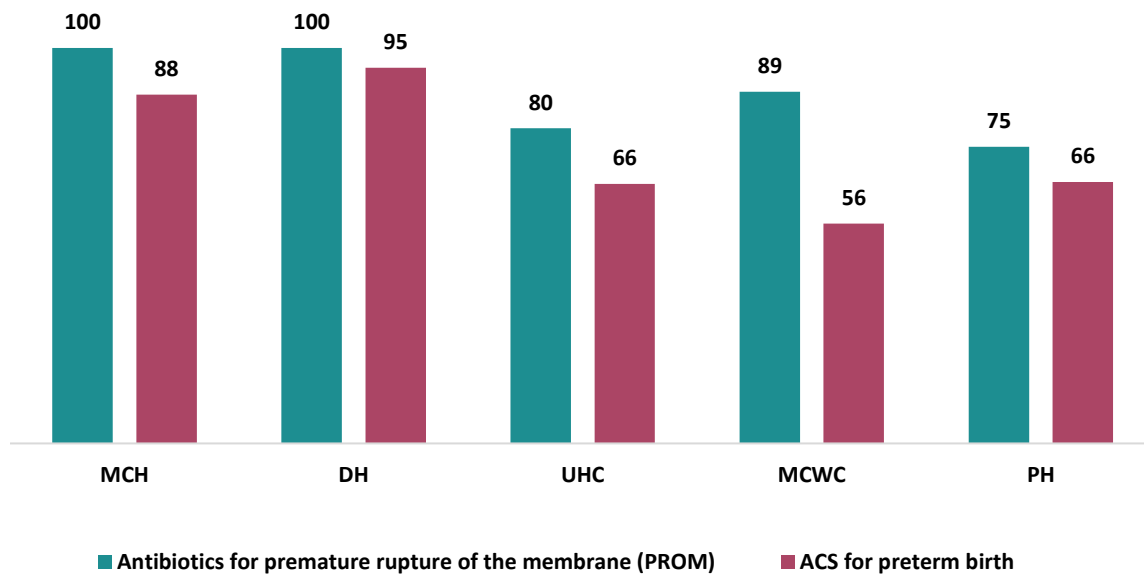


Fig 4.6: Services provided in the last three months, among facilities providing NVD services, presented in %

5. Caesarean Section Services

Key Findings

- All the MCHs and DHs have the service for CS delivery and 88 % of PHs provide the CS delivery service. For MCWCs and UHCs, this service is respectively available in 69% and 55% of facilities. (Figure 5.1)
- Designated tables or trolleys for newborn care are widely available at DHs and PHs, with almost universal coverage at 90% and 91%. UHCs, MCHs, and MCWCs maintain respectable rates at 86%, 82%, and 86%. Functioning ambu bag and mask are universally available in 94% MCHs, 95% DHs, and PHs 93%, while UHCs and MCWCs have this in good numbers at 86% in both types of facilities. Warm cloth availability varies, with MCHs, DHs, UHCs, MCWCs at respectively 82%, 79%, 71%, and 80%, and PHs maintaining balance at low which is 59%. (Figure 5.2)
- MCHs, DHs, UHCs, MCWCs, and PHs offer access to cord clamp or thread which ranged from 46% to 63%. All the UHCs stand with 100% availability of tools for cord cutting and, DHs, MCHs, and PHs offer universal access to tools for cord cutting respectively 98%, 94%, and 96%. Only UHCs have universal availability of 7.1% Chlorhexidine which values 94% in facilities, while MCHs, DHs, and PHs range from 50% to 87%. (Figure 5.3)
- DHs and UHCs have universal access to penguin sucker/suction bulb which values respectively 98% and 94%, whether MCHs, MCWCs and PHs cover good range which from 82% to 88%, Regarding suction apparatus availability, MCHs cover universal access of 94%, where DHs, UHCs, MCWCs, and PHs have the wide coverage which ranged from 80% to 89. MCHs, and UHCs have excellent universal availability of functioning Ambu bag and mask, with 100% in both types of facilities, even DHs, MCWCs, and PHs have this 98%, 93%, and 95% availability respectively. Availability of penguin sucker/suction bulb or, suction apparatus And, functioning Ambu bag and mask, this condition is fulfilled greatly by MCHs, DHs, MCWCs, UHCs universally, PHs have this service for 89% of total faculties. (Figure 5.4)
- Availability of any source of oxygen is greatly maintained by MCHs, DHs, UHCs, MCWCs, and PHs where all of these facilities have universal access to oxygen availability which ranged from 98% to 100%. For nasal catheter/ cannula, highest value of 74% UHCs have the availability; and MCHs, DHs, MCWCs, and PHs are found to have this respectively 65%, 72%, 55%, and 61%. MCHs, DHs, and MCWCs have universal access to functioning pulse oximeters which are available respectively in 94%, 95%, and 91%. UHCs and PHs also have a wide range of functioning pulse oximeters in 89% of both types of facilities. (Figure 5.5)

- All the facilities including MCHs, DHs, UHCs, MCWCs, and PHs maintain OT register at a range of 77% to 89%; Whereas the maintenance of the EmONC registers for the same facilities shows a notably lower range, with values spanning from 2% to 21%, which is quite lower. Meanwhile, 3% UHCs, 2% MCWCs, and 9% PHs have been found not to have any registers. (Figure 5.6)

5.1 Caesarean section service availability

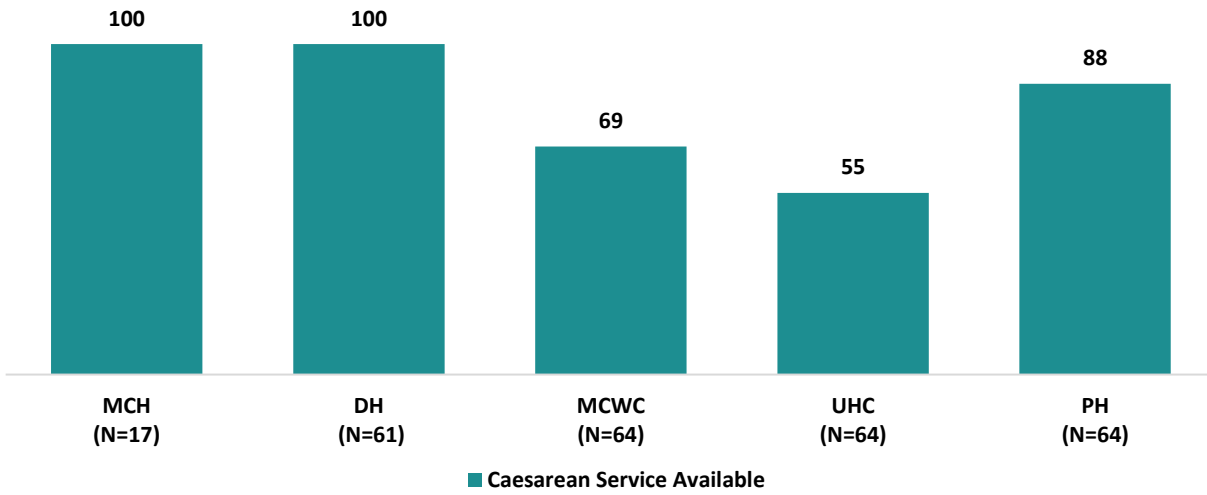


Fig 5.1: Caesarean section service availability, among facilities surveyed, presented in %

5.2 Availability of equipment/logistics to provide ENC

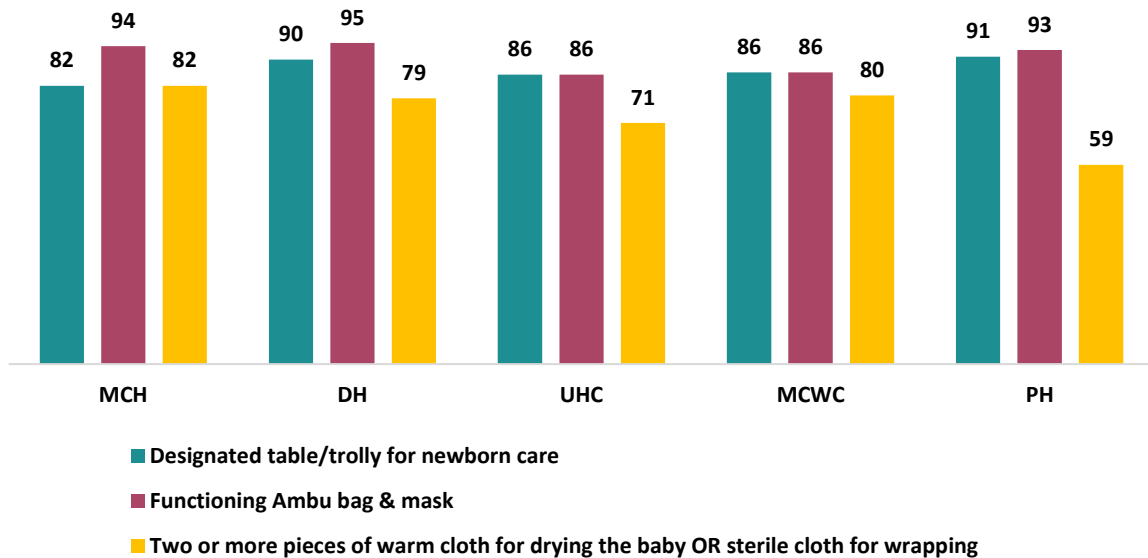


Fig: 5.2 Availability of equipment/logistics to provide ENC, among facilities providing CS services, presented in %

5.3 Availability of equipment/logistics to provide ENC

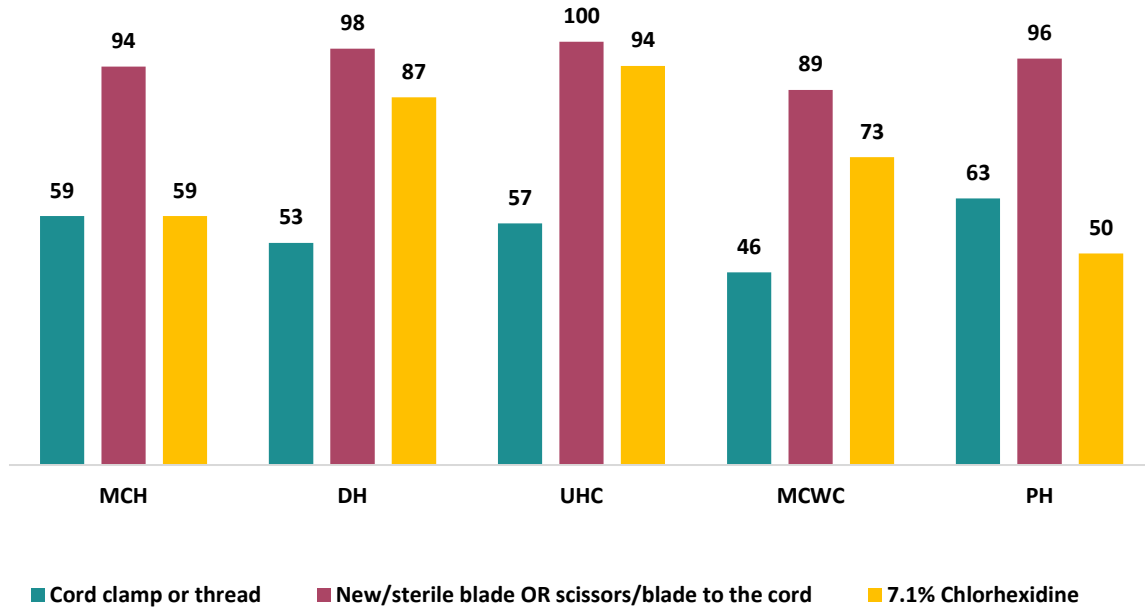
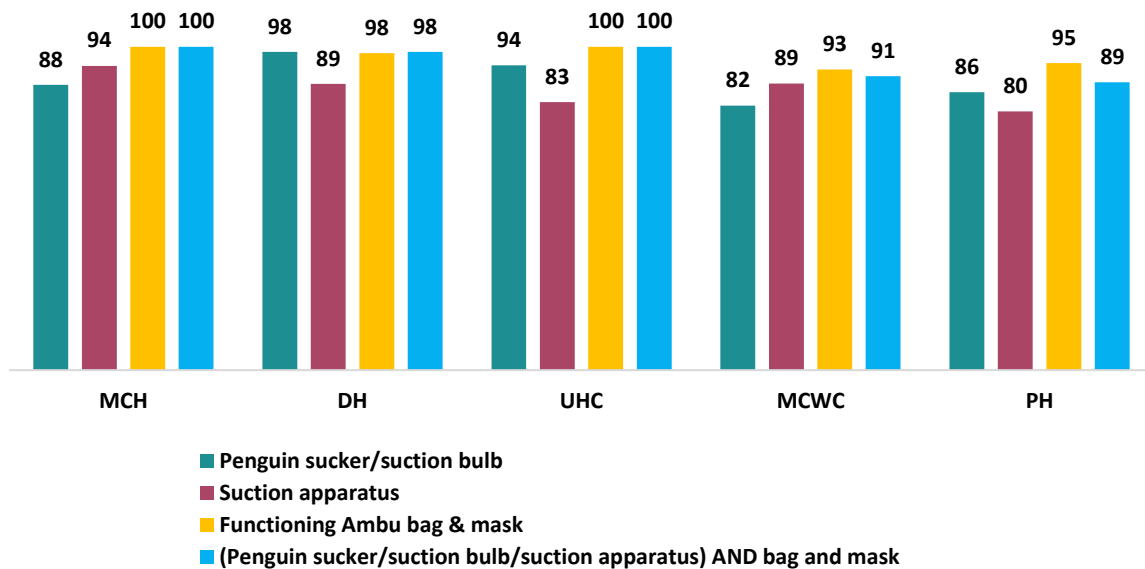


Fig: 5.3 Availability of equipment/logistics to provide ENC, among facilities providing CS services, presented in %

5.4 Availability of equipment/logistics to provide resuscitation



5.4 Availability of equipment/logistics to provide resuscitation, among facilities providing CS services, presented in %

5.5 Availability of equipment/logistics to oxygen

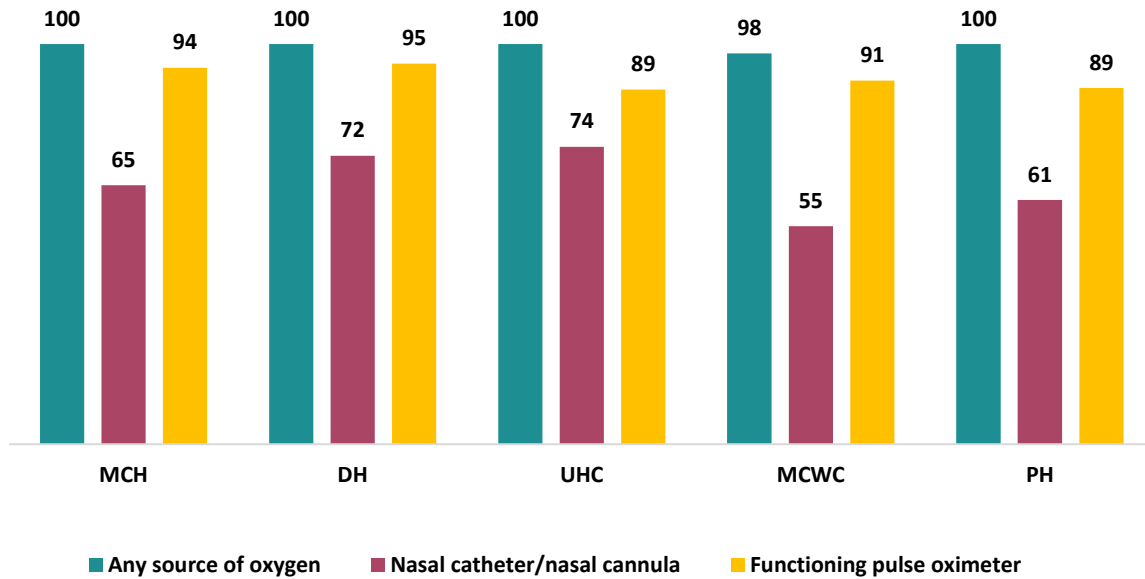


Fig: 5.5 Availability of equipment/logistics to oxygen, among facilities providing CS services, presented in %

5.6 Availability of service register

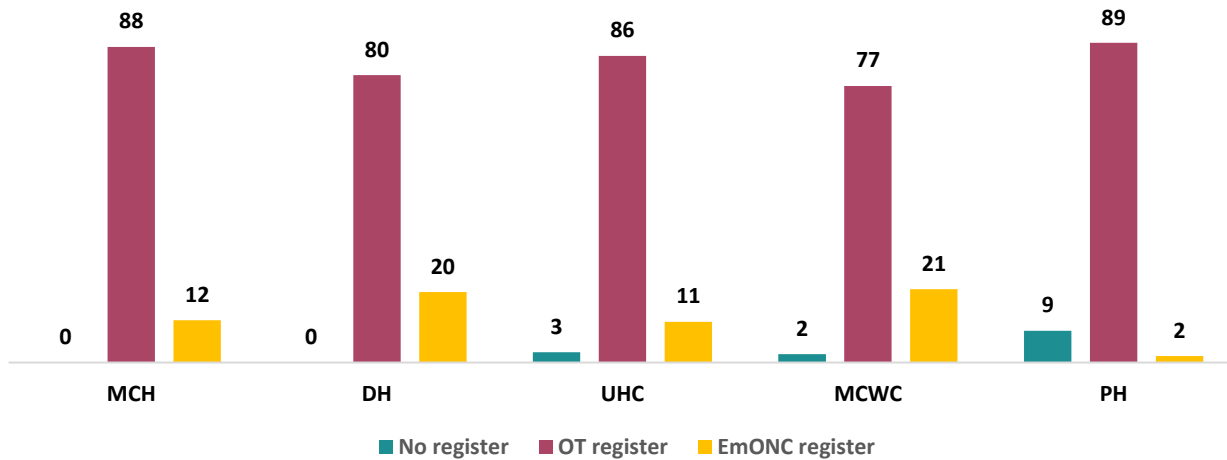


Fig 5.6 Availability of service register, among facilities providing CS services, presented in %

6. Kangaroo Mother Care (KMC)

Key Findings

- Among the various types of healthcare facilities, UHCs exhibit the highest percentage of Kangaroo Mother Care (KMC) availability, standing at 61%. DHs, PHs, and Maternal and MCWCs offer KMC services at rates of 58%, 56%, and 27% respectively. Notably, UHFWCs, USCs, and CCs do not currently provide KMC services. (Figure 6.1)
- Among facilities, 81% of MCHs, 78% of DHs, and 77% of UHCs have trained staffs in KMC. MCWCs and PHs exhibit a lower range of 27% to 56%. For KMC, PHs have no more than one trained staff. In contrast, MCHs, DHs, MCWCs, and UHCs have trained staff ranged exceeding one, from 7% to 76% of the facilities. (Figure 6.2)
- MCHs, DHs, MCWCs, UHCs, and PHs have functioning baby weighing scales, with a range spanning from 27% to 71% of facilities. (Figure 6.3)
- MCHs have a universal access rate of 91% for KMC binders. In comparison, DHs, UHCs, MCWCs, and PHs have varied ranged from 18% to 80%. In terms of the availability of armchair reclining positions, MCHs lead with 71%, followed by DHs at 36%, UHCs at 19%, MCWCs at 37%, and PHs at 9%. Functioning televisions are found in MCHs, DHs, MCWCs, and PHs, with a range of 20% to 43% of facilities, and, no UHCs are reported to have a functioning television. (Figure 6.4)
- The availability of NG tubes is observed across MCHs, DHs, UHCs, MCWCs, and PHs, ranging from 19% to 67%. For, syringes or droppers for feeding, MCHs lead with the highest value of 52% availability. DHs, UHCs, MCWCs, and PHs have this at rates of 29%, 48%, 23%, and 27%, respectively. Additionally, MCHs, DHs, UHCs, MCWCs, and PHs provide cups or spoons for feeding, with availability from 18% to 62% across facilities. (Figure 6.5)
- All MCHs have KMC register, whereas DHs, MCWCs, and UHCs maintain this register in 88.1%, 74.3%, and 59.3% of facilities. However, PHs have this register available in only 18.2%. As for KMC booklets, facilities, including MCHs, DHs, UHCs, MCWCs, and PHs, have availability ranging from 7.4% to 38.1%. (Figure 6.6)
- Among the surveyed facilities, including MCHs, DHs, UHCs, MCWCs, and PHs, the availability of KMC booklets for mother ranged from 18% to 62%. Additionally, the availability of KMC flip charts spans from 9% to 67% of facilities, while the availability of KMC feeding charts ranged from 9% to 38% of facilities. (Figure 6.7)

- For KMC which was provided in last three months; all the MCHs fulfill this interim KMC service to the Preterm and LBW babies. DHs also exhibit universal service rate, with 93% of facilities offering KMC during this period. Meanwhile, other facilities, including UHCs, MCWCs, and PHs, have provided this service at rates ranging from 33% to 76% of facilities. (Figure 6.8)

6.1 KMC service availability

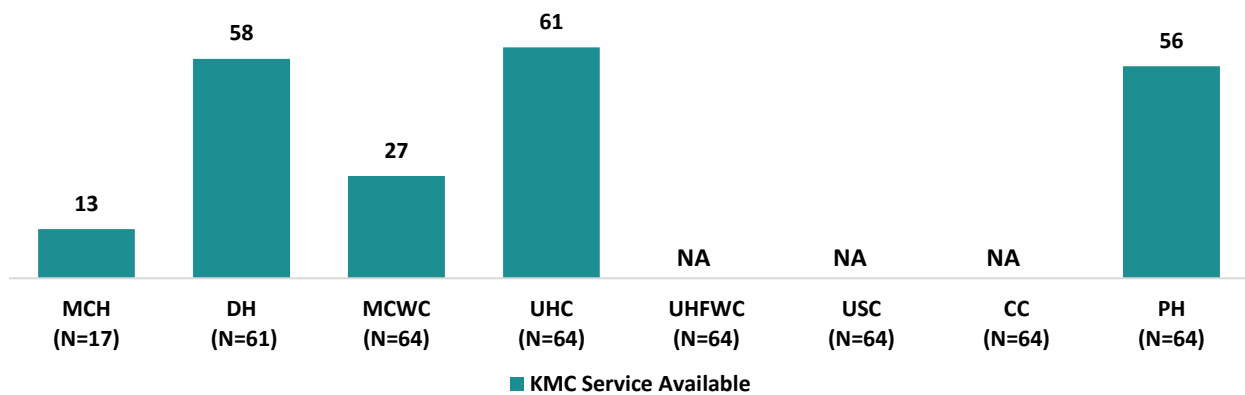


Fig: KMC service availability, among facilities surveyed, presented in %

6.2 Availability of KMC trained staff

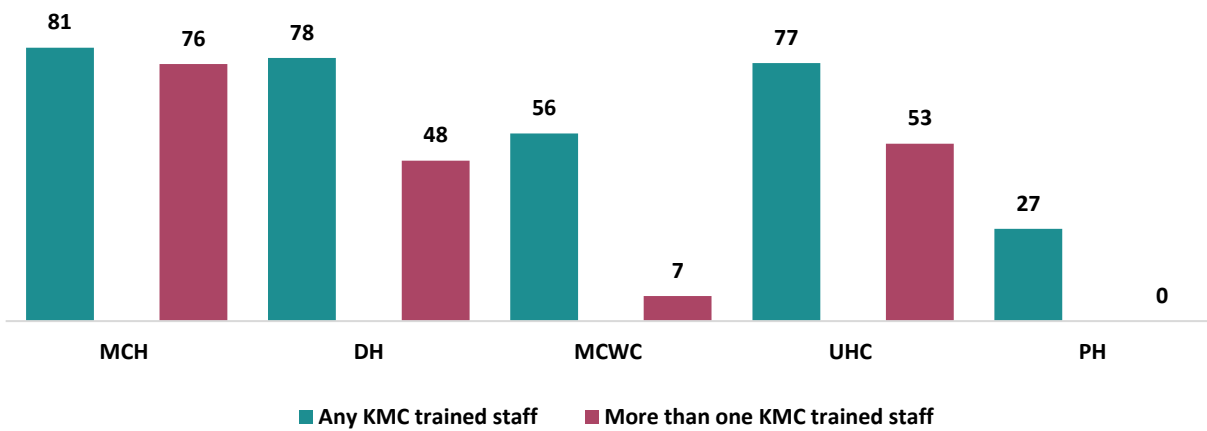


Fig 6.2 Availability of KMC trained staff, among facilities providing KMC services, presented in %

6.3 Availability of functioning baby weighing scale (Digital/Analogue)

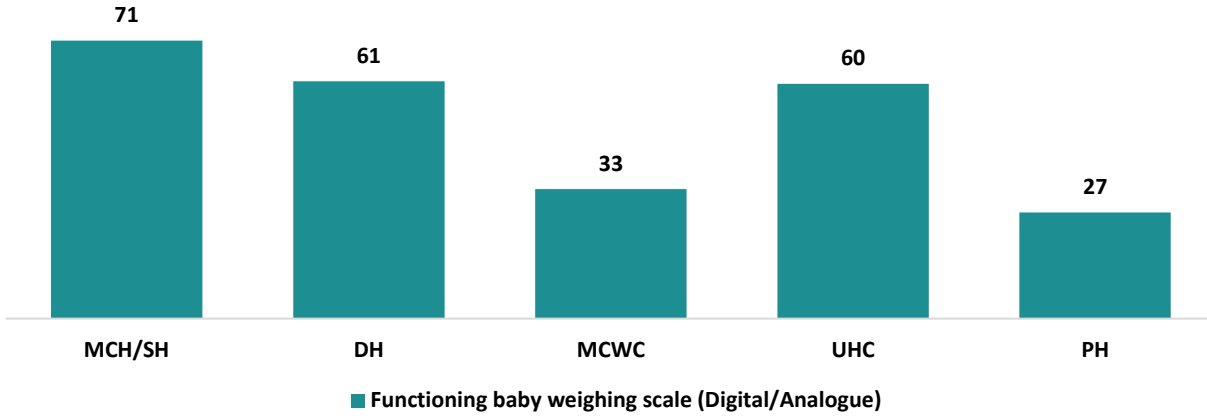


Fig 6.3 Availability of functioning baby weighing scale (Digital/Analogue), among facilities providing KMC services, presented in %

6.4 Availability of equipment/logistics to provide KMC

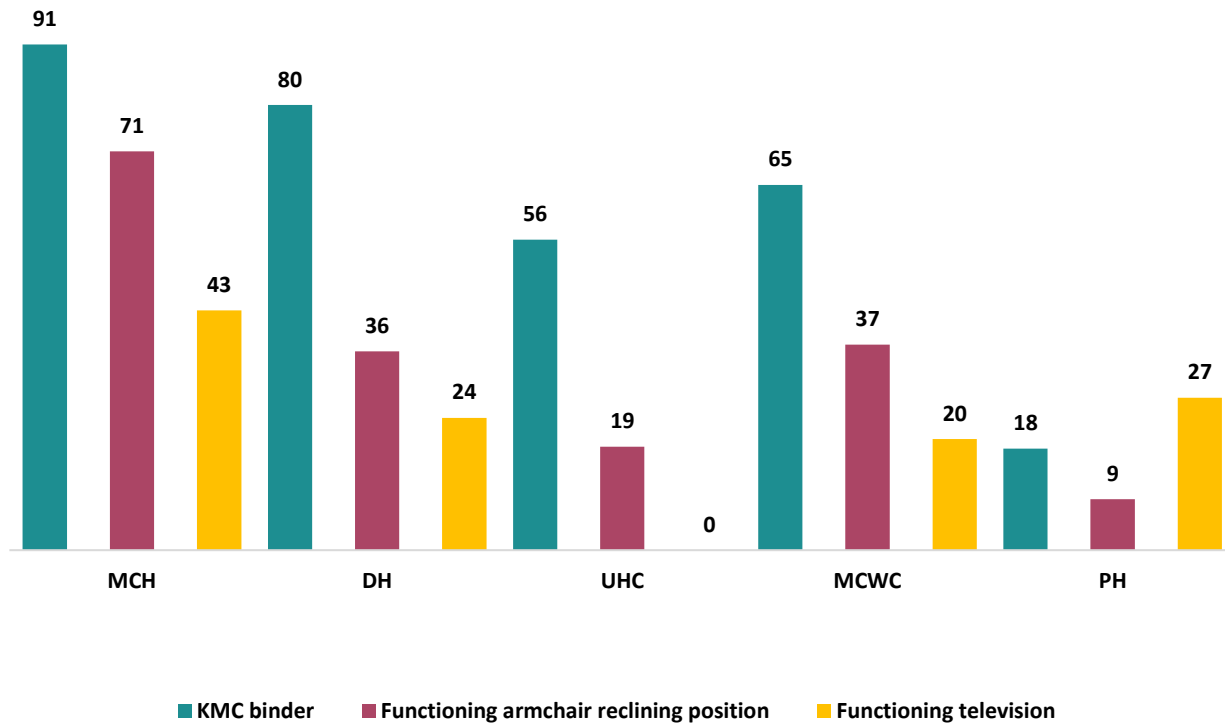


Fig 6.4 Availability of equipment/logistics to provide KMC, among facilities providing KMC services, presented in %

6.5 Availability of equipment/logistics to provide KMC

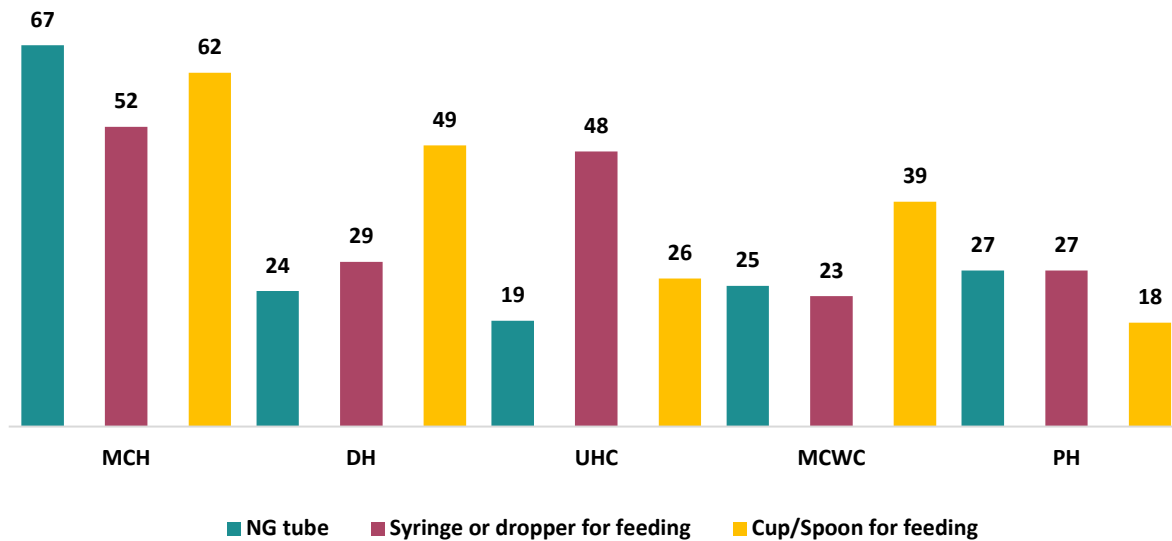


Fig 6.5 Availability of equipment/logistics to provide KMC, among facilities providing KMC services, presented in %

6.6 Availability of KMC job aids

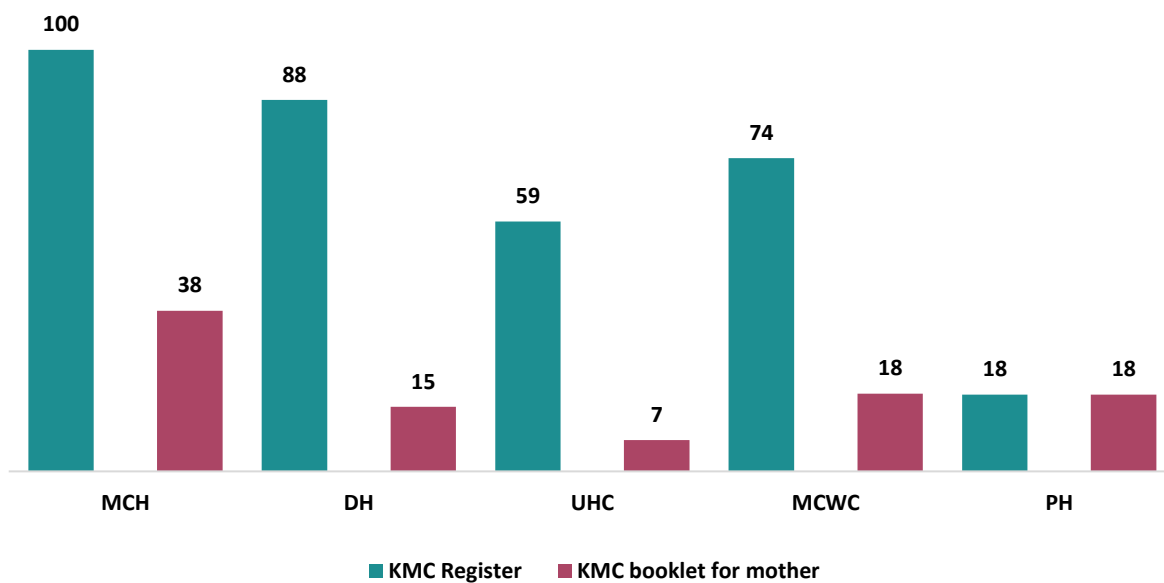


Fig 6.6 Availability of KMC job aids, among facilities providing KMC services, presented in %

6.7 Availability of KMC job aids

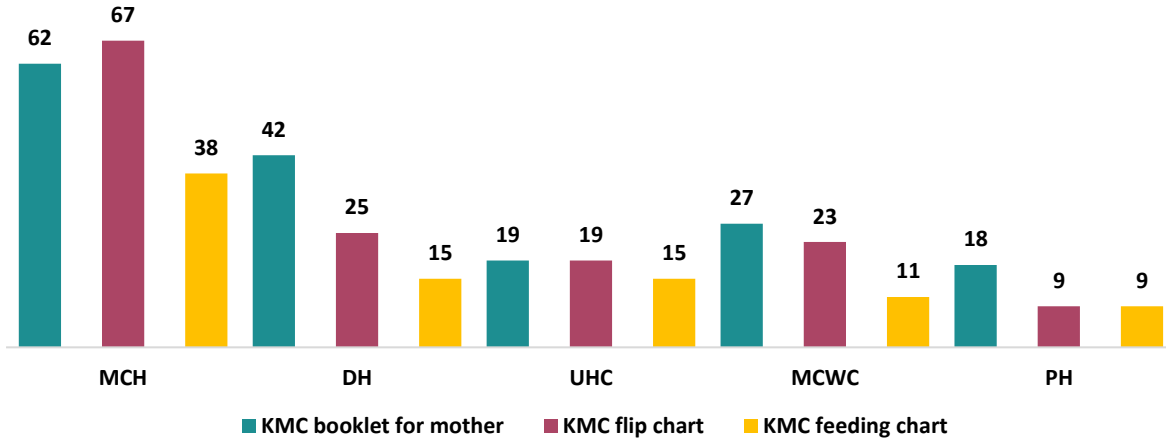


Fig: 6.7 Services provided in the last three months, among facilities providing KMC services, presented in %

6.8 Services provided in the last three months

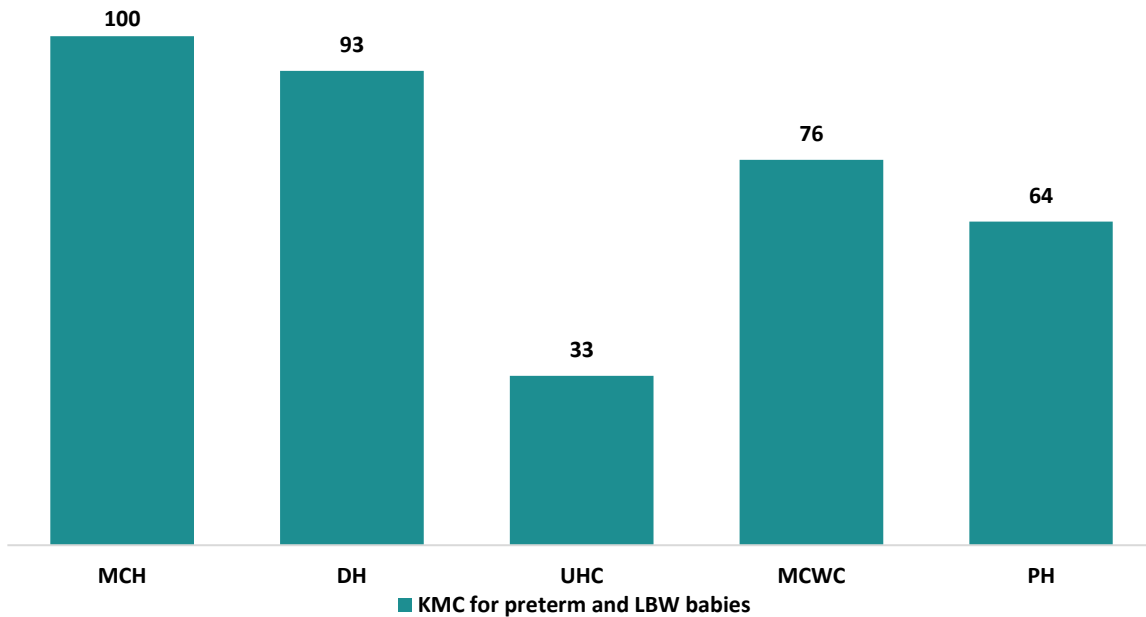


Fig: 6.8 Services provided in the last three months, among facilities providing KMC services, presented in %

7. Inpatient Management of Newborn Illnesses

Key Findings

- Inpatient newborn service is widely accessible in healthcare facilities. Specifically, MCHs, DHs, and UHCs have this with universal coverage from 94% to 98%. But, PHs provide this service in only 33% of their facilities. (Figure 7.1)
- Among the surveyed facilities, the provision of oral antibiotics in the last three months ranged from 50% to 76% in MCHs, DHs, UHCs, and PHs. Injectable antibiotics (IM) are given at a rate ranging from 25% to 58.7% across the same facilities. However, for IV antibiotics, all PHs have provided this service in the last three months, DHs have achieved a universal coverage rate of 91.5%, and MCHs and UHCs have coverage rates of 93.8% and 87.3%. As for oxygen therapy, it is universally available in all MCHs, DHs, and PHs. In UHCs, oxygen therapy has been available for the past three months in 85.7% of the facilities. (Figure 7.2)
- For the availability of antibiotics, Inj. Ampicillin is available in 25% MCHs, 20.3% DHs, 55.6% UHCs and 19% PHs. However, Inj. Gentamicin is available in 95.2% PHs, 88.9% UHCs, 75% MCHs and 67.8% DHs. For oral amoxicillin MCHs, DHs, UHCs have a range from 23.7% to 37.5% and PHs have a universal coverage of 90.5%. In case of (Ampicillin/Amoxicillin) + Gentamicin, the MCHs, DHs, UHCs, and PHs have ranged from 23.8% to 81% of facilities. (Figure 7.3)
- DHs exhibit a universal access rate of 91.5% for functioning baby weighing scales. Meanwhile, MCH, UHCs, and PHs have access rates of 87.5%, 42.9%, and 33% respectively. In terms of accessing the ARI timer, there is good coverage across all these facilities. Specifically, DHs and PHs both have universal access rates of 91.5% and 90.5% respectively. MCHs and UHCs also have rates of 81.2% and 87.3%. However, the availability of height or length boards is less likely in these hospitals which range from 4.8% to 69.5%, for MCHs, DHs, UHCs, and PHs. (Figure 7.4)
- For the availability of equipment/logistics, DHs, UHCs, and PHs have the universal rate of available thermometers at respectively 93.2%, 96.8%, and 90.5% facilities. For, MCHs functioning thermometer is available at 81.2% of facilities. MCHs, DHs, UHCs, and PHs have good universal coverage of functioning stethoscopes which ranged from 90.5% to 98.4%. For functioning torches, the MCHs, DHs, UHCs, and PHs have a range from 71.4% to 87.5% facilities. (Figure 7.5)

- DHs, and UHCs have universal coverage of functioning nebulizers in 93% and 92%, whereas PHs have it in 86% of facilities. For, Functioning glucometer, DHs, UHCs, and PHs have in the facilities respectively 46%, 70% and 67%. (Figure 7.6)
- 81.2% MCHs, 52.5% DHs, 49.2% UHCs, and 14.3% PHs have the functional pulse oximeter; where for the same facilities to have the nasal catheter/cannula ranged from 38.1% to 57.1%. (Figure 7.7)
- All MCHs, DHs, UHCs, and PHs have access to any source of oxygen, with a universal coverage rate of 100%. However, the availability of oxygen concentrators in these facilities ranged from 19% to 57%. (Figure 7.8)
- For the availability of generators or solar systems in the surveyed facilities, PHs have the highest availability at 95% with universal coverage, and as follows: MCHs, DHs, and UHCs have a rate of 69%, 59%, and 76%. (Figure 7.9)

7.1 Inpatient newborn service availability

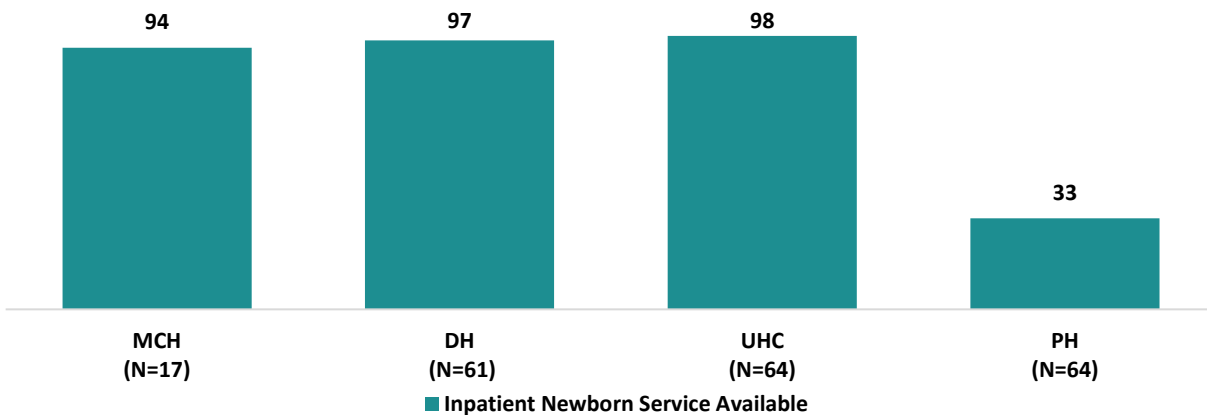


Fig: 7.1 Inpatient newborn service availability, among facilities surveyed, presented in %

7.2 Services provided in the last three months

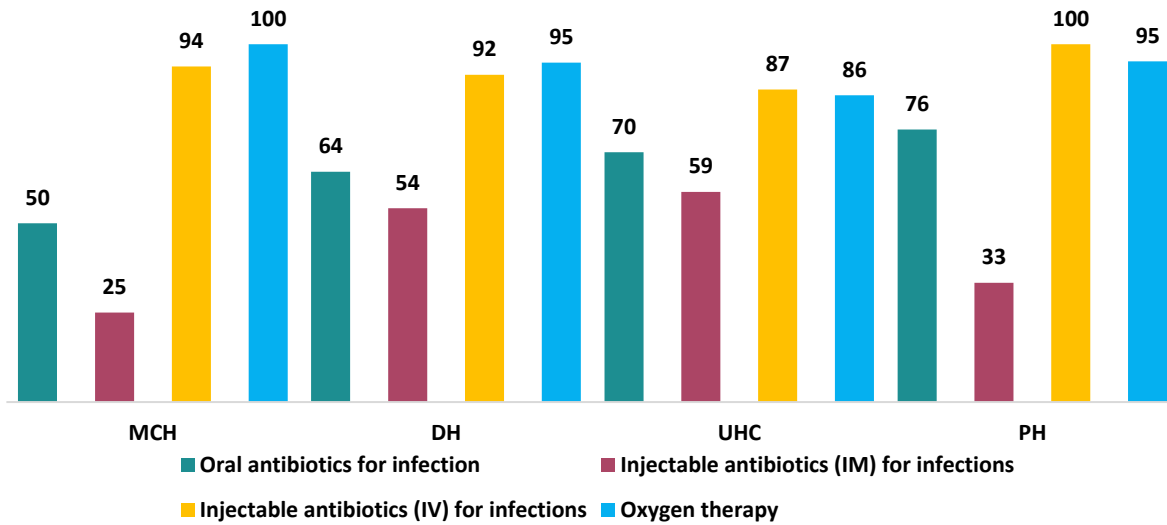


Fig: 7.2 Services provided in the last three months, among facilities providing inpatient newborn services, presented in %

7.3: Availability of antibiotics

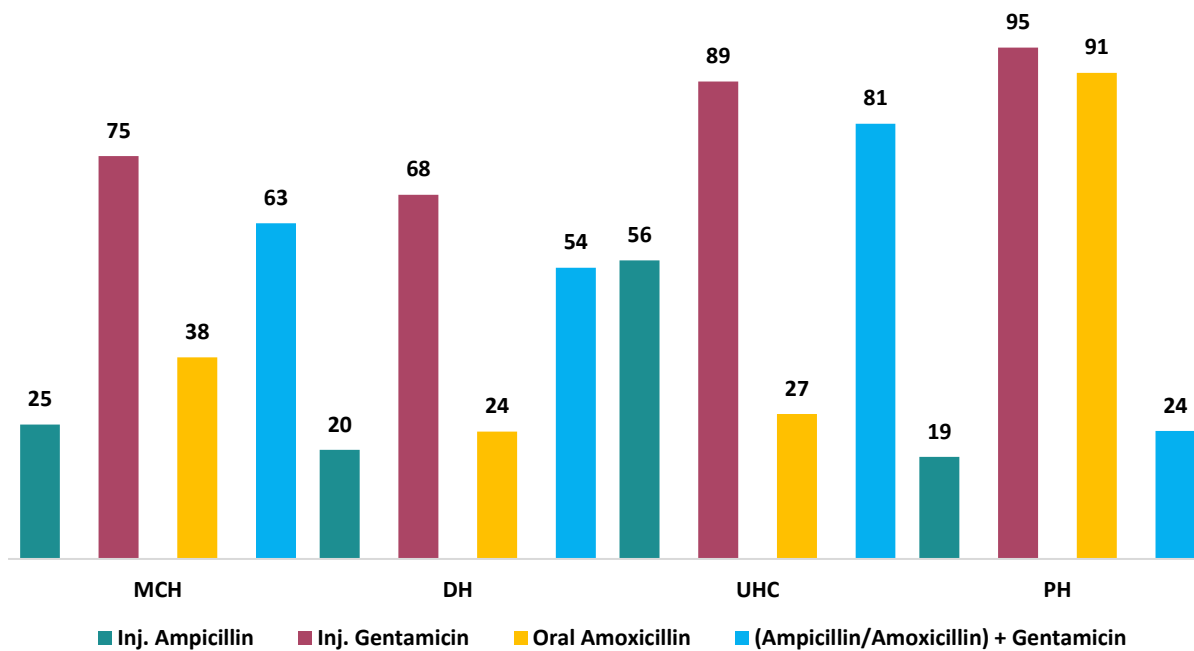


Fig: 7.3: Availability of antibiotic, among facilities providing inpatient newborn services, presented in %

7.4: Availability of equipment/logistics

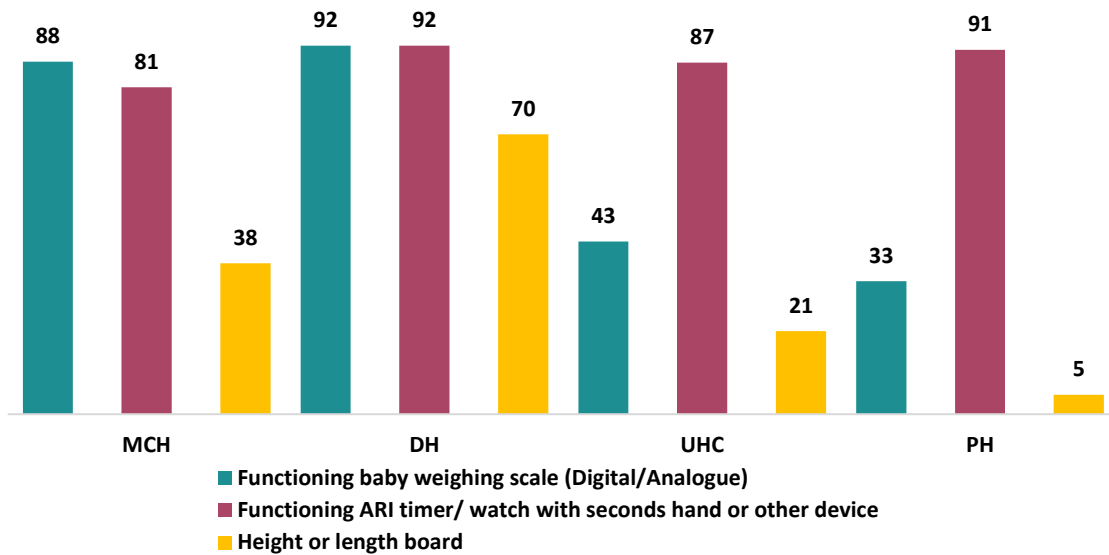


Fig: 7.4: Availability of equipment/logistics, among facilities providing inpatient newborn services, presented in %

7.5: Availability of equipment/logistics

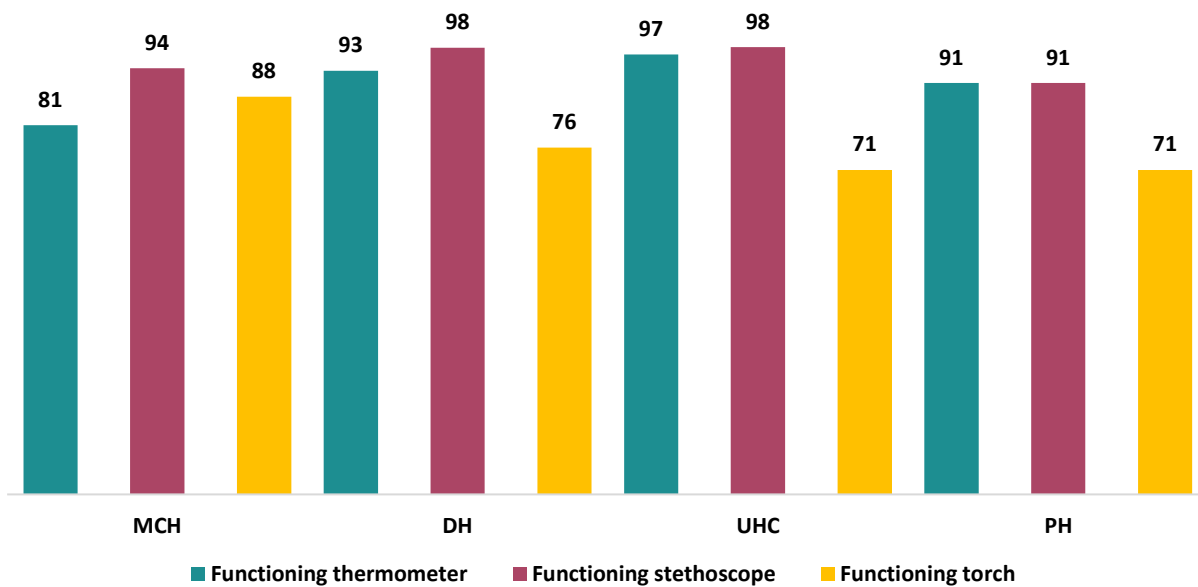


Fig: 7.5: Availability of equipment/logistics, among facilities providing inpatient newborn services, presented in %

7.6: Availability of equipment/logistics

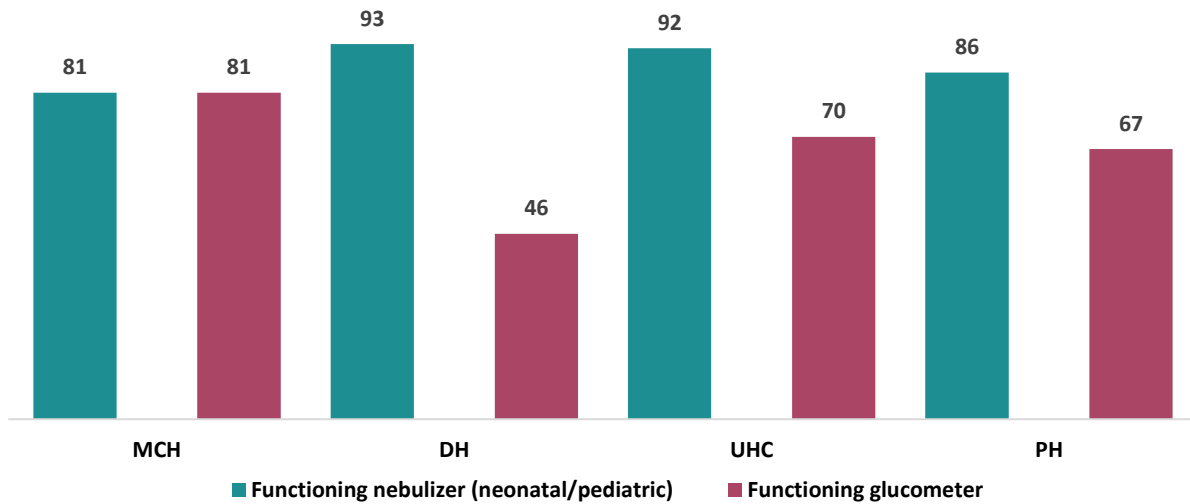


Fig: 7.6: Availability of equipment/logistics, among facilities providing inpatient newborn services, presented in %

7.7: Availability of equipment/logistics to oxygen

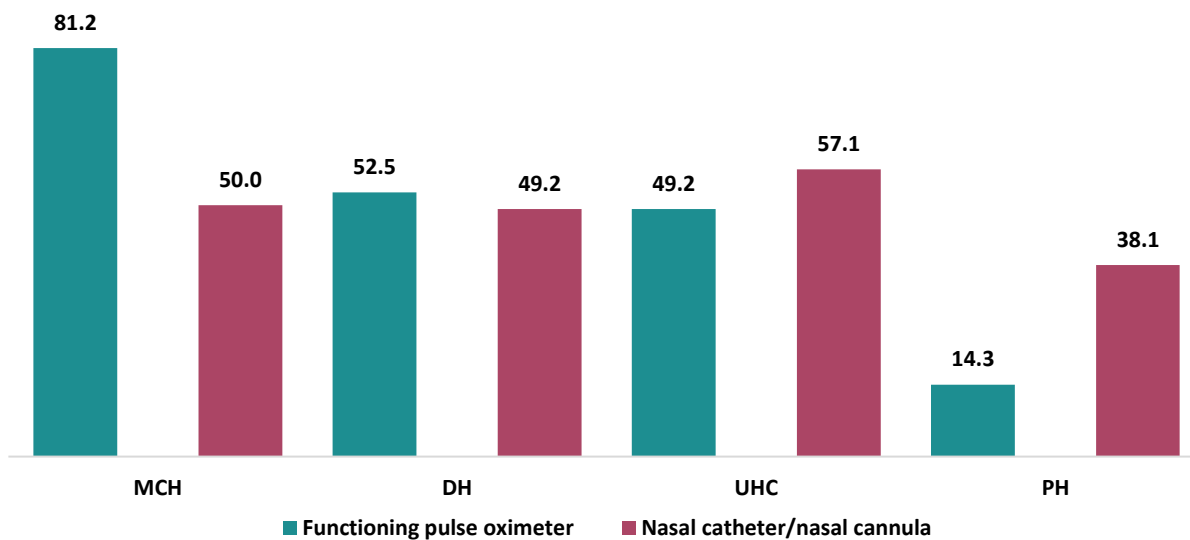


Fig: 7.7: Availability of equipment/logistics to oxygen, among facilities providing inpatient newborn services, presented in %

7.8: Availability of equipment/logistics to oxygen

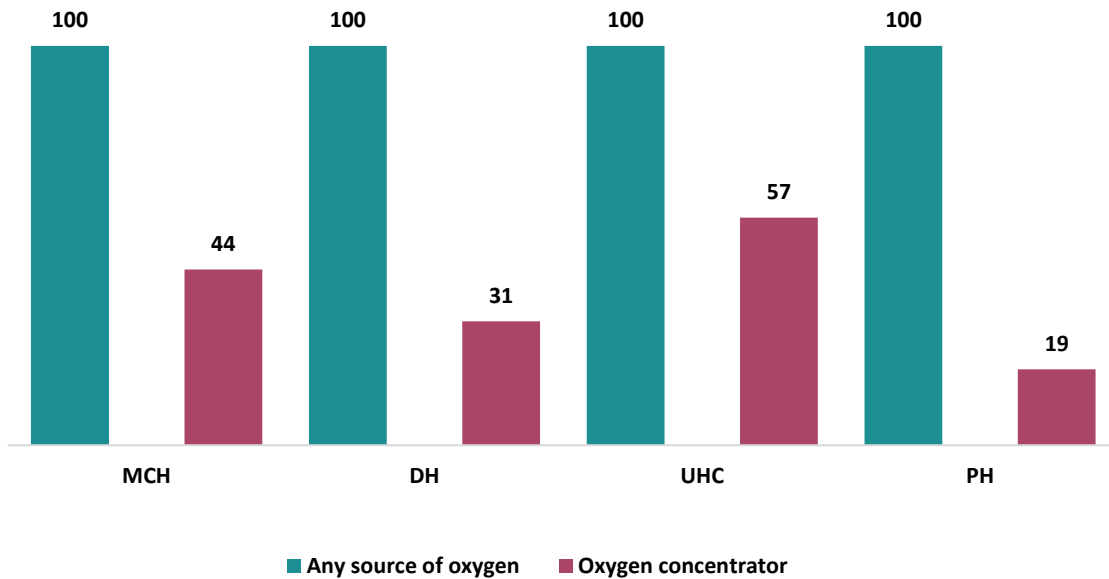


Fig: 7.8: Availability of equipment/logistics to oxygen, among facilities providing inpatient newborn services, presented in %

7.9: Availability of generator/solar system

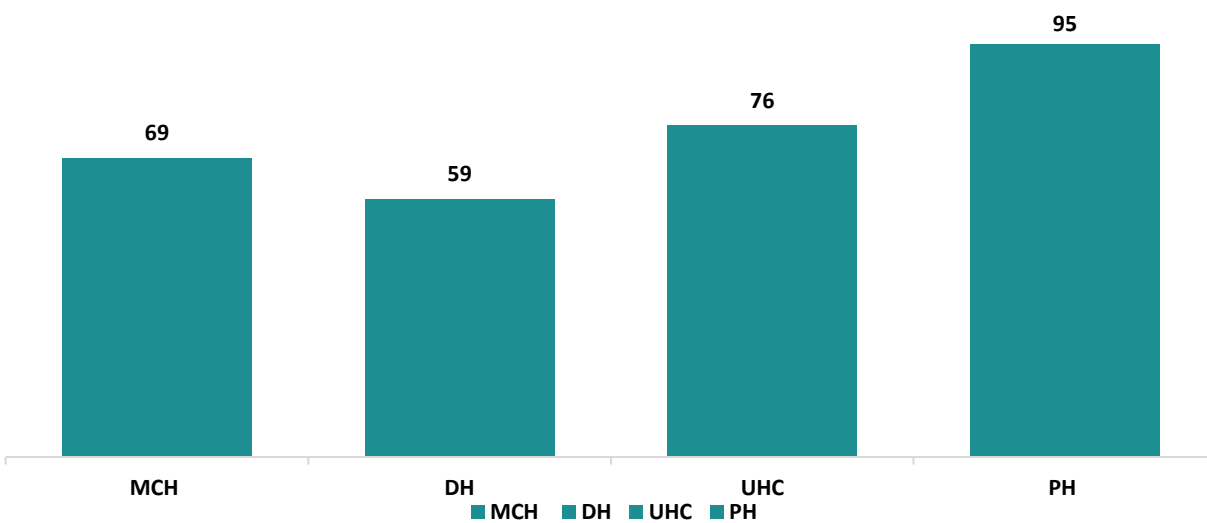


Fig: 7.9: Availability of generator/solar system, among facilities providing inpatient newborn services, presented in %

8. SCANU

Key Findings

- All District Hospitals (DHs) have any Neonatology/Paediatrics consultant. Among other facilities, 94% have this consultant, resulting in a total universal coverage of 98%. Regarding ETAT/SOP training for Medical Officers (MO) or Nurses, 92% of DHs have this staff, along with 94% of other facilities, resulting in a universal coverage of 93%. For facilities with more than one ETAT/SOP trained MO or Nurse, this coverage is universal, with 92% for DHs, 94% for other facilities, and an overall universal coverage of 93%. (Figure 8.1)
- 97% of DHs, 100% of other facilities, and a total of 98% of health facilities have universal access to a functioning radiant warmer. However, for functioning incubators, only 21% of DHs, 56% of other facilities, and a total of 32% of health facilities have them available. All DHs and other facilities, totaling 100% of facilities, have a functioning LED phototherapy machine. (Figure 8.2)
- Among the surveyed facilities that offer SCANU services, 97% of District Hospitals (DHs) have a radiant warmer. Additionally, 100% of the remaining facilities, and in total, 98% of facilities providing SCANU services are equipped with a radiant warmer. (Figure 8.3)
- In terms of equipment and logistics for SCANU services, 87% of DHs, 94% of universal coverage for other hospitals, and a combined total of 90% of universal coverage of health facilities possess a functioning weighing scale. A functioning glucometer is accessible in 67% of DHs, 83% of other facilities, and in total, 72% of all facilities offering SCANU services. As for a functioning bilirubin meter, DHs, other facilities, and the total facilities have availability rates of 10%, 39%, and 19%, respectively. (Figure 8.4)
- Among the surveyed facilities providing SCANU services, 8% of District Hospitals (DHs), 33% of other facilities, and a total of 16% have a functioning blood gas analyzer. On the other hand, the availability of a functioning laryngoscope set in the same types of facilities ranged from 54% to 65%. In terms of functioning vital monitors (measuring NIBP, HR, SpO2, ECG, RR, Temp), they are present in 59% of DHs, 72% of other hospitals, and 63% of all facilities providing SCANU services. (Figure 8.5)
- In District Hospitals (DHs), the availability of a functioning penguin sucker is universal at 90%. For the remaining facilities and in total, this equipment ranged from 72% to 84%. As for functioning suction pumps, SCANU providing DHs, other facilities, and the total count all have a universal rate, standing at 97%, 100%, and 98% respectively. Furthermore, 95%

of DHs, 100% of other facilities, and 97% of the total surveyed SCANU-providing hospitals also meet the universal rate for accessing a functioning bag-mask. (Figure 8.6)

- Functioning pulse oximeter is present in 87% of District Hospitals (DHs), 89% of other hospitals, and a total of 88% of facilities. When equipped with a neonatal probe, DHs, other facilities, and SCANU providing facilities in total range from 72%, 83%, and 75% respectively. For nasal catheters/nasal cannulas, they are available in 69% of DHs, 67% of other facilities, and in total, 68% of SCANU-providing facilities. However, oxygen hoods are available in 56% of DHs, with a universal coverage rate of 94% in other facilities, and a total of 68% in all facilities. (Figure 8.7)
- District Hospitals (DHs), other facilities, and the total number of SCANU-providing hospitals all have access to some source of oxygen, with rates of 87%, 89%, and 88% respectively. However, when it comes to the availability of oxygen concentrators, DHs and other facilities range from 77% to universal coverage at 94%, totaling 83% of all facilities. In terms of functioning CPAP machines, 44% of DHs, 72% of other facilities, and a combined 53% of all facilities have the availability. (Figure 8.8)
- Regarding the availability of SCANU registers, which are present in 85% of District Hospitals (DHs), universally in 94% of other health facilities, and in a total of 88% of facilities providing SCANU services. (Figure 8.9)
- For service provision in the past three months, it has been observed that DHs, along with other healthcare facilities and a total count of SCANU-providing hospitals, have ensured universal accessibility to Oxygen therapy and IV antibiotics, ranging from 97% to 100%. Similarly, universal phototherapy services have been available at a rate of 94% to 95% across these three types of SCANU-providing facilities. Regarding incubator support, DHs have a 5% availability, while other facilities exhibit a 61% availability, resulting in an overall facility availability of 23%. (Figure 8.10)

8.1: Availability of trained SCANU staff

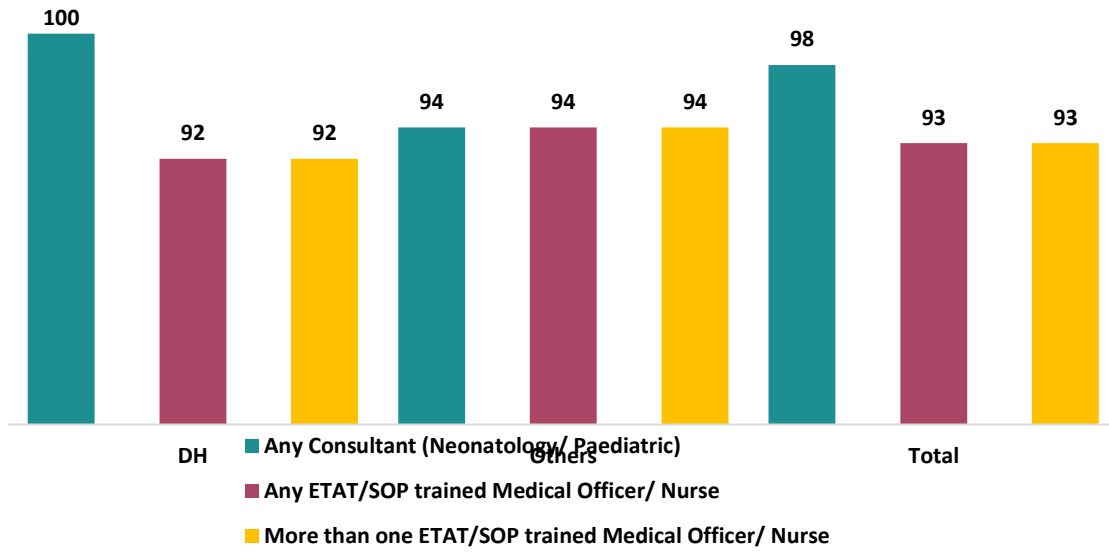


Fig: 8.1: Availability of trained SCANU staff, among facilities providing SCANU services, presented in %

8.2: Availability of equipment/logistics for SCANU

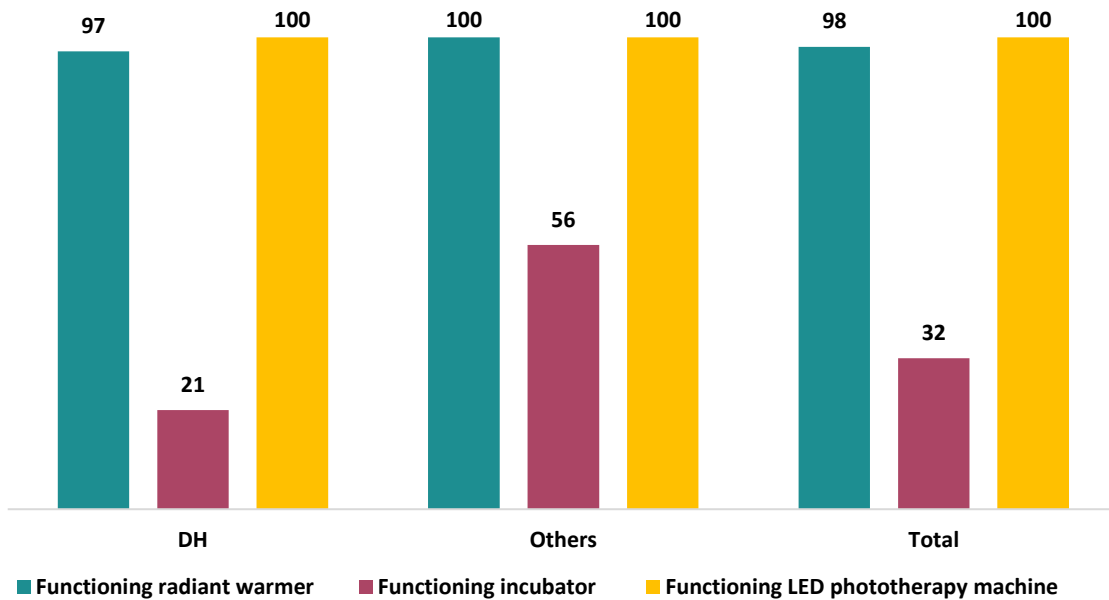


Fig: 8.2 Availability of equipment/logistics for SCANU, among facilities providing SCANU services, presented in %

8.3: Availability of radiant warmer

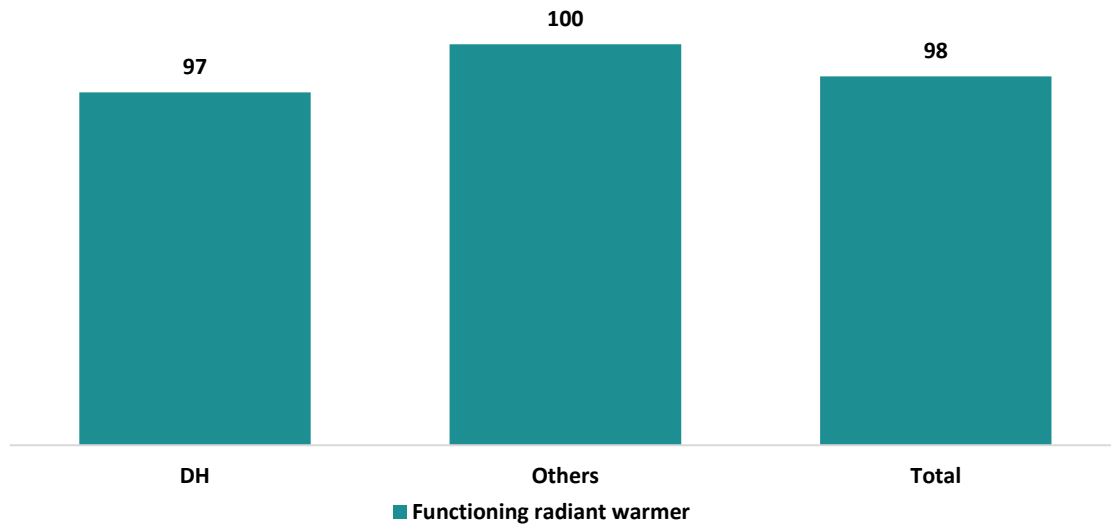


Fig: 8.3 Availability of radiant warmer, among facilities providing SCANU services, presented in %

8.4: Availability of equipment/logistics for SCANU

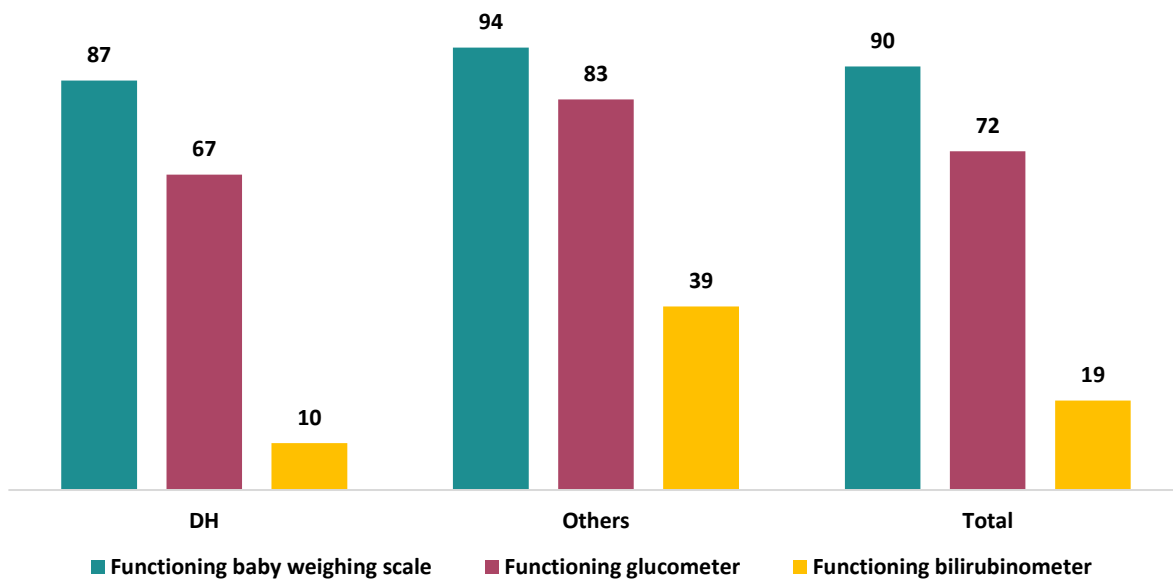


Fig: 8.4: Availability of equipment/logistics for SCANU, among facilities providing SCANU services, presented in %

8.5: Availability of equipment/logistics for SCANU

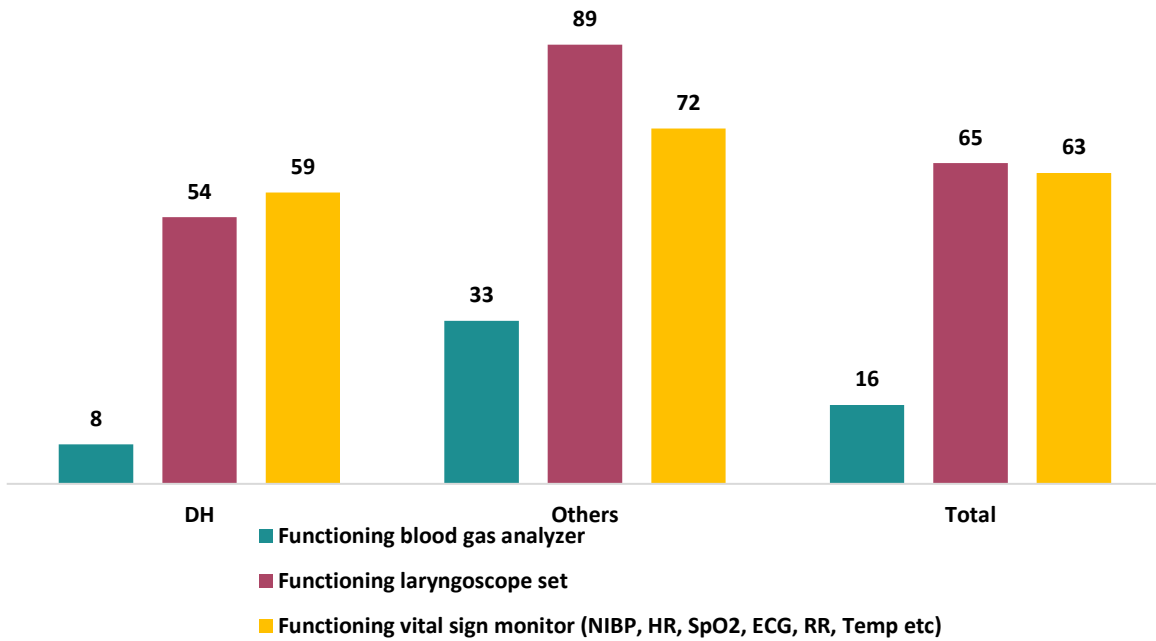


Fig: 8.5 Availability of equipment/logistics for SCANU, among facilities providing SCANU services, presented in %

8.6: Availability of equipment/logistics for SCANU

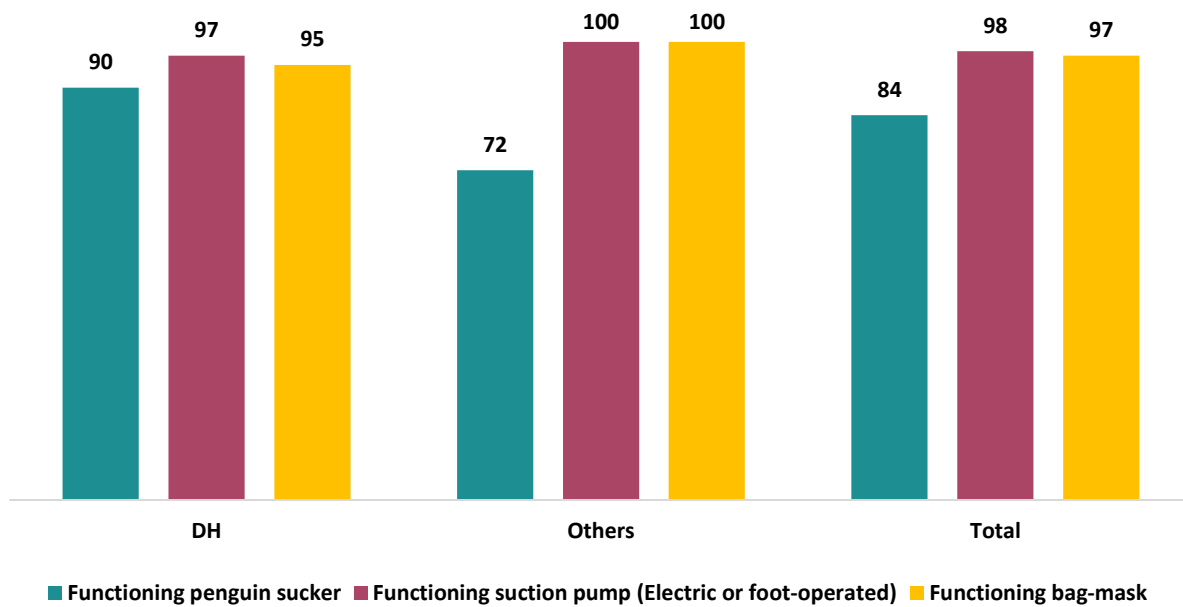


Fig: 8.6 Availability of equipment/logistics for SCANU, among facilities providing SCANU services, presented in %

8.7: Availability of equipment/logistics to Oxygen

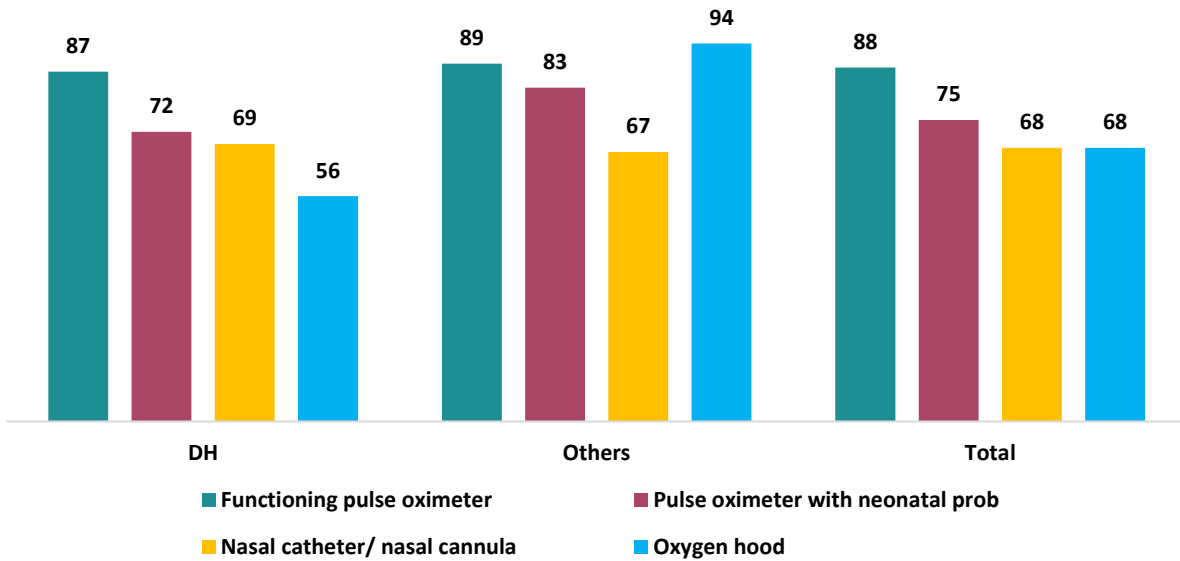


Fig: 8.7 Availability of equipment/logistics to Oxygen, among facilities providing SCANU services, presented in %

8.8: Availability of equipment/logistics to Oxygen

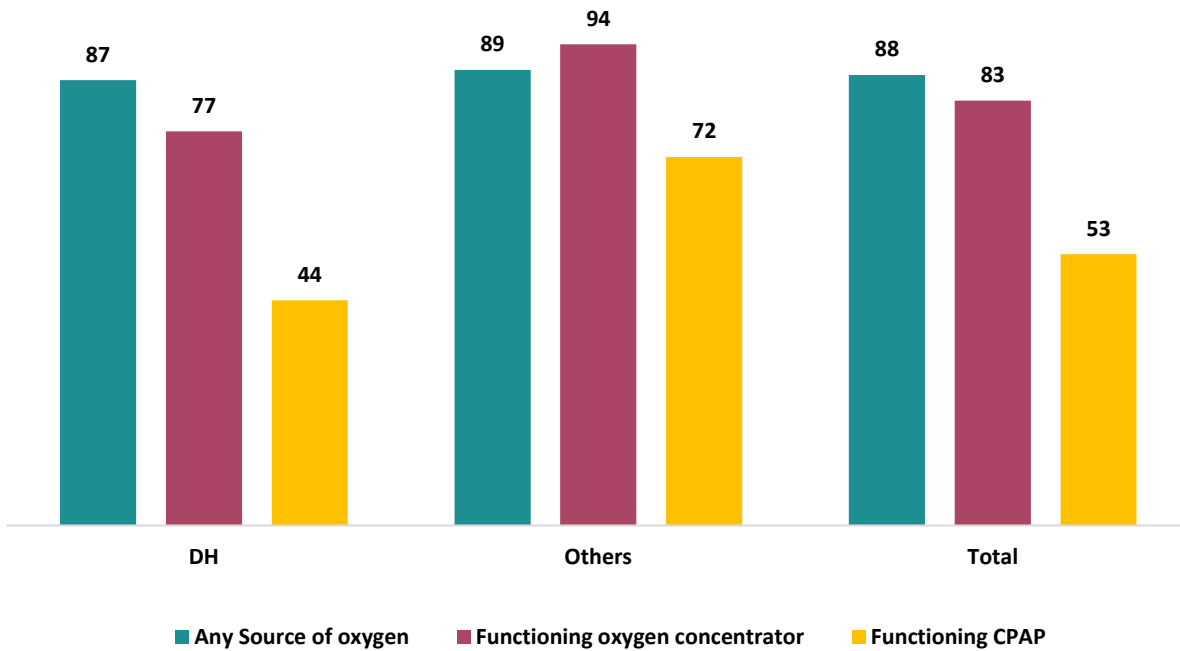


Fig: 8.8 Availability of equipment/logistics to Oxygen, among facilities providing SCANU services, presented in %

8.9: Availability of SCANU register

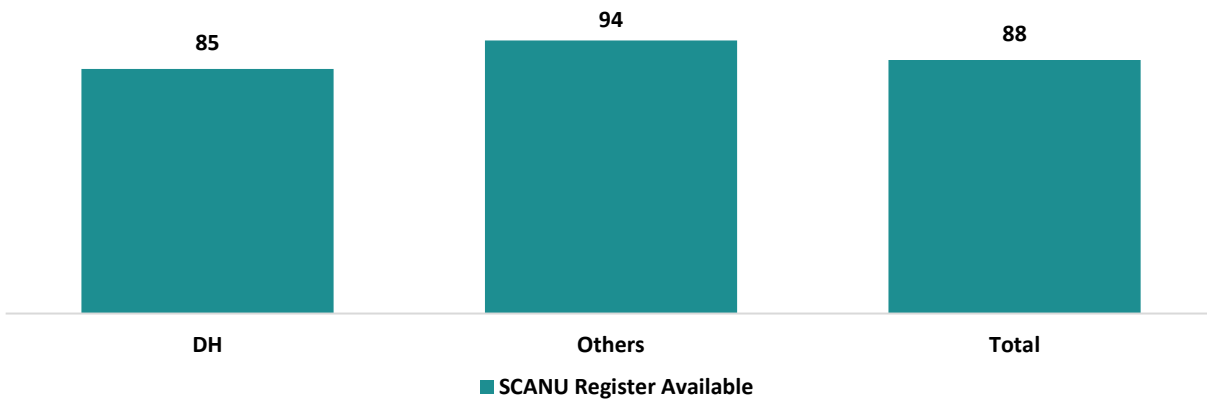


Fig: 8.9: Availability of SCANU register, among facilities providing SCANU services, presented in %

8.10: Services provided in the last three months

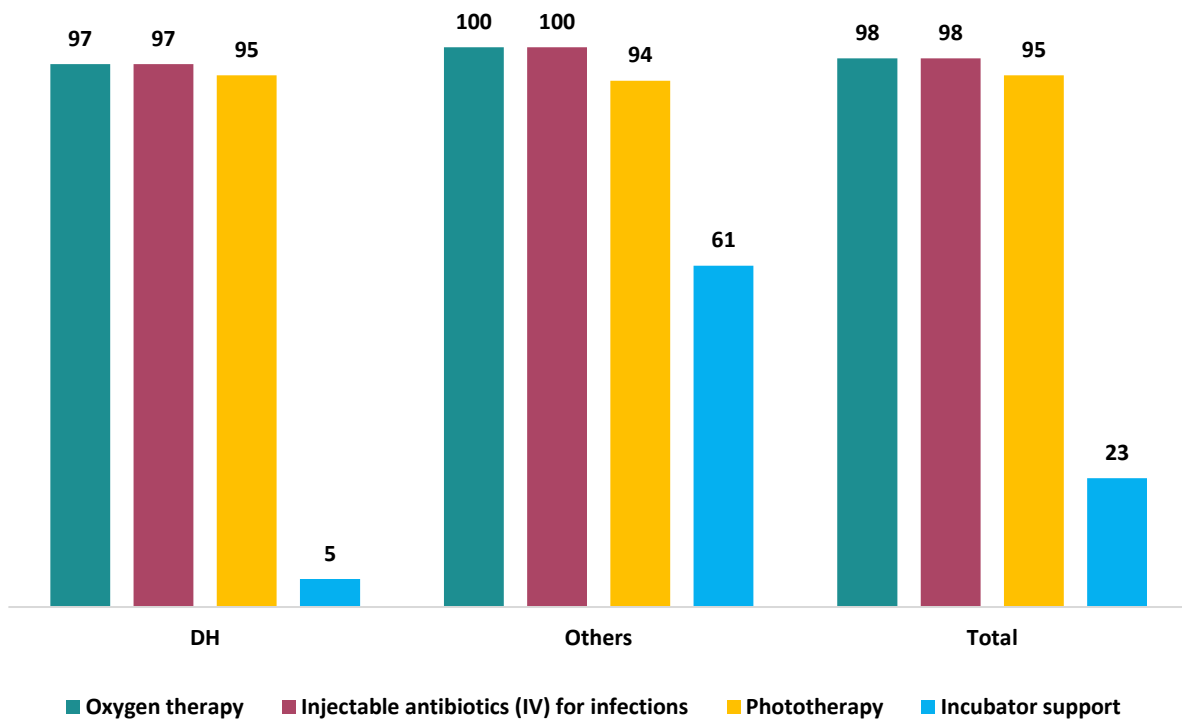


Fig: 8.10 Services provided in the last three months, among facilities providing SCANU services, presented in %

9. Outpatient Management of Newborn Illnesses/ IMCI

Key Findings

- Outpatient newborn services are provided at all MCHs, DHs, and UHCs. Additionally, 91% of MCWCs, 92% of UHFWCs, and 92% of USCs offer this service universally. CCs and PHs provide this service at rates of 83% and 66% respectively. (Figure 9.1)
- Out of the facilities providing outpatient newborn services, 47% of MCHs, 74% of DHs, 72% of MCWCs, 36% of UHCs, 53% of UHFWCs, 49% of USCs, and 12% of PHs. Community Clinics (CCs) do not have any staff trained in IMCI. Among MCHs, DHs, MCWCs, UHCs, USCs, and PHs, there is more than one trained staff for IMCI in a range from 3% to 43% of facilities. However, CCs and UHFWCs have not met this criterion, as they do not have more than one IMCI-trained staff. (Figure 9.2)
- In terms of provision, Inj. Ampicillin is available in 17.6% of MCHs, 13.1% of DHs, 31.2% of UHCs, 6.9% of MCWCs, 3.4% of UHFWCs, 8.5% of USCs, and 16.7% of PHs. Availability of Inj. Gentamicin varies, ranging from 3.4% to 76.5% across similar facilities. CCs do not have either of these medications. However, CCs, UHCs, MCWCs, and UHFWCs have universal access to oral Amoxicillin, with availability ranging from 91.5% to 98.1%. For MCHs, DHs, USCs, and PHs, availability ranged from 28.6% to 70.7%. Except for CCs (which do not have supply), MCHs, DHs, UHCs, MCWCs, UFWCs, USCs, and PHs have availability of (Ampicillin/Amoxicillin) + Gentamicin at rates of 70.6%, 50.8%, 73.4%, 43.1%, 27.1%, 3.4%, and 31% respectively. (Figure 9.3)
- The availability of functioning baby weighing scales is varied, with 94% in MCHs, 90% in DHs, 91% in UHCs, 45% in MCWCs, 66% in UHFWCs, 25% in USCs, 34% in CCs, and 62% in PHs. The presence of ARI timers ranged from 71% to 76.5% across these facilities. Access to a functioning thermometer is consistent, with availability ranging from 71% to 100% across all these facilities. Pulse oximeters are available in MCHs (41%), DHs (44%), UHCs (38%), MCWCs (36%), UFWCs (48%), USCs (25%), CCs (45%), and PHs (57%). (Figure 9.4)
- Regarding the availability of IMCI registers for infants aged 0-59 days, DHs and UHCs have achieved universal coverage with availability in 90% and 97% of services respectively. For MCHs, MCWCs, UHFWCs, USCs, and CCs, the availability ranged from 36% to 59%. However, PHs do not meet the criteria for having the IMCI register. The availability of IMCI chart booklets varies across these facilities, ranging from 2% to 69%. Likewise, the availability of IMCI referrals ranged from 2% to 47% among same of these types of facilities. (Figure 9.5)

- The provision of oral antibiotics is universally available in MCHs, with a 93% service rate in DHs and PHs. Upazila Health Complexes (UHCs), Mother and Child Welfare Centers (MCWCs), Upazila Family Welfare Centers (UHFWCs), Union Sub-Centers (USCs), and Community Clinics (CCs) have varying service rates, ranging from 40% to 89%. In terms of Injectable antibiotics (IM), MCHs, DHs, UHCs, MCWCs, UHFWCs, USCs, and PHs offer this service at rates ranging from 2% to 31%. CCs do not provide this type of medicine. (Figure 9.6)
- For service provision in last three months, all MCHs and UHCs have measured the weight of the newborn. However, DHS, MCWCs, UHFWCs, USCs, CCs, and PHs have wide coverage which ranged from 52.5% to 95.2%. Identification of danger sign of newborn are performed in all MCHs and this procedure is performed for the remaining other same types of facilities ranging to 66.1% to 98.4%. For respiratory assessment of newborns MCHs, DHs, UHCs have universal services which are respectively 94.1%, 96.7%, 95.3%. UHCs, MCWCs, UHFWCs, USCs, CCs and PHs perform this activity which ranged from 50.9% to 88.1%. (Figure 9.7)
- The temperature of newborns is universally measured in DHs (90.2%), UHCs (93.8%), and PHs (95.2%). In MCHs, UHFWCs, MCWCs, USCs, and CCs, this service is available in facilities ranging from 71.7% to 89.7%. As for oxygen saturation measurement of newborns, it is performed in MCHs (35.3%), DHs (54.1%), UHCs (40.6%), MCWCs (32.8%), UHFWCs (32.2%), USCs (11.9%), CCs (20.8%), and PHs (64.3%) of facilities. (Figure 9.8)

9.1: Outpatient newborn service availability

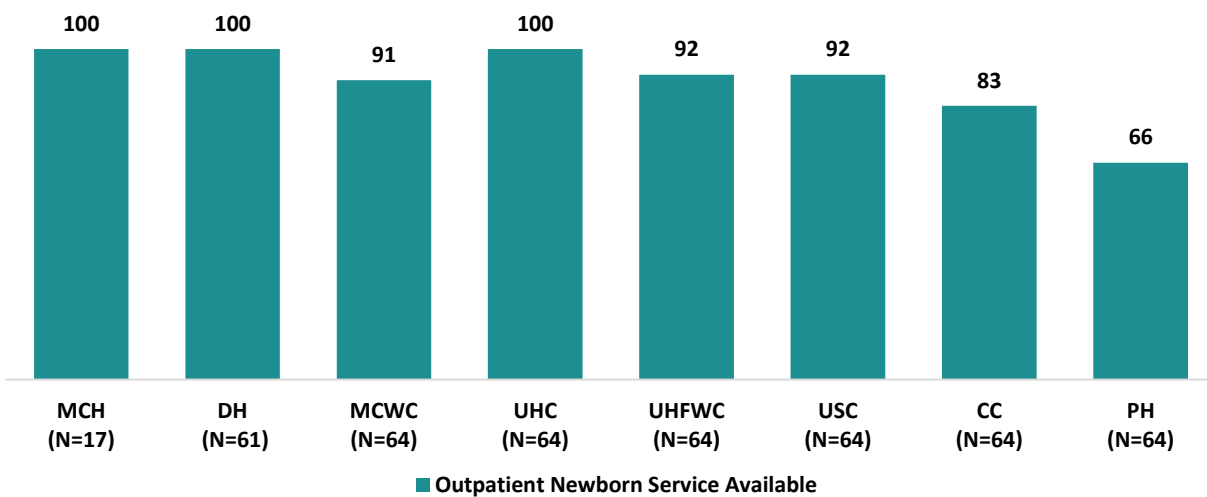


Fig: 9.1 Outpatient newborn service availability, among facilities surveyed, presented in %

9.2: Availability of IMCI trained staff

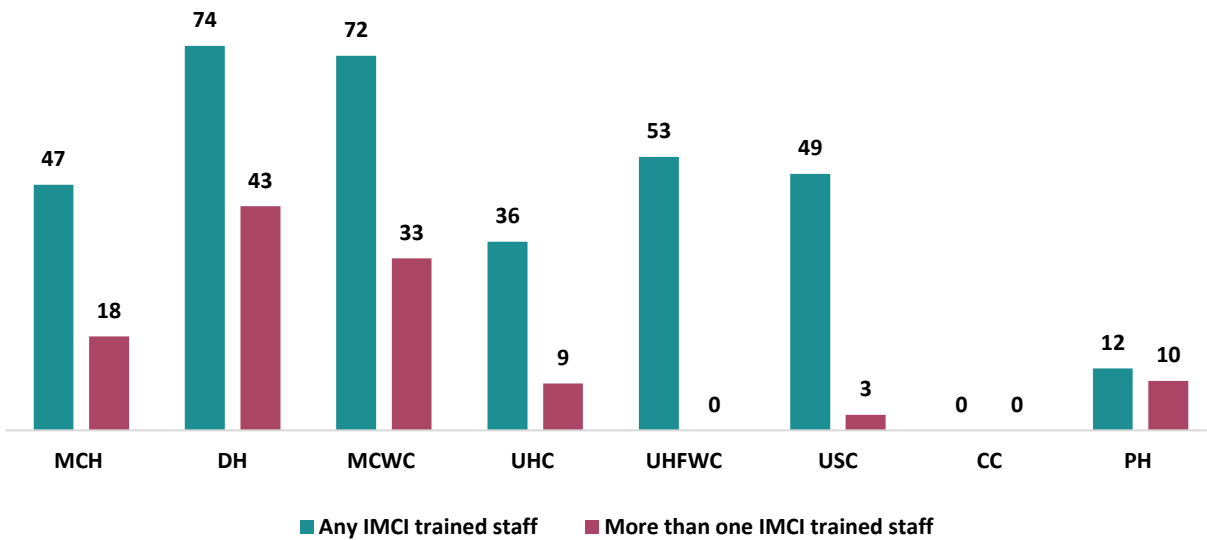


Fig: 9.2 Availability of IMCI-trained staff, among facilities providing outpatient newborn services, presented in %

9.3: Availability of antibiotics

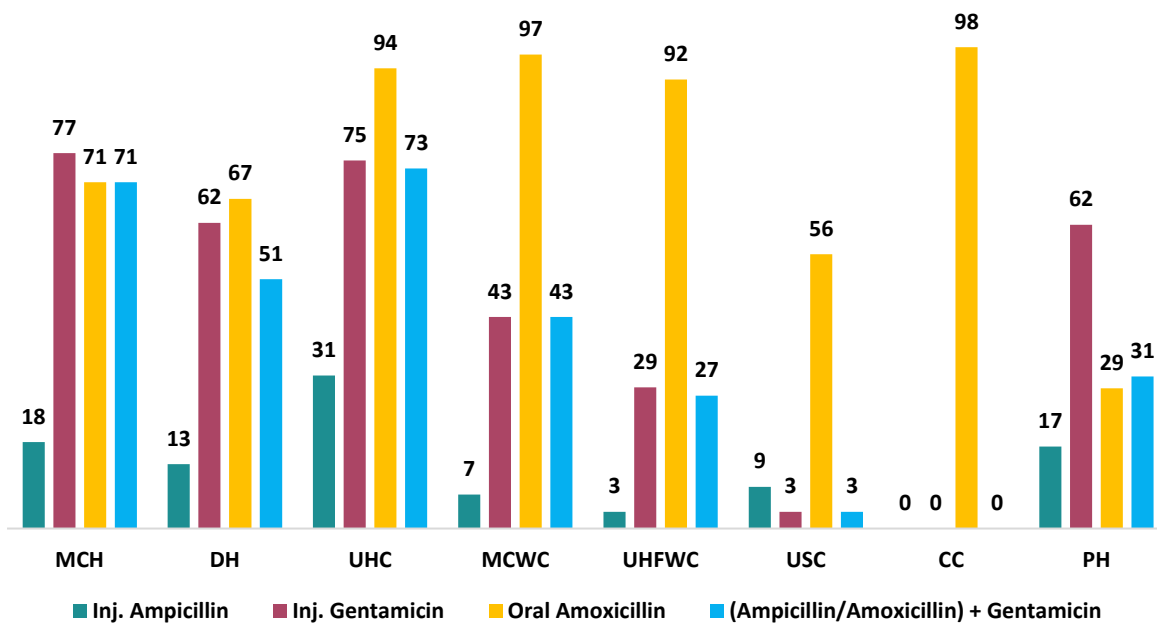


Fig: 9.3 Availability of antibiotics, among facilities providing inpatient newborn services, presented in %

9.4: Availability of equipment/logistics

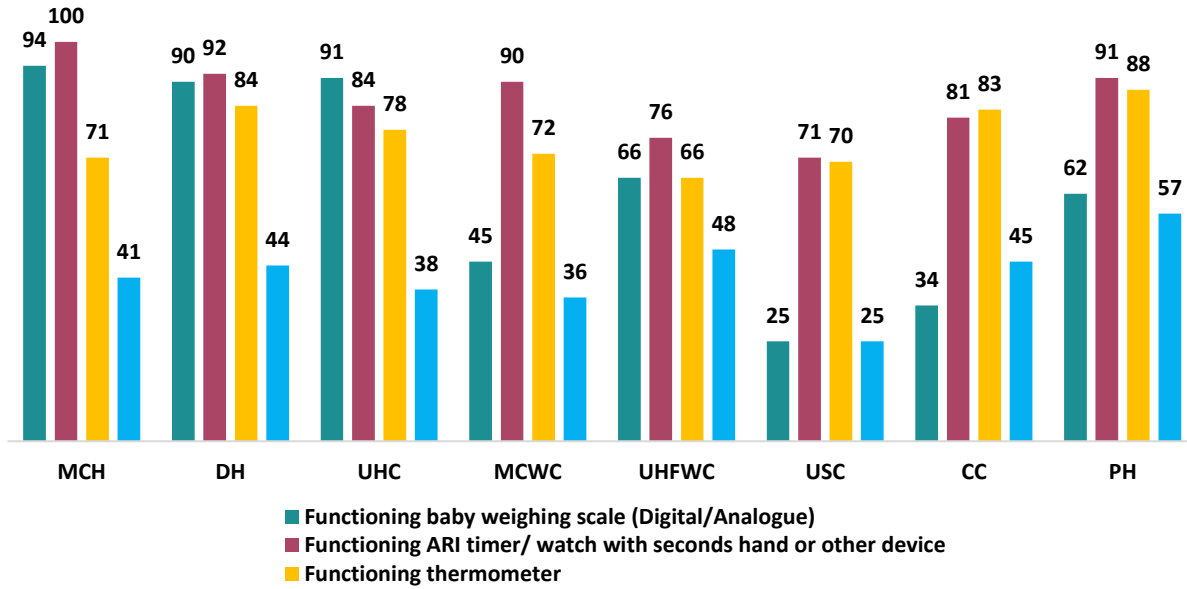


Fig: 9.4 Availability of equipment/logistics, among facilities providing outpatient newborn services, presented in %

9.5: Availability of IMCI job aids

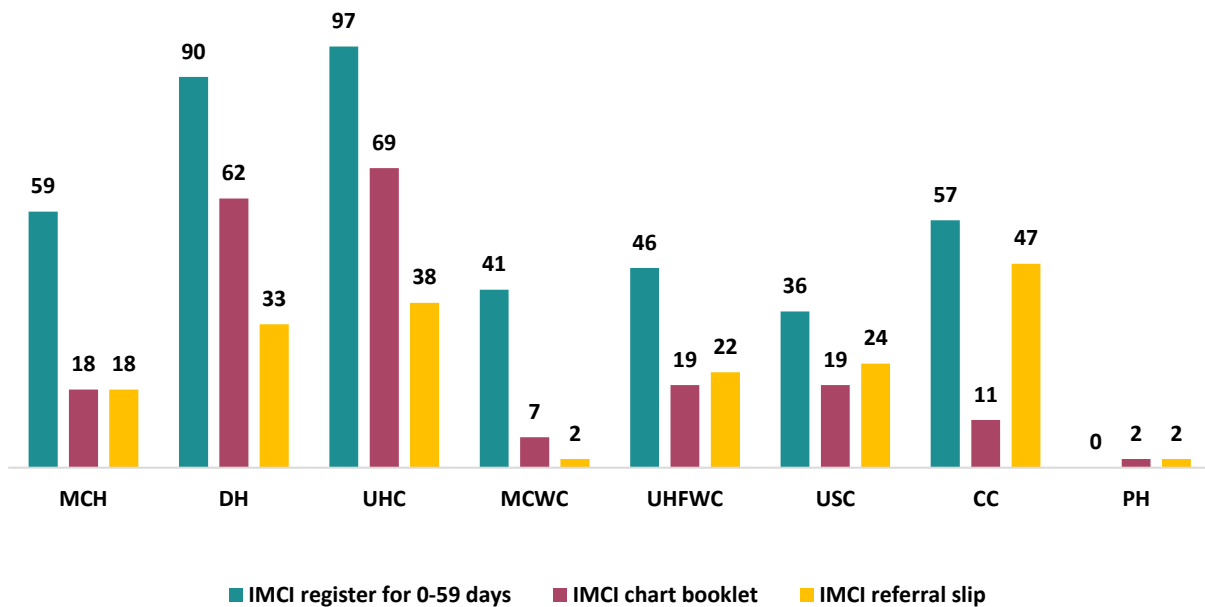


Fig: 9.5 Availability of IMCI job aids, among facilities providing outpatient newborn services, presented in %

9.6: Services provided in the last three months

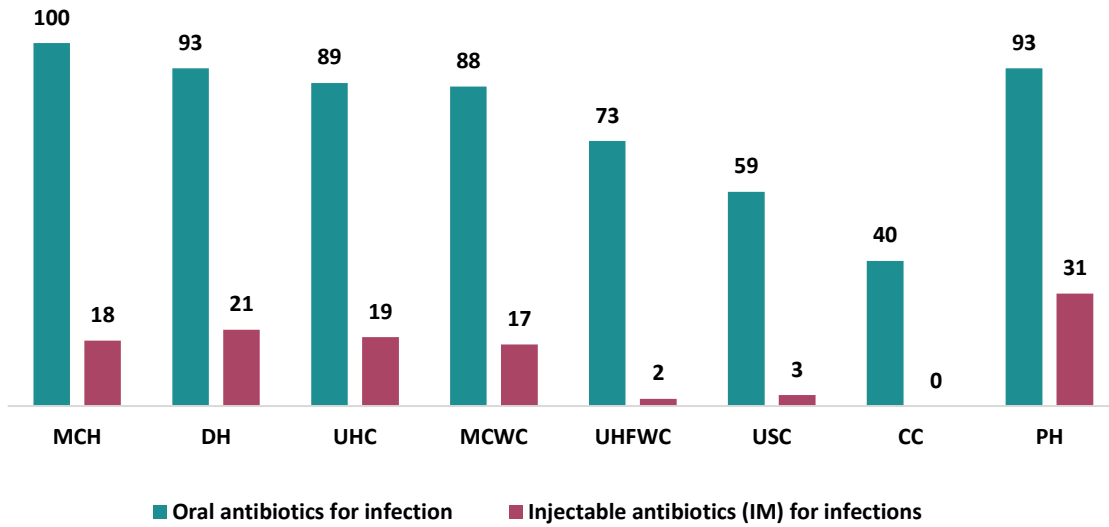


Fig: 9.6 Services provided in the last three months, among facilities providing outpatient newborn services, presented in %

9.7: Services provided in the last three months

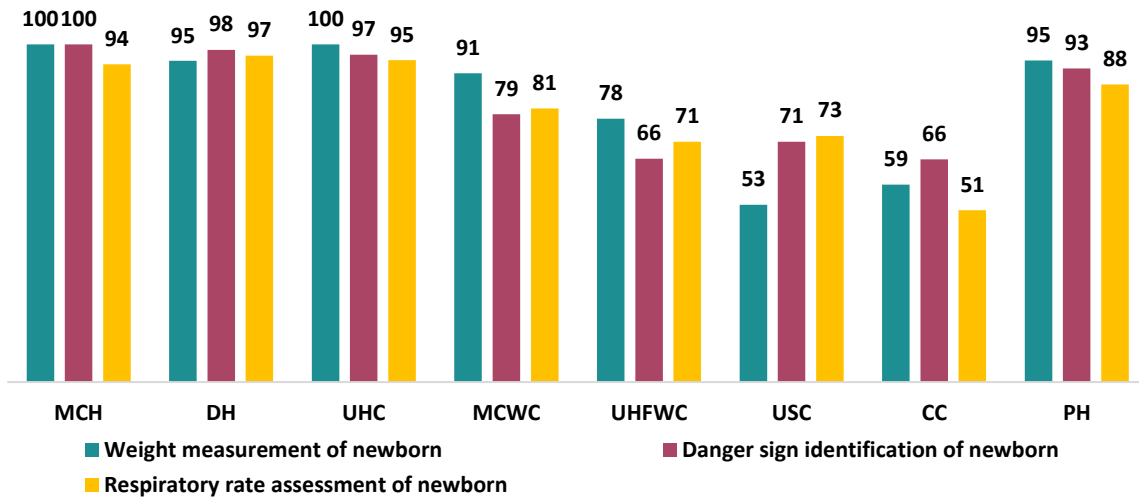


Fig: 9.7 Services provided in the last three months, among facilities providing outpatient newborn services, presented in %

9.8: Services provided in the last three months

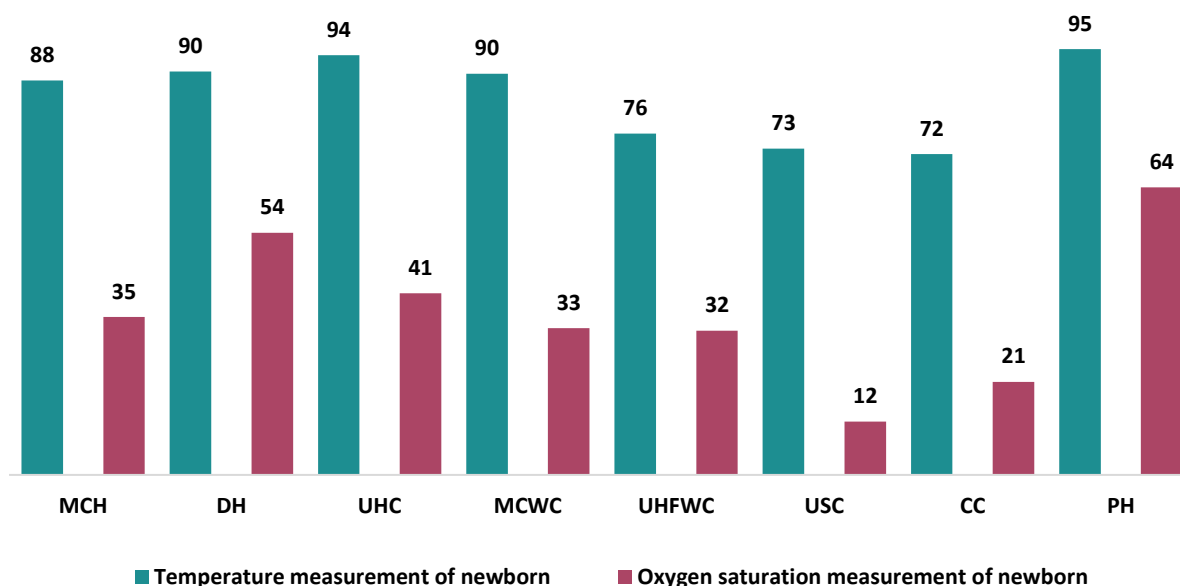


Fig: 9.8 Services provided in the last three months, among facilities providing outpatient newborn services, presented in %

Conclusion:

In summary, this report underscores the imperative need to improve newborn care in Bangladesh, given the alarmingly high rates of preventable newborn mortality. Our collaboration with icddr,b under the USAID-funded RDM project has yielded a comprehensive assessment of CNCP implementation, a vital component in shaping the newborn health operational plan for the forthcoming health sector program. It's noteworthy that we now possess extensive inventory information on KMC and SCANUs in Bangladesh. The Comprehensive Newborn Care Package, coupled with the nationwide facility assessment, serves as a robust foundation for informed policy and programmatic initiatives aimed at mitigating newborn mortality.

DISCLAIMER

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