New-born Health Care and Quality of Services in Ethiopia: Evidence Brief

Findings

Postnatal Care Coverage Increased, but Gaps Remain: Postnatal care by skilled health professionals saw significant growth between 2016 and 2022, maternal post natal care within 48 hrs rising from 16% to 46% and newborn care from 13% to 43%.

Regional Disparities Persist: In 2022, maternal postnatal care was lowest in regions like Afar (26%) and Somali (39%), while in Addis Ababa showed much higher coverage (86%).

Quality of Newborn Care Needs Improvement: Only 31% of newborns receiving postnatal care from skilled providers received all recommended components in 2022, a slight increase from 25% in 2016.

Essential Care Elements Lacking: Only about three in ten newborns receive essential care elements like physical examination, temperature checks, danger sign counseling, and breastfeeding support within two days of delivery.

Socioeconomic Factors Influence Care Quality: Newborns of illiterate mothers received only 26% of recommended care components, compared to 43% for those with highly educated mothers in 2022.

Regional Disparities in Care Quality: In 2022, quality scores ranged from just 5% in Benishangul-Gumuz to 58% in Addis Ababa, highlighting the need for targeted healthcare interventions.

Disparities in Facility Readiness: Newborn care service readiness summary scores were 69% for hospitals and 61% for health centers.

Hospitals are better than Health Centers: Newborn care service availability scores ranged from 79% in health centers to 94% in hospitals.

Equipment Shortages: Only 40% of hospitals and 13% of health centers had all 13 key equipment components available.

Low Scores for Guidelines and Staffing: Guidelines and staffing scores were particularly low, at 4% in hospitals and 41% in health centers, indicating a critical area for improvement. The data consistently shows that “trained staff and guidelines” has the lowest scores across many regions, and these regions often have lower postnatal care utilization.

Regions with Low Facility Readiness Show Lower Postnatal Care Utilization: Afar consistently shows low scores for postnatal care utilization (both maternal and newborn) and poor scores across most facility readiness indicators (BEmOC signal function, newborn signal function, medicine availability, overall service availability). This suggests a strong link between a lack of resources and lower service uptake. Southwest Ethiopia and Somali also exhibit low postnatal care utilization and generally lower facility readiness scores, reinforcing this correlation.

Urban Areas with Higher Readiness Have Better Utilization: Addis Ababa, with higher scores for most facility readiness indicators (BEmOC, newborn signal function, general requirements, equipment, overall availability), also has the highest postnatal care utilization

Introduction

Postnatal care for mothers and newborns is an essential component of maternal and child healthcare, aimed at monitoring the health status of both during the critical six weeks following delivery. Globally, a health contact during this period is defined as a health check received within two days of childbirth. The necessity for effective postnatal care is underscored by the alarmingly high rates of maternal and perinatal morbidity and mortality prevalent in low-income countries like Ethiopia. Addressing these issues demands substantial investments aimed at increasing access to, demand for, and utilization of skilled maternity care. Additionally, enhancing the quality of care provided is crucial for improving health outcomes.

Objective

This study aims to provide evidence for policy development, strategic planning, and program support in for improving the coverage and quality of care for new born care. It seeks to contribute to national targets (2023/24-2025/26 plan) and the Sustainable Development Goals (SDG) 2030 through these specific objectives:

Analyze trends in postnatal care for new-born and mothers within 2 days after delivery at national and regional level.
Evaluate the readiness and quality of newborn health services by facility type, location (rural/urban), and region.
Policy Implications and recommendations.

Data Sources: The study utilizes data from the Ethiopia Demographic and Health Surveys (EDHS 2000-2019)(1–5), the 2022 National Health Equity Survey(6), and the 2014 & 2021-22 ESPA health facility surveys(7)(8).

Trends in Postnatal Care

Postnatal care coverage by skilled health professionals significantly increased between 2016 and 2022: maternal care rose from 16% to 46%, and newborn care from 13% to 43%. Despite this progress, substantial regional disparities persist. In 2022, maternal postnatal care was lowest in Afar (26%), Southwest Ethiopia (30%), and Somali (39%). Newborn care coverage was lowest in Southwest Ethiopia (25%), followed by Afar (26%), Sidama (37%), and Somali (38%). Urban regions, like Addis Ababa (86% for maternal care) and Harari (77%), showed much higher coverage (Table 1, Figures 1). The regions of Oromia and Benishangul-gumuz demonstrated particularly high growth rates, although their coverage levels were initially low in 2016. Conversely, regions such as Tigray and urban regions like Addis Ababa and Harari exhibited lower rates of increase.

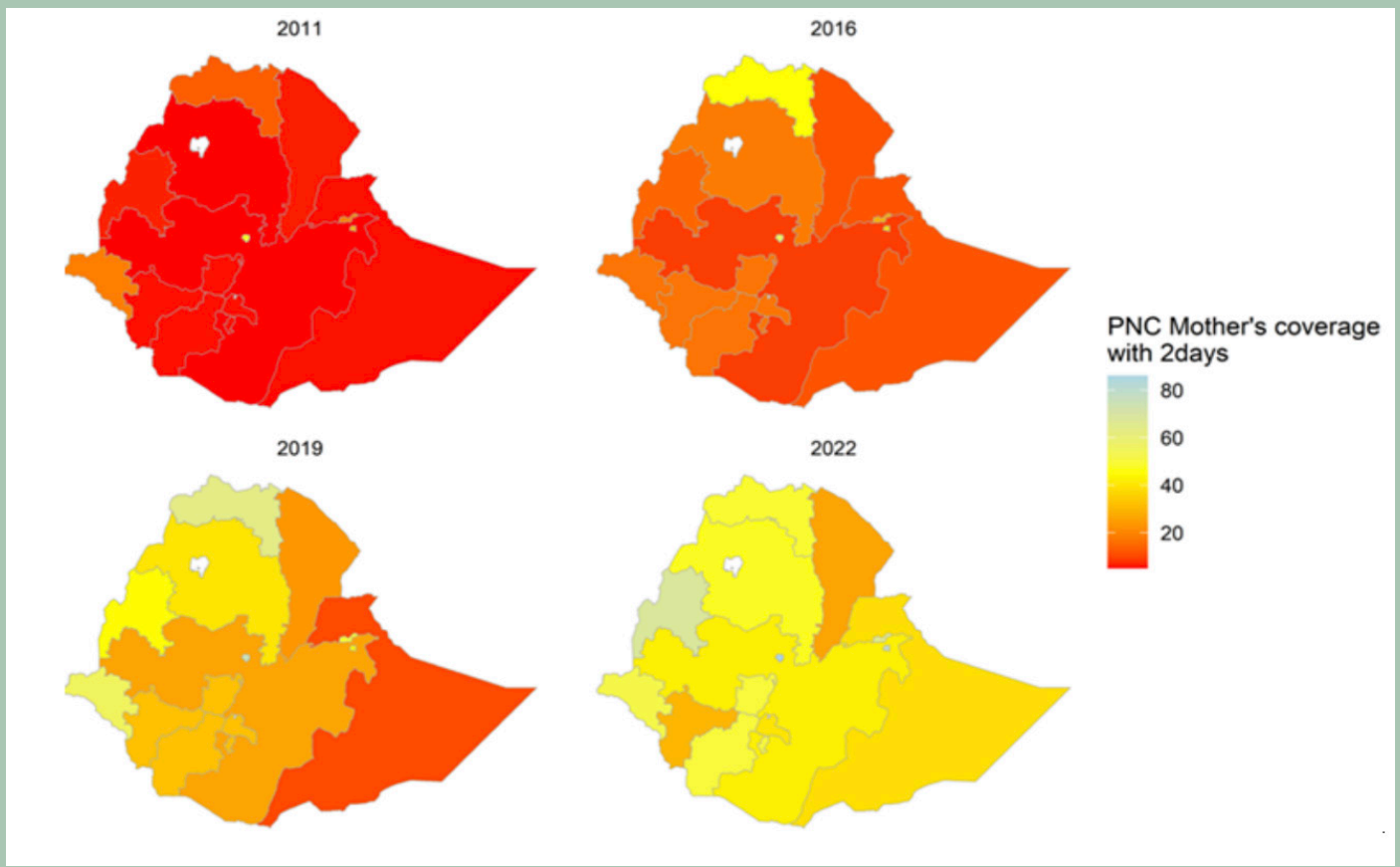

Figure 1 Postnatal care within two days after delivery for mothers 2011 -2022

The average annual rate of increase (AARI) for mothers and newborns receiving postnatal care within two days of delivery exhibited positive trends across all regions. Nationally, the coverage improved by an average of 18% per year for mothers and 22% for newborns. Interestingly, this growth was predominantly driven by rural areas, where the AARI for maternal postnatal care was recorded at 19%, compared to just 8% in urban settings. For newborns, the rural AARI was significantly higher at 22%, versus 11% in urban regions.

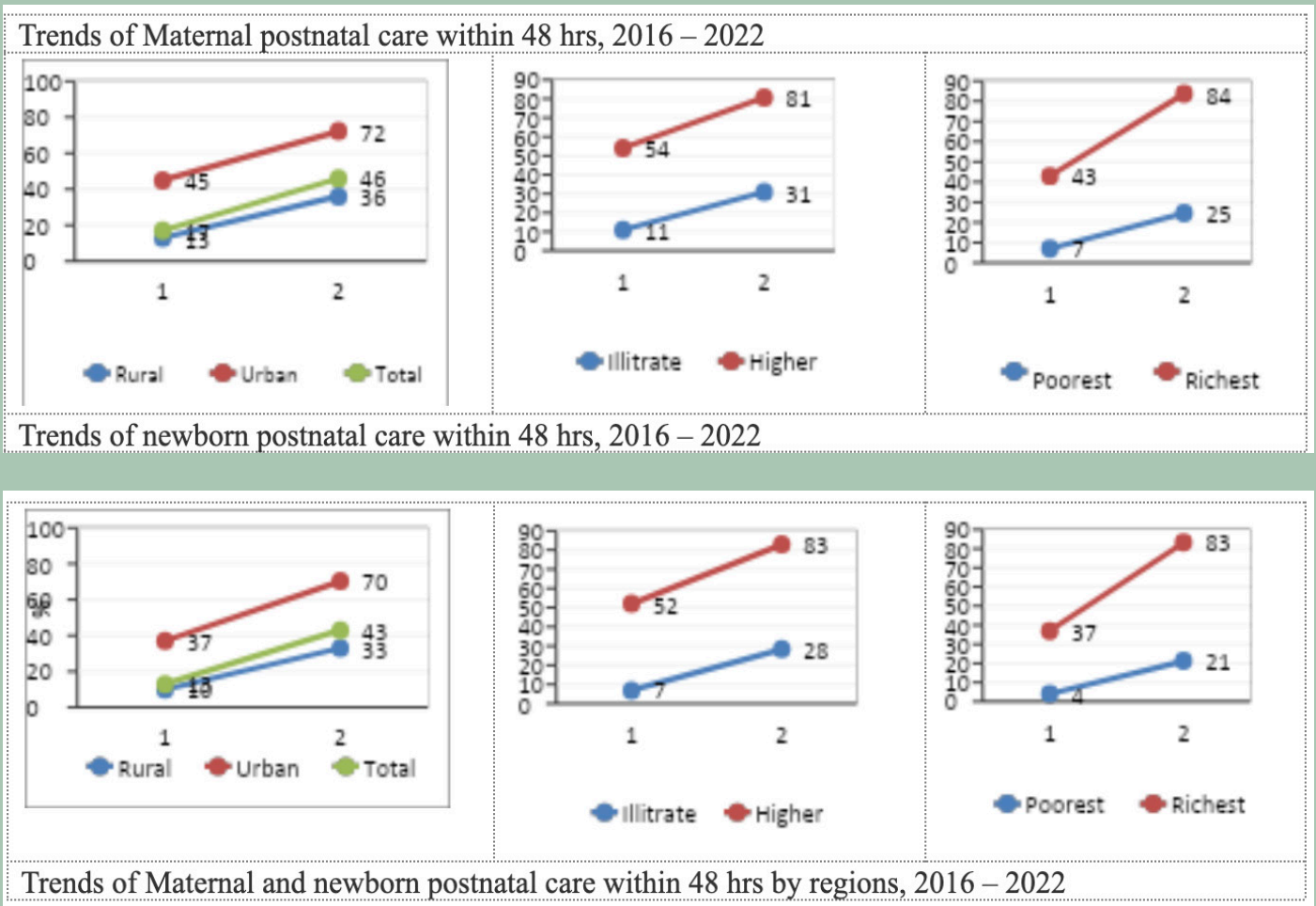

Figure 4 trends of maternal and newborn postnatal care by background characteristics, 2016 -2022

Quality of Postnatal Care for Newborns

Newborn care practices improved between 2016 and 2022: cord examination increased from 10% to 42%, temperature measurement from 14% to 42%, and counseling on danger signs from 12% to 50%. However, among newborns receiving postnatal care from skilled providers, only 31% received all recommended components in 2022, a slight improvement from 25% in 2016. This means only about three in ten newborns receive essential care elements like physical exams, temperature checks, danger sign counseling, and breastfeeding support within two days of delivery.

The care given to baby after birth are increased over the time, for example cord examination increased from 10% to 42%, measuring temperature from 14% to 42%, counsling on danger signs also increased from 12% to 50% from 2016 to 2022. Among the newborns who received postnatal care from skilled providers at health facilities for the most recent live births within two years prior to the survey, the assessment of quality of postnatal care revealed that only 31% received the recommended components of postnatal care, an improvement from 25% in 2016. This indicates that only three out of ten newborns are receiving essential care elements, such as physical examinations, temperature measurements, counselling on danger signs, and breastfeeding support, within two days of delivery (Figure 2 and Table

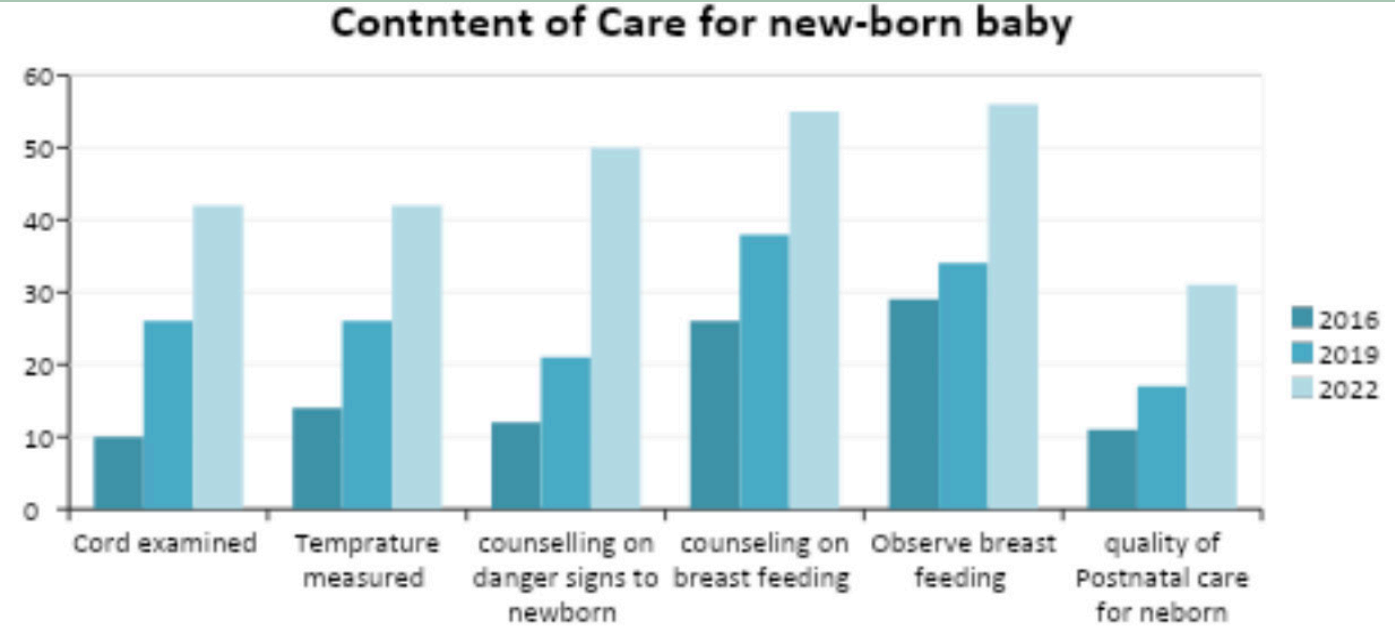

Figure 2 Content of care for newborn care 2016-2022

Disparities in the Quality of Postnatal Care

Newborn postnatal care quality is significantly influenced by socioeconomic factors: maternal education, household income, and region of residence. Higher education and income correlate with improved care. In 2022, newborns of illiterate mothers received only 26% of recommended care components, compared to 43% for those with highly educated mothers. Newborns from the poorest households received 30% of recommended care, while those from the wealthiest received nearly 48% (Table 1 and Figure 3).

Regional disparities in 2022 are substantial: Benishangul-Gumuz had a quality score of only 5%, followed by Southwest Ethiopia (11%), Somali (16%), and Amhara (19%), while Addis Ababa performed better at 58% (Table 1). This highlights the need for targeted healthcare interventions.

Table 1: Trends of postnatal care within two days after delivery for mothers and newborn baby 2016 -2022

	PNC for Mother within 2days			PNC for Baby within2days			Content of care for newborn		
	2016	2019	2022	2016	2019	2022	2016	2019	2022
Tigray	45	63	49	31	56	47	38	30	37
Afar	12	23	26	7	26	26	1	45	51
Amhara	18	40	47	11	42	43	14	19	19
Oromia	9	26	42	8	28	40	24	20	34
Somali	12	10	39	12	13	38	12	23	16
Benishangul Gumuz	15	45	68	15	45	62	16	40	5
SNNP	17	32	50	14	30	48	23	24	36
Gambela	17	55	52	18	56	52	7	43	41
Harari	37	45	77	35	47	77	13	16	39
Addis Ababa	55	74	86	46	84	86	37	53	58
Dire Dawa	29	48	64	27	48	60	16	14	50
Sidama			40			37			53
SouthWest Ethiopia			30			25			11
Total	16	34	46	13	34	43	25	25	31

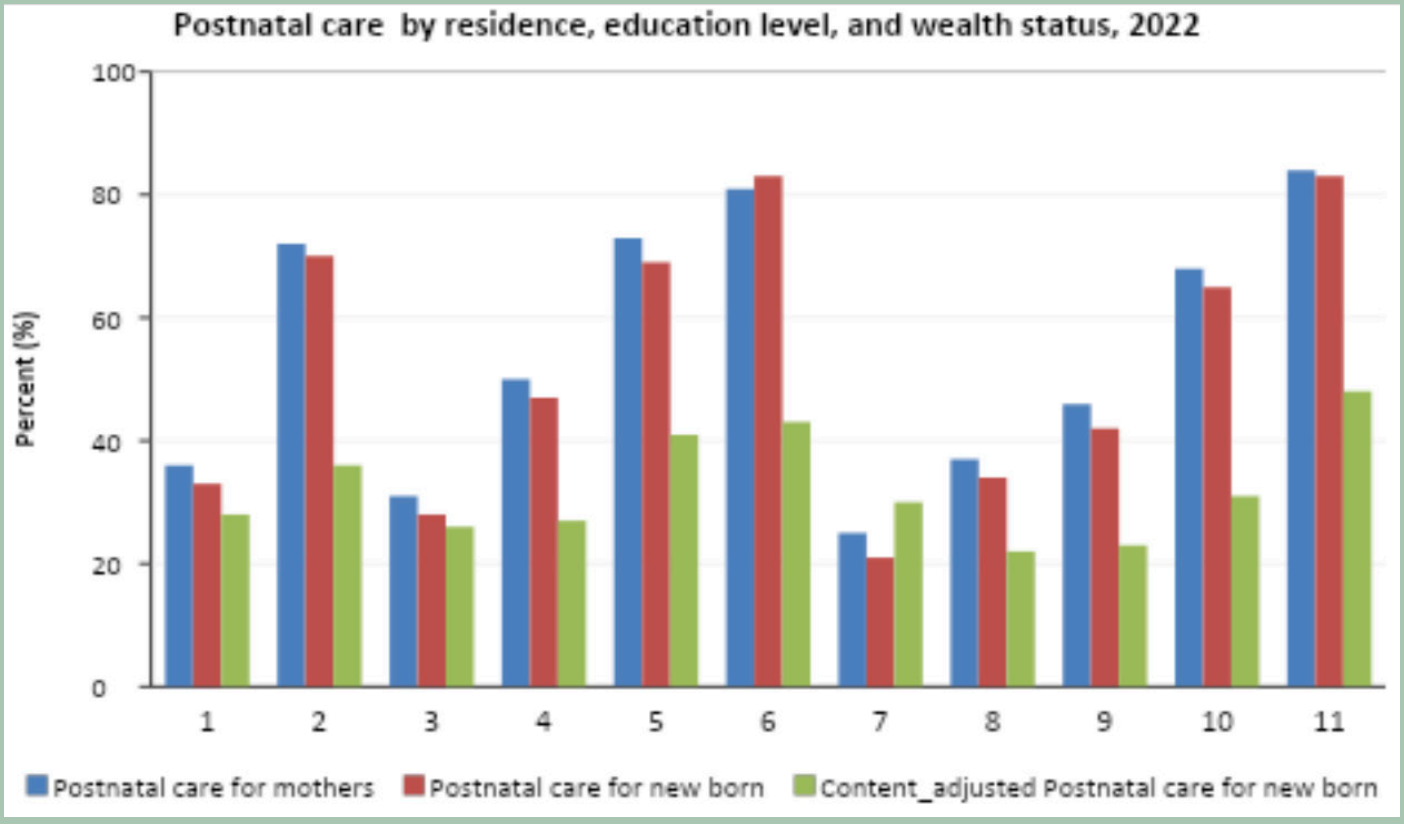

Figure 3: Postnatal care within two days after delivery for mothers and newborn baby 2022

Newborn Care Service Availability

Domain A: BEmOC Signal Functions The first domain of newborn care service availability is the availability of the six basic emergency obstetric care signal functions.
Domain B: neonatal resuscitation, provision of corticosteroids during preterm labor, and KMC for premature/very small babies.

Domain C: routine use of the partograph to monitor and manage labor, early initiation of breastfeeding, and provision of thermal care (drying and wrapping the newborn).
Newborn care service readiness

Service Readiness Domain A: General Requirements The first domain of service readiness, general requirements, includes five components: uninterrupted electricity, an improved water source, improved sanitation, skilled birth attendance available 24/7, and emergency transport.

Service Readiness Domain B: Equipment The second domain of service readiness, equipment, includes 13 indicators to gauge the extent to which facilities with normal delivery services have the essential equipment needed to support comprehensive delivery and newborn care.

Service Readiness Domain C: Medicines and Commodities There are eight components in the third domain of service readiness, medicines and commodities.

Service Readiness Domain D: Guidelines and Staffing There are 10 components in the fourth domain of service readiness, guidelines and staffing. Presence of the three types of guidelines is generally low throughout the countries (see Figure 7).

Figure 4 illustrates that coverage of specific components varies significantly by facility type. Parenteral antibiotic administration, uterotonic drugs, and assisted vaginal delivery were most prevalent in hospitals within the three months prior to assessment. In health centers, the availability of manual removal of retained products of conception (78%), manual removal of placenta (78%), and parenteral anticonvulsant administration (65%) were low. Overall scores were 95% in hospitals and 83% in health centers. Only half of the health centers providing facility delivery and newborn care possessed all BEmOC signal functions.

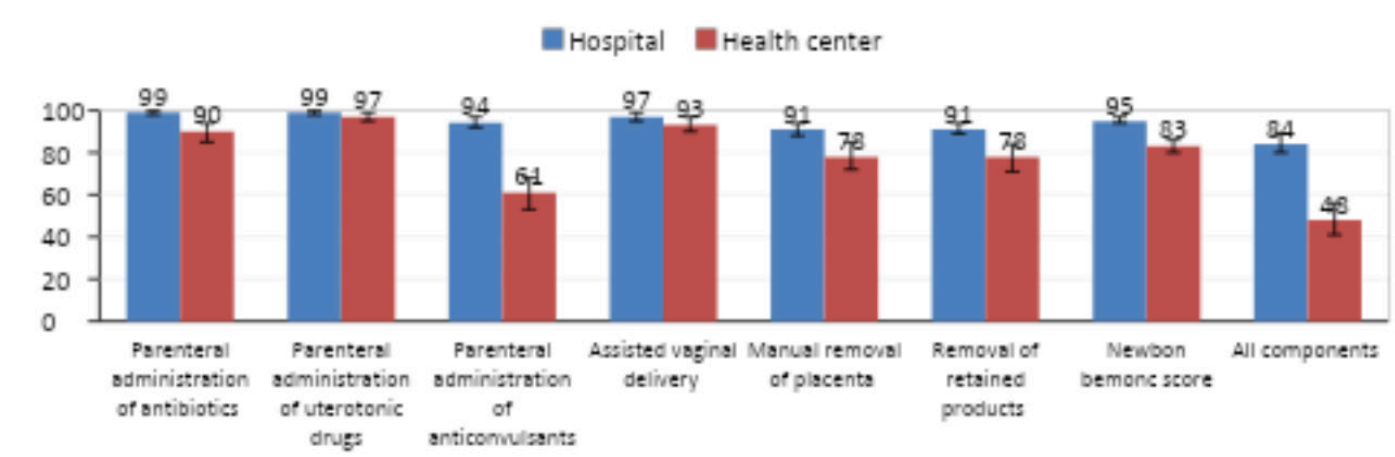

Figure 4: Availabilities of newborn care services , 2022

Newborn Signal Functions

We assessed facility performance of three newborn signal functions in the three months prior to assessment: neonatal resuscitation, corticosteroid provision during preterm labor, and Kangaroo Mother Care (KMC) for premature/small babies. Hospitals showed better availability than health centers for neonatal resuscitation (97% vs. 85%), corticosteroid provision (81% vs. 21%), and KMC (87% vs. 69%). Among health facilities providing normal delivery and newborn care, only two out of ten administered corticosteroids for preterm labor. The overall signal function score was 88% in hospitals and 58% in health centers. Approximately 70% of hospitals, but only 20% of health centers, had all three components available.

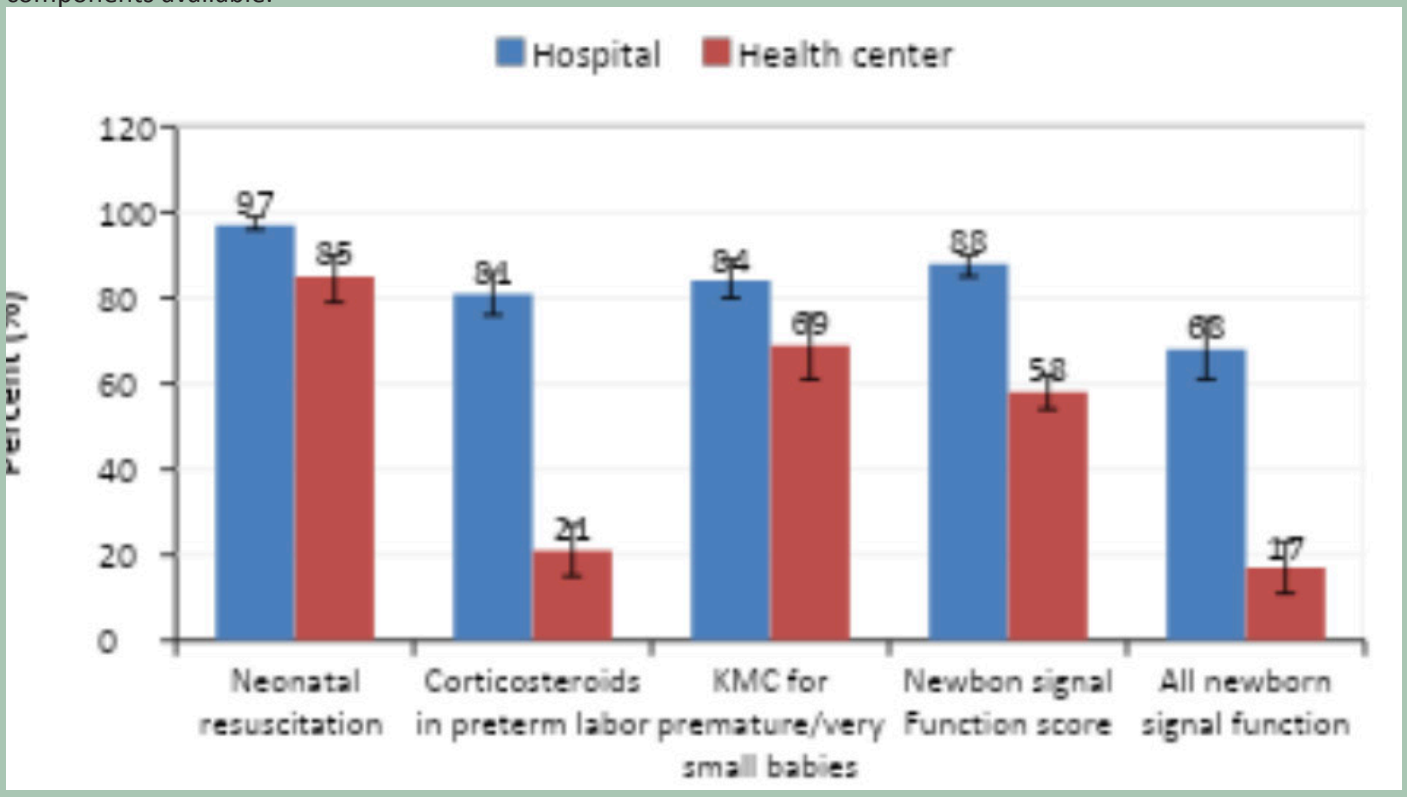

Figure 5: Availabilities of newborn signal functions , 2022

Routine Practices

Figure 6 shows the national coverage of key indicators by hospital and health center. Early breastfeeding initiation and thermal care are nearly universally practiced in all facilities (99%). Routine partograph use varies slightly in health centers at 88%.

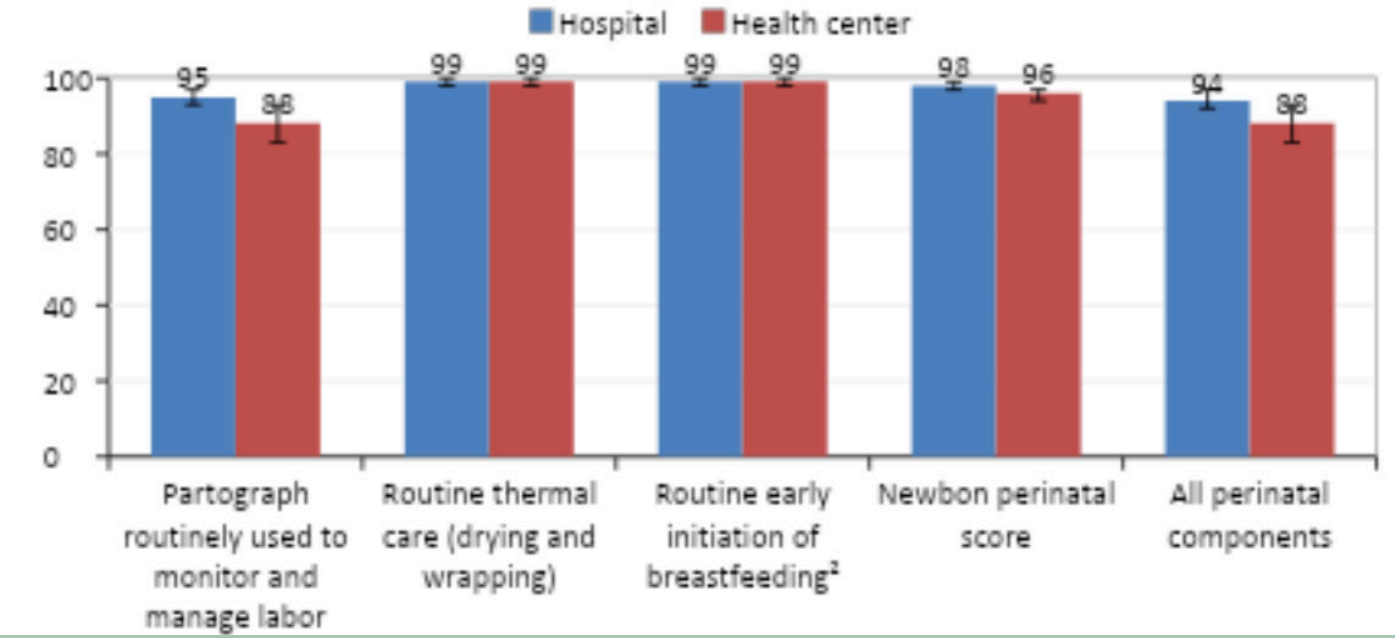

Figure 6: Availabilities of routine practices for newborn care , 2022

Newborn Care Service Readiness

General Requirements: General requirements indicated that hospitals generally possessed basic amenities, while health centers showed lower availability. Improved water sources were available in 78% of health centers, and improved sanitation in 89%. Skilled birth attendants were almost universally available 24/7. Emergency transport was available in 97% of hospitals, but only 73% of health centers. Uninterrupted electricity was available in 95% of hospitals and 83% of health centers. All basic amenities were found in 79% of hospitals and 44% of health centers.

Essential Equipment and Supplies: Figure 7 indicates the availability of 13 key equipment components by facility type. Delivery beds, delivery packs, partographs, newborn bags and masks, infant scales, BP apparatus, and hand washing facilities were highly prevalent in all facilities. However, only 68% of hospitals had vacuum aspirators or D&C kits. Availability of some equipment was considerably lower in health centers compared to hospitals; sterilization equipment, examination lights, suction apparatus, and vacuum aspirators showed low availability. The average score for the 13 equipment items was 93% in hospitals and 79% in health centers. Only 40% of hospitals and 13% of health centers had all 13 components.

Medicines and Commodities: The third domain of service readiness, medicines and commodities, includes eight components with an average prevalence of 83% in hospitals and 75% in health centers. At the time of assessment, antibiotic eye ointment was present in the delivery area in 94% of hospitals and 87% of health centers. Injectable antibiotics were found in 77% of hospitals and two-thirds of health centers. Skin disinfectant was found in 84% of hospitals and 83% of health centers. IV solutions with an infusion set were more available in health centers (91%) than in hospitals (87%). Chlorhexidine for cord cleaning showed lower prevalence compared to other medicines but was more available in health centers (77%) than in hospitals (62%). Only 39% of hospitals and 13% of health centers had all the medicines and commodities required for newborn care.

Guidelines and Staffing: The fourth domain of service readiness includes 10 components related to guidelines and staffing. The presence of the three types of guidelines is generally good across health facilities. Integrated Management of Newborn and Childhood Illness (IMCI) guidelines are available in only 65% of hospitals but are more prevalent in health centers (97%). Comprehensive Emergency Obstetric Care (CEmOC) guidelines are available in almost all facilities. Guidelines for managing preterm labor are present in 85% of hospitals and 64% of health centers. Recent staff training in the six areas assessed is rare, with the exception of thermal care. Training in neonatal resuscitation ranges from 31% in hospitals to 25% in health centers, while training in early and exclusive breastfeeding ranges from 28% in hospitals to 22% in health centers.

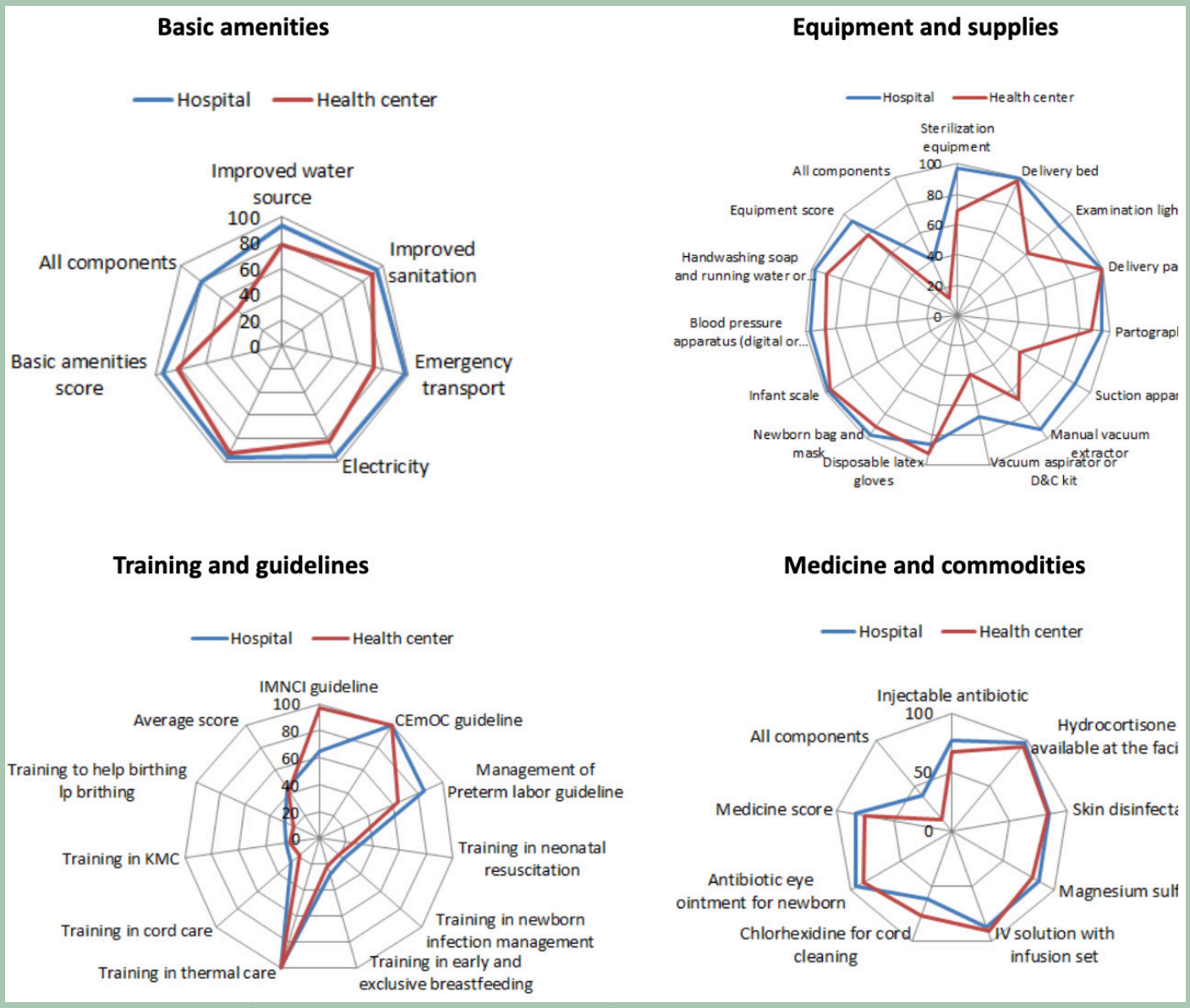

Figure 7: Availabilities of items by readiness components by facility type, 2022

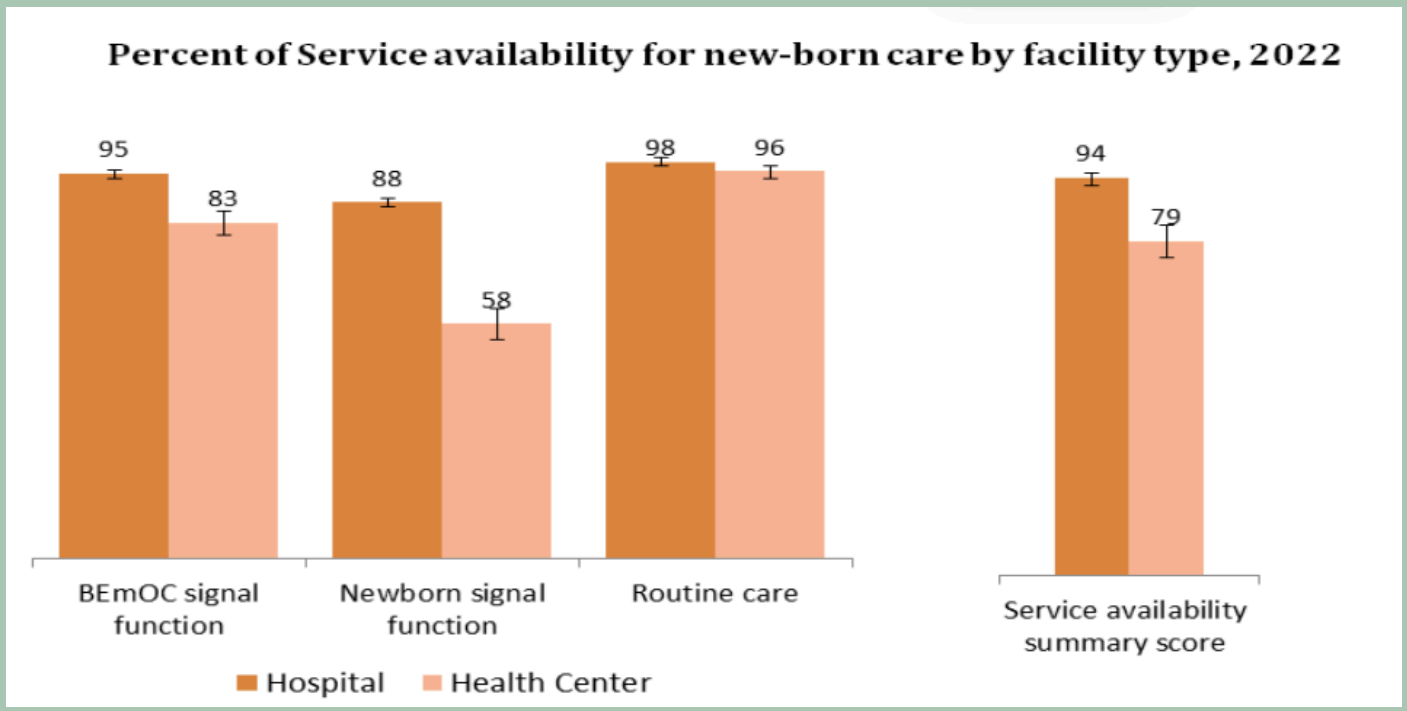

Figure 8: Newborn care service availability score by facility type, 2022

Summary scores for newborn care service readiness were 69% for hospitals and 61% for health centers. The coverage patterns for the four domains of service readiness are consistent across the facilities. Of the four domains, scores for guidelines and staffing are the lowest, followed by scores for medicines. Guidelines and staffing scores were 4% in hospitals and 41% in health centers. Medicine scores were 83% in hospitals and 75% in health centers. The scores for general requirements and equipment are better, with nearly all hospitals possessing both, and eight out of ten health centers having them.

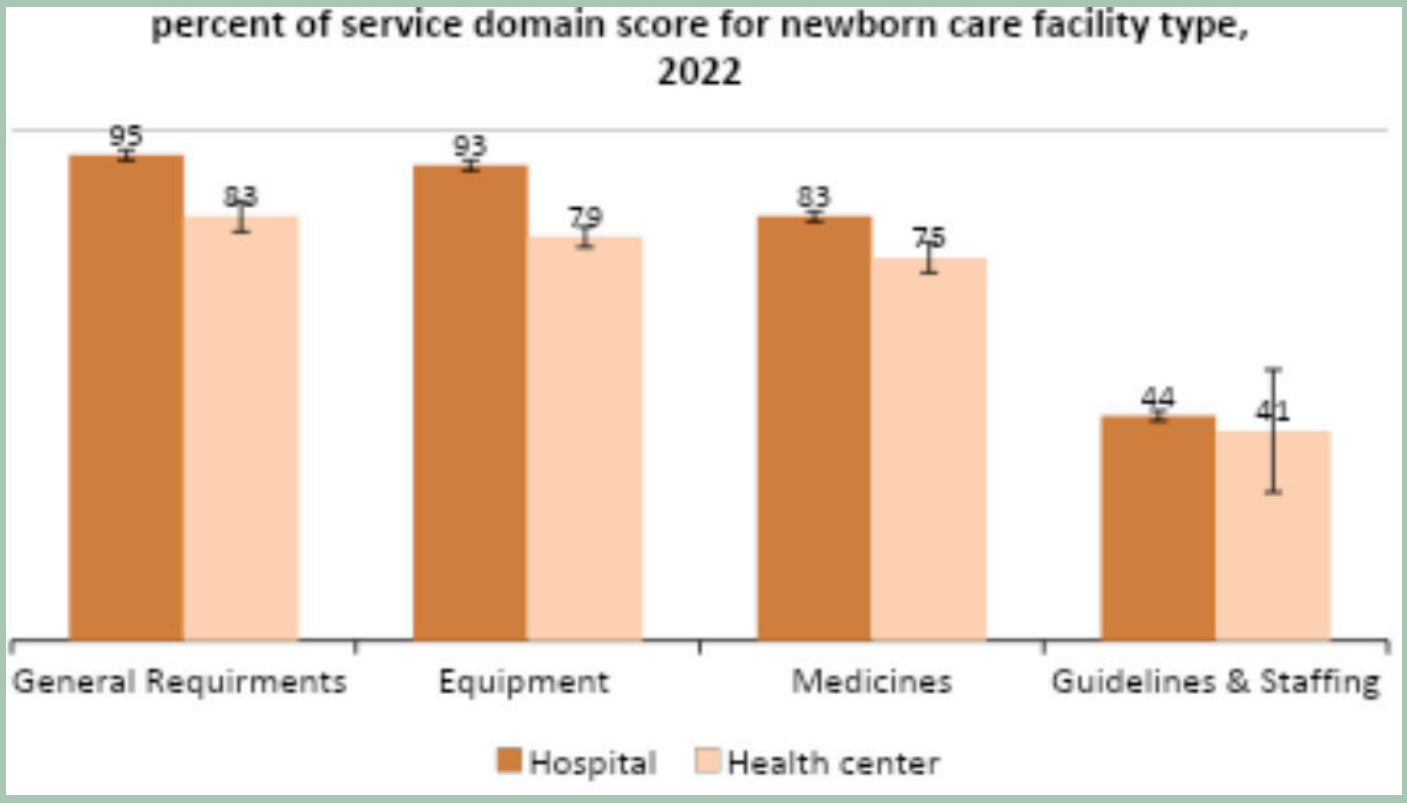

Figure 9: Newborn care service availability score by readiness domain , 2022

The median readiness score for hospitals was 69 (IQR: 67–75) and no variation observed by location of the facilities. The health center median readiness score was 61 (IQR=56,69). This varies by location, it ranged from 58(IQR=53,67) in rural area to 64(IQR=58,72) in urban area. This suggests that hospitals may be better prepared or more equipped than health centers. Additionally, the readiness gap among hospitals is narrower compared to that of health centers.

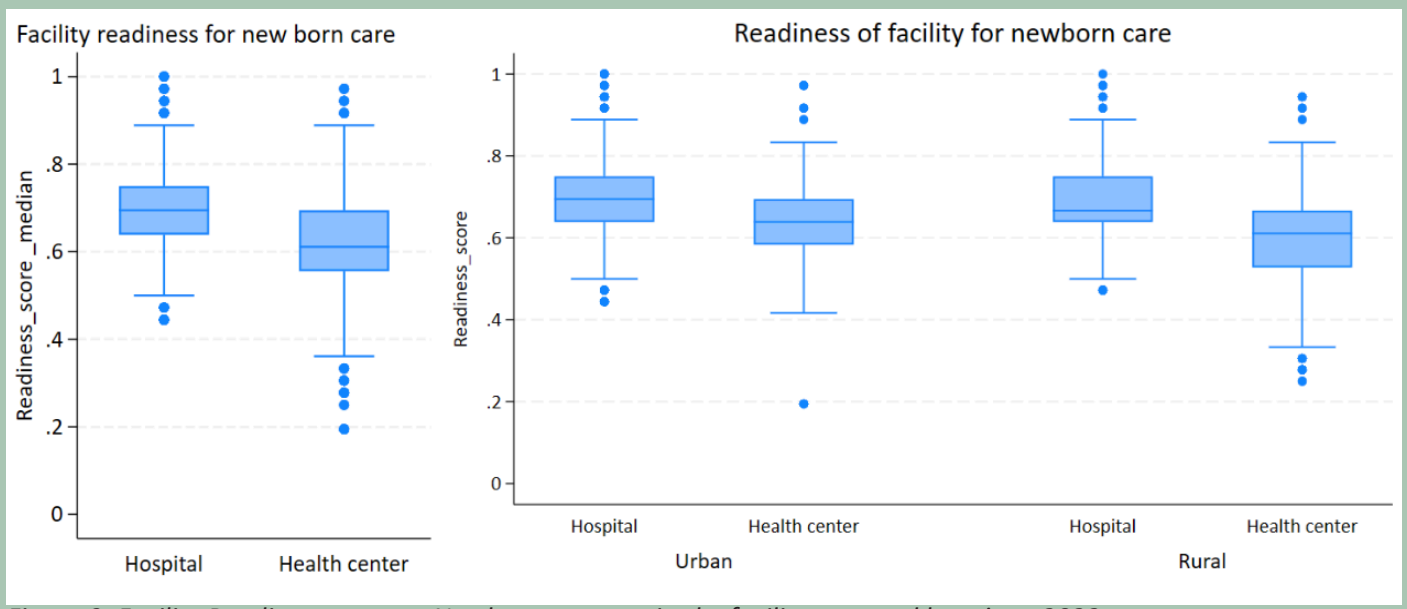

Figure 9: Facility Readiness score to Newborn care service by facility type and location , 2022

Availability scores differed by location, with urban facilities demonstrating better newborn care services than rural ones. Private facilities generally had higher availability scores, except for medicine availability. Regional disparities were also evident. BEmOC signal function ranged from 53% in Afar to 91% in Amhara and Addis Ababa. Newborn signal function varied from 52% in Afar to 75% in Harari. Perinatal care scores ranged from 77% in Somali to 100% in Dire Dawa, while general requirements varied from 72% in Benishangul-Gumuz to 97% in Addis Ababa. Equipment availability ranged from 69% in the Somali region to 94% in Addis Ababa, and medicine availability varied from 65% in Afar and SNNP to 85% in Gambella. The lowest-scoring area across all regions was the availability of trained staff and guidelines, ranging from 20% in Gambella to 76% in Benishangul-Gumuz. Overall service availability scores ranged from 60% in Afar to 87% in Addis Ababa, and facility readiness scores varied from 56% in SNNP to 70% in Addis Ababa.

Table 2 the availabilities and readiness of facilities for new-born care by facility characteristics, 2022 Ethiopia

	BEmOC signal score	Newborn signal score	Perinatal score	general requirement	Equipment score	Medicine score	Training guideline score	Service availability	Readiness score
Facility type									
Hospital	95	88	98	95	93	83	44	94	69
Health center	83	58	96	83	79	75	41	79	61
Facility Location									
Urban	91	71	97	87	86	78	43	87	65
Rural	81	56	95	83	77	75	40	78	60
Managing authority									
Public	84	61	96	84	80	76	42	81	62
Private	91	82	97	96	93	70	39	90	66
Region									
Afar	53	52	94	77	76	65	54	60	57
Amhara	91	68	99	89	84	84	38	87	67
Oromia	86	60	96	87	83	78	38	81	63
Somali	82	71	77	74	69	75	51	78	58
Benishangul gumuz	69	66	88	72	85	78	76	73	65
SNNP	79	53	97	78	73	65	43	77	56
Gambella	90	64	94	74	83	85	20	84	64
Harari	74	75	97	95	91	72	48	80	66
Addis baba	91	67	99	97	94	77	52	87	70
Dire Dawa	83	68	100	92	93	79	47	83	67
Sidama	76	64	93	82	74	67	55	76	59
National	84	61	96	84	81	76	42	81	62

Policy Recommendations

Targeted Resource Allocation: Implement a needs-based resource allocation model that prioritizes regions with the lowest postnatal care coverage and readiness scores (e.g., Afar, Somali, Southwest Ethiopia).

Quality Improvement Programs: properly follow the implementation of the national quality improvement strategy focusing on ensuring that all newborns receive the recommended components of postnatal care. This include standardized protocols for postnatal care.

Address Socioeconomic Barriers: Integrate strategies to address socioeconomic barriers into postnatal care programs including community-based education campaigns to promote the importance of postnatal care and address cultural beliefs that may hinder access.

Strengthen Facility Readiness: Develop and implement a national plan to improve facility readiness, particularly in health centers. Invest in upgrading infrastructure, ensuring access to reliable water, sanitation, electricity, and emergency transport. Procure essential equipment and supplies, such as delivery beds, newborn bags and masks, infant scales, and sterilization equipment.

Invest in Staff Training and Development: Implement comprehensive training programs to equip healthcare providers with the knowledge and skills to deliver quality postnatal care. Provide regular in-service training on neonatal resuscitation, early and exclusive breastfeeding, and management of preterm labor. Ensure that all facilities have access to up-to-date guidelines and protocols for postnatal care.

Promote Community Engagement: Engage communities in the planning and implementation of postnatal care programs to ensure that services are culturally appropriate and responsive to local needs. Establish community health worker programs to provide education and support to pregnant women and new mothers. Conduct participatory assessments to identify community-specific barriers to accessing postnatal care.

Policy Implications

The proposed policy recommendations have several important policy implications that affect health governance, budgeting, service delivery, and community engagement. First, implementing targeted resource allocation based on need requires a shift in how resources are distributed across regions. This means that national and regional governments must adopt equity-focused planning and budgeting systems to ensure that underserved areas like Afar, Somali, and Southwest Ethiopia receive the support they need. It also requires strong health information systems to track regional disparities in postnatal care coverage and readiness, along with robust monitoring mechanisms to follow through on the implementation of the national quality improvement strategy. Enforcing standardized postnatal care protocols across all health facilities will also require updates to clinical guidelines and health worker training.

Addressing socioeconomic barriers to postnatal care access involves integrating social and cultural dimensions into health policies. Community education campaigns will need to be supported by policies that promote behavioral change and consider local beliefs and traditions. Additionally, improving facility readiness will require significant investments in infrastructure, such as water, sanitation, electricity, and emergency transportation, especially in health centers. This calls for long-term national planning, capital investment, and improvements in procurement and supply chain management to ensure the consistent availability of essential equipment and supplies.

Training and developing healthcare staff is another key area with major policy implications. There must be a strong focus on strengthening human resources for health policies to ensure regular and comprehensive in-service training. This includes updating curricula, establishing clear certification processes, and providing incentives for health workers to serve in remote areas. Coordination with educational institutions is essential to align training with updated postnatal care protocols and ensure quality service delivery.

Finally, promoting community engagement in postnatal care programs highlights the need for inclusive health governance. Policies should create formal spaces for community participation in health planning and decision-making. Strengthening community health worker programs will require national support in the form of training, fair compensation, and ongoing supervision. Engaging communities through participatory assessments can help identify local barriers to care and shape more culturally appropriate and responsive services. Altogether, these recommendations require coordinated efforts across multiple sectors and a strong commitment to equity, accountability, and inclusive health system reform.

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