Policy Brief

Every Birth Counts:

Urgent Policy Actions Needed to End Preventable Newborn Deaths in Amhara Region

Executive summary

Amhara region faces a critical public health challenge with relatively high rates of newborn deaths both at a population and institutional level. While there have been significant strides in reducing under-5 mortality rates, progress in reducing neonatal mortality rates has been less pronounced, especially since early neonatal deaths remain alarmingly high. The birth of a child, while a pleasant occasion, also carries significant risks, including neonatal mortality. However, in the current context of the region, many families continue to experience the heartbreak of losing their newborns due to preventable causes. The occurrence of neonatal death in rural residents was higher than in urban. This disparity underscores the urgent need for policy action to address the factors contributing to the region's newborn mortality.

Between 2000 and 2020, Ethiopia's neonatal mortality rate (NMR) declined from 48 to 32 per 1,000 live births, a 42% reduction at an annual rate of 2.7%, while in the Amhara region, it decreased from 56 to 35 per 1,000 live births, a 37% reduction at 2.3% annually.

Despite this progress, in the Amhara region, over 95% of infant and under-5 deaths still occur during the neonatal stage, with a substantial proportion of neonatal deaths happening within the first seven days of life, indicating that most pronounced progress in the region was achieved after neonatal period mainly due to substantial survival gains from rural areas. Further analysis suggests that, in the Amhara region, the neonatal mortality rate at health facilities increased from 6 to 8 per 1,000 live births, a 32% rise at 5.2% annually between 2018-2023, with more than 81% of deaths within health facilities still occur in the first week of life, particularly within the first 48 hours, underscoring persistent challenges in early neonatal care even within institutional settings. Data from the two largest specialized hospitals indicate that prematurity, asphyxia, and sepsis were the leading causes of neonatal deaths in 2023, accounting for nearly 90% of all cases.

This policy brief calls for urgent action to prevent avoidable tragedies by expanding access to quality health services, especially Basic and Comprehensive Emergency Obstetric and Newborn Care (BEmONC and CEmONC) in high-need areas within the region. Strengthening equitable health systems within the region is essential to ensure every child receives necessary care, regardless of location. The brief recommends implementing technology-driven referral and surveillance systems, along with targeted strategies, to address the leading causes of neonatal deaths. Active community engagement is also crucial for raising awareness and promoting timely health-seeking behaviors, ultimately improving outcomes for all newborn babies.

Background

Neonatal mortality, which refers to deaths within the first 28 days of life, is a critical indicator of a country's overall health system and directly reflects the quality of maternal and newborn care [1]. Globally, neonatal deaths account for nearly half of all under-5 mortality, with the majority occurring within the first week of life. This period is the most vulnerable for newborns, as they face numerous risks, such as prematurity, birth asphyxia, and infections like sepsis, which require immediate and specialized care [2]. Addressing neonatal mortality is, therefore, a crucial step in reducing overall child mortality rates.

With an NMR of 41.2% per 1000 live births in 2021, the Amhara region ranked 1st of all regions in Ethiopia, performing much lower than the national average (28 per 1000 live births) and failing to meet national and global targets. Results from cohort studies conducted between 2018 and 2020 also corroborate, suggesting NMR in the region was about 31% during this period, and the coverage contribution of stillbirths was 23%. The institutional neonatal mortality rate in the region was 7.2% among preterm births, 12.2% among low-birth-weight births, and 4.1% among small for gestational age births [3].

The importance of focusing on neonatal mortality cannot be overstated, as progress in this area significantly impacts broader efforts to improve child survival. While regional initiatives have led to substantial reductions in under-5 and infant mortality over the past three decades, declines in neonatal mortality have been much slower. This slower pace is mainly due to the complexity of the causes of neonatal deaths and the need for targeted interventions during childbirth and the immediate postpartum period. By prioritizing the reduction of deaths during the neonatal period, particularly within the first few days of life, the region's health system can substantially reduce overall child mortality.

Focusing on the critical first days of life has effectively reduced neonatal mortality and improved child survival. In geographies similar to the Amhara region, the best approach involves strengthening health system for timely and quality care around childbirth, especially in high-need areas. Expanding BEmONC [4] and CEmONC [5] services and strong referral and surveillance systems are crucial to prevent avoidable deaths. Engaging communities to raise awareness about early health interventions, from pregnancy to postpartum, further reinforces these efforts. These practices lay a solid foundation for policy recommendations in the Amhara region.

Approaches

The evidence supporting our policy recommendations comes from a comprehensive analysis of multiple data sources. We primarily utilized population-based surveys, such as the Ethiopian Demographic and Health Survey (EDHS) [6], to assess trends and disparities in mortality rates, offering a broad view of progress over time. To ensure consistency and accuracy, we triangulated these findings with estimates from the United Nations Inter-agency Group for Child Mortality Estimation (UN-IGME) [7]. In addition to population-level data, we analyzed routinely reported health facility data from the District Health Information System (DHIS2) [8], which provides valuable insights into recent trends in institutional mortality and the performance of health services. Health facility surveys conducted in 2014 and 2022 [9, 10] were also analyzed to explore facilities' readiness and observed progress regarding critical care services for newborns. To further enrich our analysis, we conducted a detailed chart review of mortality data from the past five years at two regional comprehensive specialized hospitals, namely Felegehiwot Specialized Hospital (FHSH) and Tibebe Ghion Specialized Hospital (TGSH). This review allowed us to identify leading causes of institutional deaths and assess hospital-based mortality trends while highlighting specific challenges in care quality. By integrating these diverse data sources, we developed a robust understanding of the region's progress and the current state of neonatal mortality. This evidence base forms the foundation of our policy recommendations, ensuring they are based on accurate, up-to-date information that reflects on-the-ground realities.

Key findings

Neonatal mortality remains a critical public health challenge in the Amhara region despite significant strides in reducing overall child mortality rates. Between 2000 and 2020, Ethiopia's neonatal mortality rate (NMR) declined from 48 to 32 per 1,000 live births, reflecting a 42% reduction. In the Amhara region, the NMR decreased from 56 to 35 per 1,000 live births during the same period. While these reductions indicate progress, the majority of infant and under-5 deaths in the region continue to occur during the neonatal period, particularly within the first week of life.

The decline in neonatal mortality rates (NMR) was more pronounced in rural areas, dropping from 72 per 1,000 live births in 1990 to 35 in 2020, compared to a decrease from 56 to 34 per 1,000 live births in urban areas over the same period. This suggests that much of the progress in NMR can be attributed to improvements in rural regions. Similarly, among the poorest quintile of households, NMR fell from 71 per 1,000 live births in 1990 to 29 in 2020, while in the wealthiest families, it declined from 61 to 25 per 1,000 live births during the same period.

Prematurity, birth asphyxia, and sepsis have been identified as the leading causes of neonatal deaths in the region, accounting for nearly 90% of all cases in 2023, according to data from the two largest specialized hospitals in the region. These conditions are particularly prevalent in rural areas, where timely access to and quality health service is compromised. The lack of timely and effective care during and immediately after birth contributes significantly to the high mortality rates. This underscores the importance of expanding and strengthening BEmONC and CEmONC services, particularly in the most needed geographies.

Figure 1 shows the trend of neonatal mortality in the Amhara region from 1990 to 2020 based on household survey data. Neonatal mortality in the Amhara region strictly decreased from 68% in 1990 to 36% in 2020.

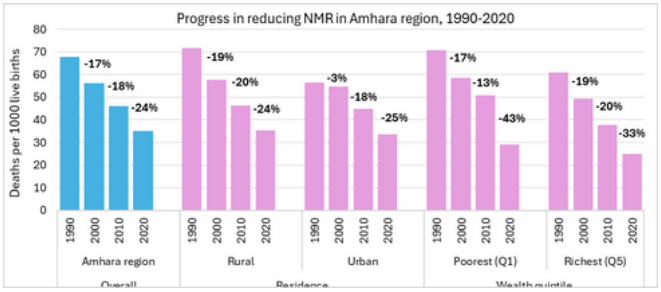

Figure 1. Percentage decrease in NMR in Amhara Region (1990-2020), with numbers presenting decade-wise reduction

Despite notable progress in reducing population-level neonatal mortality, institutional deaths remain a significant challenge in the region. Data from DHIS2 indicate that early neonatal mortality within health facilities has risen in recent years, increasing from 6 deaths per 1,000 live births in 2018 to 8.3 per 1,000 in 2021, representing a nearly 11% increase (Figure 2). From 2022 to 2023, neonatal deaths increased from 7.3 to 7.6 per 1000 live births.

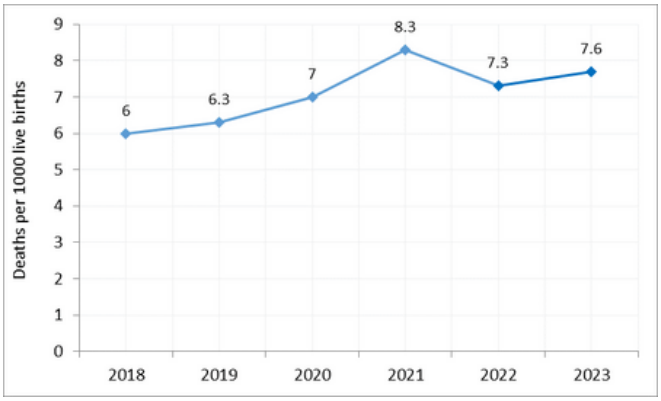

Figure 2. Institutional (early) neonatal death rate in Amhara region, DHIS2 2018-2023

Further analysis of health facility surveys indicates that, though significant changes in readiness score for newborn care increased from 47% in 2014 to 71% in 2022, the availability of guidelines and trained personnel remained unchanged, and health facilities remained suboptimal in almost all domains over ten years (Figure 3).

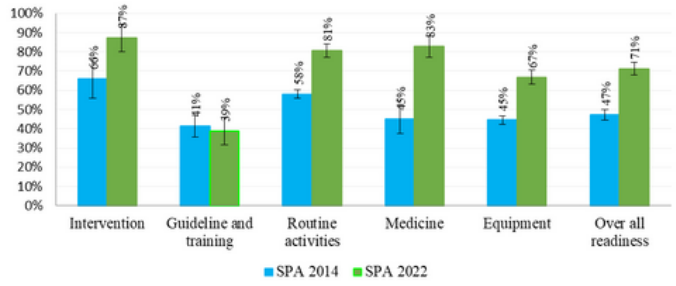

Figure 3. Newborn care readiness score in Amhara region, SPA 2014 and 2022

A review of 1,770 neonatal death charts from two major hospitals between 2019/2020 and 2023/2024 revealed that nearly two-thirds (63%) of the deaths were from rural areas. Additionally, fewer than half of the newborns received the most critical care interventions essential for newborn survival, with only 19% receiving breastfeeding initiation within the first hour and 52% receiving skin drying, mouth suctioning, and stimulation as recommended (Fig. 4).

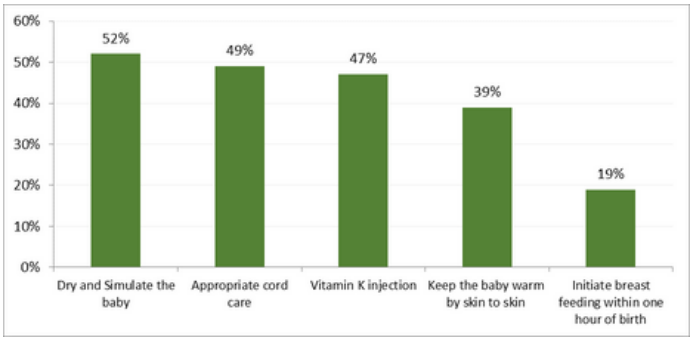

Figure 4. Care given at birth for neonates who were later identified as dead in the FHSH and TGSH, 2019/20-2023/24

A five-year chart review from two major hospitals aligns with population and regional data, revealing that over 81% of neonatal deaths in health facilities occur within the first week of life, particularly within the first 48 hours. This underscores ongoing challenges in providing timely and quality care during and immediately after childbirth in institutional settings. In 2023, the two largest specialized hospitals identified prematurity, asphyxia, and sepsis as the leading causes of neonatal deaths, accounting for nearly 90% of cases. This indicates a significant opportunity to reduce mortality by addressing these conditions (Figure 5).

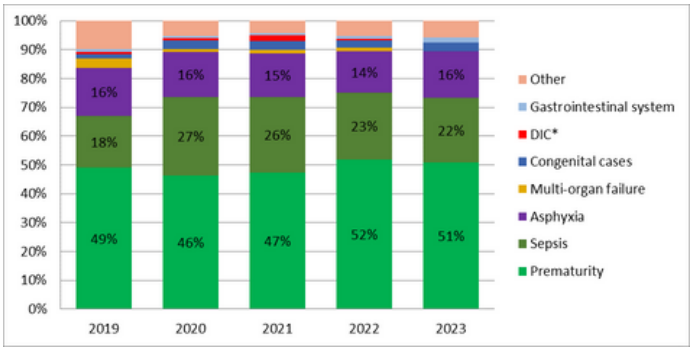

Figure 5. Causes of neonatal deaths in two major hospitals (FHSH and TGSH) in Amhara region, 2019/20-2023/24

Conclusion

Despite significant progress in reducing neonatal mortality in the Amhara region, it remains a critical public health challenge, particularly within the first week of life, which accounts for over 81% of deaths. NMR has declined from 68% in 1990 to 36% in 2020, with notable improvements in rural areas and among the poorest households. However, disparities persist, and institutional mortality has risen, highlighting gaps in the quality and timeliness of care during and after childbirth. Prematurity, birth asphyxia, and sepsis remain the leading causes of neonatal deaths, especially in rural areas where access to timely care is limited. The high percentage of deaths within the first 48 hours underscores the urgent need to strengthen and expand BEmONC and CEmONC services in high-need areas.

While there have been improvements in health facility readiness for newborn care, challenges persist, particularly in the availability of guidelines and trained personnel. Addressing these issues and enhancing the quality and consistency of care is essential for further reducing neonatal mortality and improving child survival in the region. To achieve this, interventions tailored to reducing neonatal mortality in the first seven days of life at health facilities and addressing disparities by ensuring equitable access to life-saving interventions, improving data management, and enhancing community education are needed.

Policy recommendations

By adopting and implementing the following comprehensive policy recommendations, the region can create a supportive environment that significantly reduces newborn deaths, ultimately contributing to healthier families and communities in the Amhara region.

Enhancing equitable access at PHCU /community level through deploying local mobile health units to treat critically ill newborns under seven days; strengthening community-level existing digital and paper-based platforms; supporting the establishment and functionality of introductory and comprehensive health posts to be engaged in providing MNH services; strengthening and expanding BEmONC and CEmONC services in high-need areas; digitalizing the referral system/linkage bi-directionally from community networks and deploying digital performance management

Enhancing quality of services at the facility level (secondary and tertiary level hospitals) through strengthening quality service delivery of skilled birth attendance and the use of a safe childbirth checklist in each facility; enhancing the improved service delivery of existing platforms of newborn' care, including ECD, IMNCI, NICU; and introducing a clinical decision support system to provide service provision for newborns in each service room of facilities; ensuring that all health facilities offering delivery services meet minimum standards, including the availability of clinical guidelines, ongoing training for service providers, and access to essential medicines and supplies, such as oxygen, resuscitation equipment, and medications, and staffed by trained personnel who can provide immediate care during transport.

Enhancing the positive behavior of the community regarding MNH service uptakes by promoting massive health education, incorporating maternal and newborn health education into school curriculums and adult education programs, and improving community engagement on maternal and newborn health to increase community awareness through targeted behavioral change communication strategies.

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Saving Newborn Lives,
Shaping a Healthier Tomorrow!