

PROTECTING OUR NEWBORNS:

Strategies to combat stillbirths and neonatal deaths in Cameroon



KEY MESSAGES

- *In Cameroon, there are respectively 14 and 24 stillbirths and neonatal deaths per thousand births in 2023 (1). This is still far from the recommended target of 12 per thousand births (2).*
- *80% of all newborn deaths result from three preventable and treatable conditions: complications due to prematurity, intrapartum-related deaths (including birth asphyxia) and neonatal infections. (2).*
- *Strengthening health systems with better prenatal care, skilled attendance at birth and emergency obstetric and neonatal services can reduce neonatal mortality by up to 75%, particularly in low-resource settings (3).*
- *Integrating community-based interventions into local health systems can lead to a 50% reduction in neonatal mortality rates when implemented effectively (4, 5, 6).*
- *Community health is the most cost-effective strategy, preventing 3,175 infant deaths annually at the lowest incremental cost-effectiveness ratio (827 CFA per death averted) and with high economic and political feasibility.*
- *Availability of qualified HF workers, while beneficial, is less cost-effective (11,834 CFA per death averted) and requires significantly higher investment (25.66 million CFA more than status quo), making community health the preferred policy option.*

PROBLEM STATEMENT

Stillbirth is generally defined as the death of a fetus at 28 weeks gestation or more (7). This distinction is in line with global health guidelines, which often consider fetal viability at this stage. In contrast, neonatal death refers to the death of a baby born alive within the first 28 days of life, which is divided into early neonatal deaths (from birth to 7 days) and late neonatal deaths (from 8 to 28 neonatal days) ((2).

Global stillbirth and neonatal mortality rates have fallen from 31 deaths per 1,000 live births in 2000 to 20 deaths per 1,000 live births in 2020. Developed countries have made significant

progress, often achieving rates of less than 10 deaths per 1,000 live births (8). Although declining for several years, according to the Cameroon Demographic and Health Surveys, with neonatal mortality rates of 31/1,000 in 2011 (9) and 28/1,000 in 2018 (10), the latest rate is still higher than the target of 12/1,000 recommended in MDG 3.2 and adopted by the Newborn Health Operational Plan 2022-2025 (11). Indeed, it is estimated to be 24 deaths per 1,000 live births in 2023 (22), while the stillbirth rate stands at (14 /1,000 live births in 2023 (22), contributing to the overall burden of infant and child mortality.

The loss of a neonate or a stillbirth can be a source of deep emotional trauma for immediate family members. The medical complications that are often associated with it are also accompanied by additional financial burdens, and even social stigmatization in some communities.

Stillbirths and neonatal mortality are mainly attributable to shortcomings in the Cameroonian health system, which can be classified into three groups according to the three delays model

- The decision to seek care: this is when pregnant women do not seek medical assistance for their pregnancy and/or birth due to lack of awareness, cultural beliefs or other factors.
- Access to a healthcare facility: this delay is linked to the geographical difficulty of accessing a healthcare facility or receiving local care.
- Receive adequate healthcare: this is linked to the quality of service delivered in the healthcare facility.

CURRENT INTERVENTIONS AND KEY FACTORS CONTRIBUTING TO HIGH RATES IN CAMEROON

To systematically and respond to maternal and perinatal, Cameroon adopted technical guidelines for monitoring and responding to maternal and perinatal deaths (MPDSR) in 2017 in line with WHO guidelines (12). Since then, the measures taken included:

- Committees to monitor examinations maternal and neonatal deaths at each level of the health pyramid;
- Development of a response plan for maternal deaths, stillbirths and neonatal deaths;
- Introduction of Universal Health Coverage for vulnerable populations reduces neonatal deaths and stillbirths by removing financial barriers to skilled birth attendance and facility-based deliveries. The acquisition of health vouchers (Phase 1) promotes regular antenatal and postnatal care, enabling early detection and management of health risks for mothers and newborns. This improves access to essential healthcare services, reduces health disparities, and enhances maternal

and neonatal health outcomes.

- Training actors in the health cascade for all levels of health care providers. (Physicians, midwives, nurses and obstetricians trained in maternal and perinatal death reviews (MPDR), essential newborn care and management of complications); Community health workers (CHWs), trained in referral protocols and community education on safe delivery practices; and administrative and supervisory staff (hospital administrators and regional health officers) trained in data collection analysis and of implementation of intervention plans.
- The Incident Management System activates a rapid, coordinated response during public health emergencies, ensuring essential maternal and neonatal services remain accessible. By streamlining resource allocation and real-time monitoring, it helps address complications that can lead to neonatal deaths and stillbirths during crises.
- The creation of a team of regional coaches provides direct support and training to healthcare workers in underserved regions. This hands-on guidance improves skills in managing safe deliveries and neonatal care, ultimately enhancing the quality of care and helping to reduce neonatal deaths and stillbirths.

These interventions have proven to have a positive impact on mortality, as presented above. But this impact has been limited by many factors, the most profound of which are ::

- **Deficiencies in the healthcare system:** shortage of qualified staff, poor infrastructure of facilities and lack of necessary equipment compromise the quality of care.
- **Delays in care:** cultural norms, lack of awareness of danger signs and ineffective care delay timely intervention.
- **Burden of disease:** the high prevalence of diseases such as malaria, HIV/AIDS and neonatal infections (sepsis, pneumonia) exacerbate mortality rates.
- **Weaknesses in policy and implementation:** inconsistent application of national guidelines and inadequate monitoring hamper progress.

Intervening on these factors would not mean tackling any particular delay, but rather to improve access to care at all levels of the health pyramid. However, among the deaths reported, the first and third delays are the most concerning, given that the decision not to seek care during pregnancy and childbirth, as well as poor quality care often leading to

avoidable complications, result in 31% of neonatal deaths as shown in the figure below.

Moreover, this potential causality between the first and third delays and neonatal mortality can be observed in the geographical distribution of mortality rates. The data available since 2021, and particularly those for 2023 (1), show that the West regions and Littoral, which have the highest proportions of prenatal consultations (ANC) in the country, as well as assisted deliveries, are also the regions with the lowest stillbirth rates, while conversely, regions with the lowest ANC attendance rates are those with the highest stillbirth rates, as shown in the figure 1.

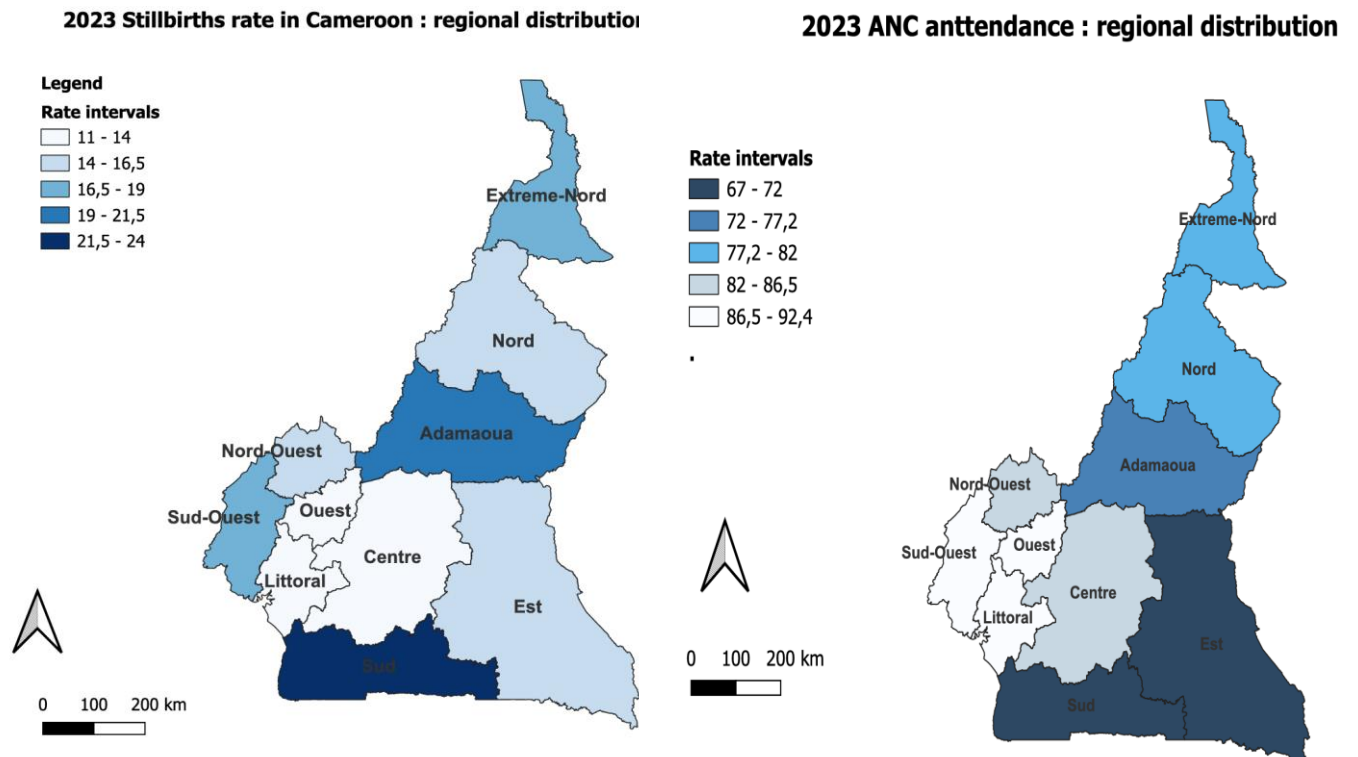


Figure 1: ANC attendance and stillbirth rate in the regions of Cameroon in 2023

Source: Authors, DHIS2 data analysed in Excel

The root causes of the high stillbirth and neonatal mortality rates that need to be urgently addressed can be divided into two categories,

- **Quality of care:** low compliance with standards, shortage of qualified staff and poor distribution of available staff.
- **Use of health services:** low ANC attendance and assisted deliveries.

POLICY OPTIONS

To reduce stillbirths and neonatal deaths, we strongly recommend the use of strong, realistic and effective measures in both health and economic terms. As far as our healthcare system is concerned, measures to reduce these deaths include strengthening the workforce, building the capacity of existing staff and promoting advanced strategies through community health. These measures will improve the quality and availability of the health services offered and encourage the use/attendance of health services to avoid stillbirths and newborns.

❖ IMPROVE THE COVERAGE AND QUALITY OF MATERNAL AND CHILD HEALTHCARE

Advantages and disadvantages:

What: Strengthen the training of healthcare professionals on maternal and child healthcare and implement an equitable distribution of skilled workers in health facilities to improve service delivery and address healthcare shortages. The target population is clinical workers, including midwives, nurses and doctors.

Why: Cameroon faces high neonatal and perinatal mortality due to delays in care, particularly the third delay (inadequate quality of care and referral mechanisms). With only 1.3 health workers per 1,000 inhabitants, Cameroon is below the critical threshold of 2.5 per 1,000 set by the WHO, resulting in labor shortages that disproportionately affect rural areas (13).

Proof of impact in a similar country: For example, in Rwanda, investment in midwifery training has significantly increased the presence of skilled birth attendants, rising from 39% in 2005 to 91% in 2020. This contributed to a decrease in neonatal mortality rates from 37 per 1,000 live births in 2000 to 19 per 1,000 in 2020 (14). Similarly, in Ethiopia, health extension programs focusing on rural areas helped reduce neonatal mortality from 37 per 1,000 in 2005 to 29 per 1,000 in 2015 (15). On a global scale, strengthening midwifery training and practice programs has been shown to reduce neonatal mortality by up to 83% under optimal conditions (16,17).

Feasibility: Medium. Limited resources in rural areas, combined with resistance to workforce reallocation due to urban-oriented policies, could hinder equitable access to health services. Incentives for staff to work in underserved areas should be built in.

❖ STRENGTHENING CAPACITIES OF CHW IN PROMOTING COMMUNITY HEALTH AND IMPROVING EMERGENCY SERVICE ACCESS

Advantages and disadvantages:

What: Accentuate the implementation of community health activities targeting communities to address the first delay (late decision to seek maternal care), due to the inability to

recognize danger signs and the lack of preparedness.

Why: The intervention aims to promote the use of newborn and newborn care services through social and behavioral change (SBC) strategies. Community health workers (CHWs) will play a key role in educating populations to recognize danger signs of complications during pregnancy, such as severe hemorrhage and decreased fetal movement. They will facilitate referral to emergency services by coordinating transport and ensuring rapid access to health facilities, providing basic maternal and neonatal care, including antenatal and postnatal care, newborn health monitoring and vaccinations, and distributing health products such as vitamins, iron supplements and antiretroviral therapy for HIV-positive pregnant women.

Several models suggest that similar community health strategies could also be beneficial in Cameroon. For example, in **Pakistan, the** implementation of community-based interventions in mountainous regions has been effective in reducing stillbirth and neonatal mortality rates, underlining the potential applicability of this approach in Cameroon (18).

Feasibility: high. Implementing low-cost community intervention within the health system has proven feasible and effective, significantly reducing the burden of stillbirths and neonatal mortality.

	Status quo (SQ)	Availability of qualified HF workers (manpower/ training) (supply)	Community health (demand)
Number of infant deaths per year	8,680	6,512	5,505
Difference between SQ and options		2,168	3,175
Cost (in CFA per year)	50 146 347	75 802 347	52 770 347
Difference between SQ and options		25 656 000	2 624 000
Incremental cost-effectiveness		11,834	827
Economic feasibility		Medium	High
Political feasibility		Medium	High

CONCLUSION

The comparative analysis of three strategies highlights key differences in effectiveness, cost,

and feasibility. “Improve Community Health activities” demonstrates the highest impact, preventing 3,175 infant deaths annually, compared to 2,168 deaths prevented by increasing the availability of qualified HF workers. This makes Community Health the most effective intervention in reducing perinatal mortality.

From a cost perspective, “Availability of qualified HF workers” requires the highest additional investment (25.66 million CFA more than SQ), with an incremental cost-effectiveness ratio of 11,834 CFA per infant death averted. In contrast, Community Health achieves greater impact at a significantly lower cost (2.62 million CFA above SQ), with an incremental cost-effectiveness ratio of 827 CFA per infant death averted, making it the most efficient use of resources.

In terms of feasibility, Community Health ranks higher both economically and politically, as it requires fewer structural changes and relies on community-based interventions. The Availability of Qualified HF Workers approach, while beneficial, faces moderate feasibility due to workforce constraints and higher financial demands.

Given its superior cost-effectiveness, higher feasibility, and greater impact on perinatal mortality reduction, Community Health is the most viable strategy. Policymakers should prioritize its implementation to achieve sustainable and scalable improvements in child survival.

RECOMMENDATIONS/ACTIONS

Based on the analysis, we recommend the implementation of the community health approach as economically and politically feasible, given its low cost and high impact.

Community-centered approach

- *Community involvement: Ensure that community members are actively involved in policy implementation and evaluation. Community health workers must belong to communities, and community leaders must play a leading role.*
- *Community empowerment: Promote community empowerment by providing resources and training to address perinatal health issues.*

PROPOSED MEASURES TO BE TAKEN:

1. Strengthening the capacities of community health workers: To ensure that each newly trained CHW is able to provide quality prenatal and postnatal care, as well as recognize and manage danger signs.

- Train 15,000 new CHWs by 2026 to reach the target of 25,000 qualified CHWs.
- Regional target: Prioritize training in the hardest-hit regions: 5,000 CHWs in the South, 4,000 in the East, 3,000 in Adamaoua, 1,500 in the Far North and 1,500 in the North.

2. Promotion of social and behavioral change strategies: Increase prenatal and postnatal consultation rates by 30% in target regions by 2026.

- Awareness campaigns: Launch awareness campaigns in the regions of South and East to promote maternal and neonatal care.
- Regional target: Organize at least 50 awareness sessions per month in each target region (South, East, Adamaoua, Far North, North).

3. Improving access to emergency services: Reduce access time to emergency care for pregnant women by 25% in targeted regions by 2026.

- Strengthening medical transport: Equip priority regions with vehicles suitable for transporting pregnant women to health facilities.
- Regional target: Provide at least 10 new medical vehicles in each of the target regions (South, East, Adamaoua, Far North, North).

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