

BRIEF

Addressing Gaps in Ghana's Newborn Care Supply Chain



Photo by GHSC-PSM

Ghana has made progress in reducing neonatal mortality rates through health and supply chain reforms. A 2018 survey showed a 14 percent reduction in the newborn mortality rate, from 29 to 25 per 1,000 live births between 2014 and 2017. However, newborn mortality rates in Ghana remain high. Assessments have indicated the country has challenges around availability of medical equipment necessary for the care of small and sick newborns (SSNBs).

Reviewing the Respiratory Ecosystem

In 2023, Ghana's Ministry of Health (MOH), Ghana Health Service (GHS), Health Access Network (HAN), and USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project conducted a comprehensive review of the newborn respiratory ecosystem by assessing availability and functionality of newborn medical devices, associated commodities, and provider capacity in Ghana.

Specifically, these stakeholders aimed to:

- ✓ Conduct a situational analysis of the prevalence of improvised bubble continuous positive airway pressure (bCPAP) therapy, 100 percent oxygen use, and pulse oximetry monitoring use.
- ✓ Identify data gaps in the respiratory support and oxygen ecosystem for the care of SSNBs.
- ✓ Investigate health staff capacity to manage and maintain devices critical to ensuring adequate respiratory support for SSNBs.
- ✓ Evaluate maintenance protocols for medical devices for newborn care.



Methodology

The assessment used mixed methods, involving both quantitative and qualitative techniques. 51 health facilities that recorded at least 300 deliveries in 2022 were selected across the Northern and Upper West Regions for the assessment. The final sample included 24 hospitals, five polyclinics, 19 health centers, and three Community-based Health Planning and Services (CHPS) compounds



Key Findings

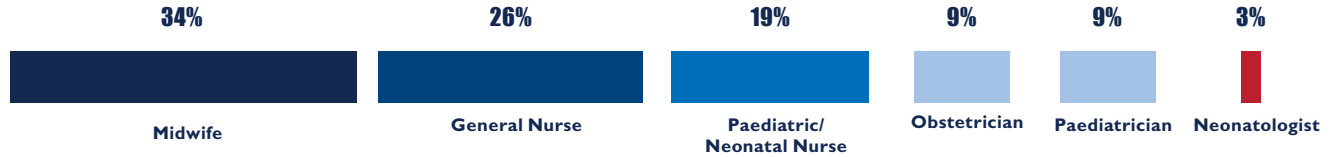
This assessment reviewed key areas of newborn care and supply chain, including facility infrastructure, equipment/devices of the newborn respiratory ecosystem, neonatal services provided, neonatal unit electricity supply, neonatal admission and discharge, infection prevention, waste management, inventory and forecasting of consumables, newborn care equipment and maintenance, and human resources. Key findings are explored in more detail below.



Staffing for Newborn Care

The assessment found limited availability of staff dedicated to newborn care, resulting in midwives and general nurses being most often responsible for assessing and discharging newborns.

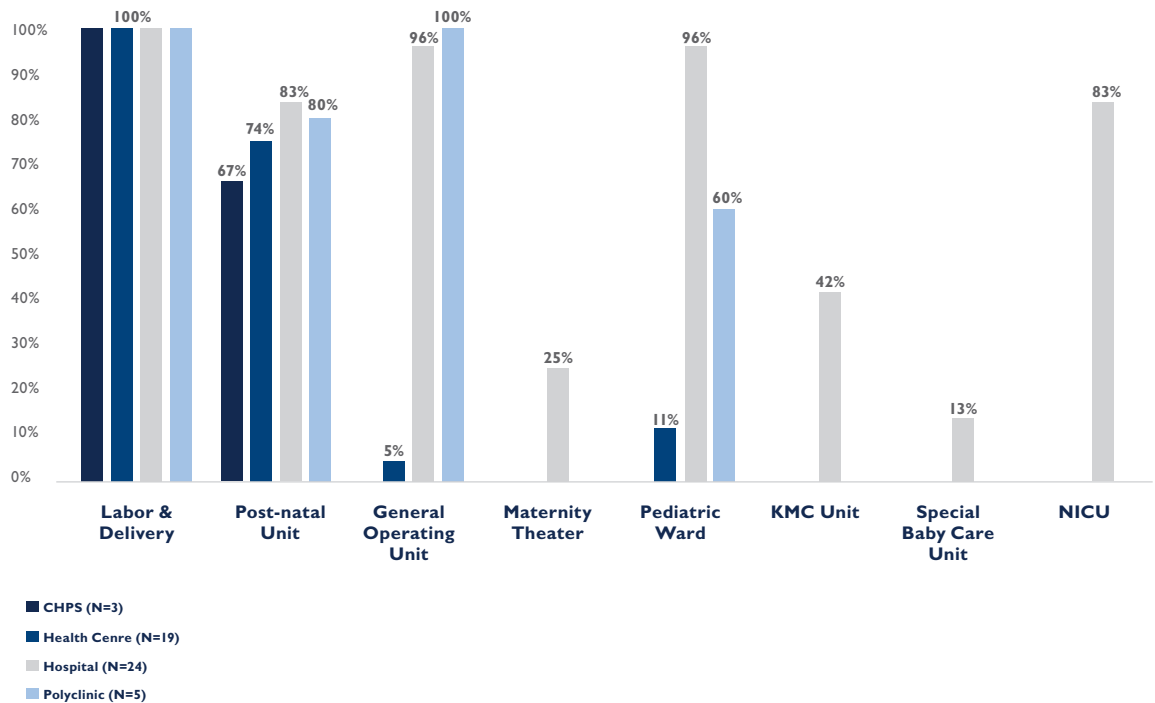
Category of Staff Responsible for Assessing and Discharging Newborns



Availability of Infrastructure for Newborn Care

All surveyed facilities had labor and delivery units; however, not all sites had a dedicated post-natal unit and other recommended amenities like a general operating unit, pediatric ward, maternity theatre, kangaroo mother care (KMC) ward, special baby care unit, and neonatal and intensive care unit (NICU).

Availability of Physical Areas and NICU in Facility

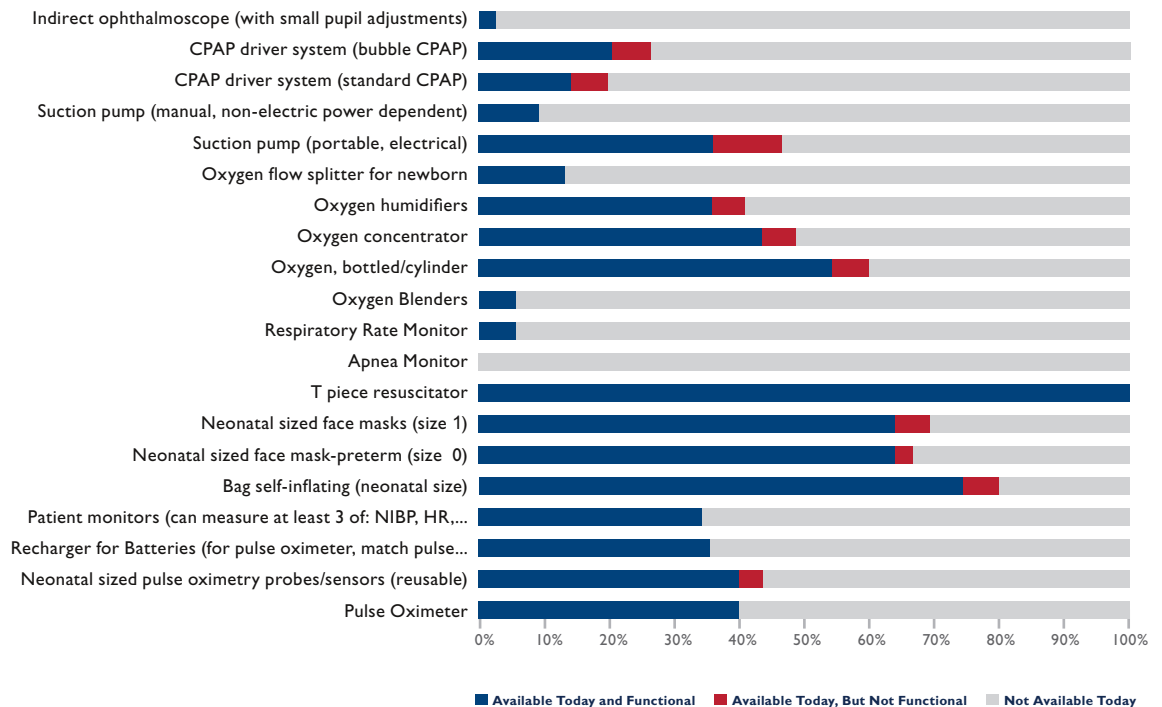




Availability of Newborn Care Equipment and Supplies

The assessment showed gaps in availability of key equipment such as continuous positive airway pressure (CPAP) machines, pulse oximeters, and oxygen concentrators/blenders for management and care of SSNBs, and highlighted needs for increased funding to procure equipment.

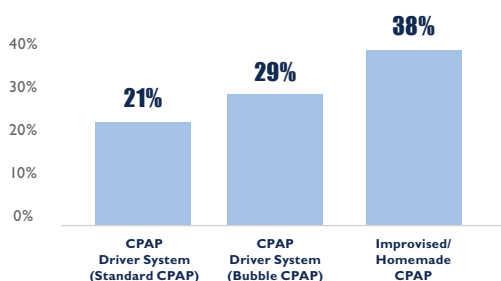
Availability for Devices and Equipment for Newborns



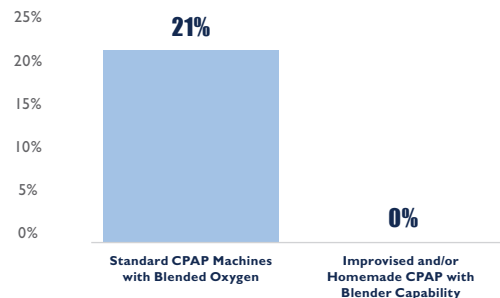
Availability of CPAP

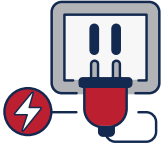
CPAP machines were available and functional only in hospitals (at levels 2 and 3). However, none of the hospitals had sufficient CPAP devices and accessories to cover all babies that required respiratory support. Over 50 percent of the facilities with improvised/homemade CPAP did not have blended oxygen.

Availability of Functioning CPAP Machines in Hospitals



Availability of CPAP Machines with Blended Oxygen in Hospitals

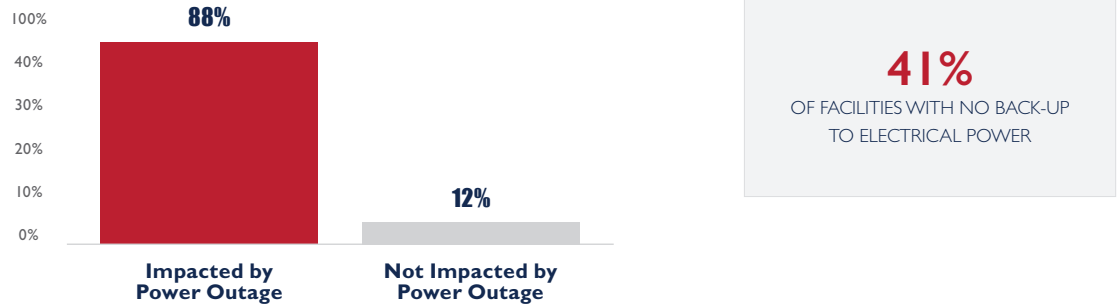




Neonatal Unit Electricity Supply

41 percent of facilities reported not having any back-up electrical power, despite 88 percent of facilities being impacted by power outages. Back-up power sources were used for a variety of equipment, including vaccine refrigerators, phototherapy lights, radiant warmers, oxygen concentrators, incubators, and suction pumps. Only 8 percent of facilities had electrical load certification conducted within the past 12 months.

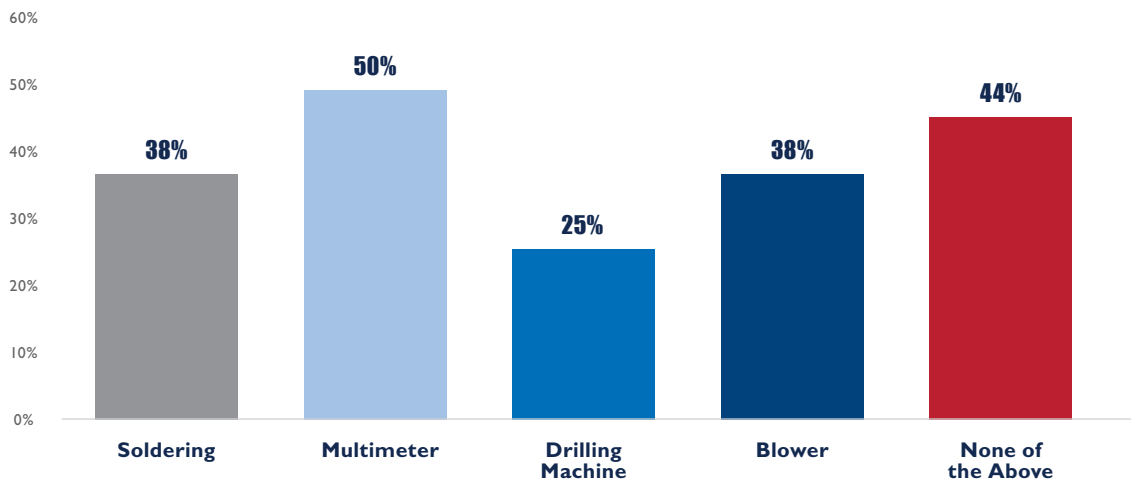
Facilities with Neonatal Units that are Impacted by Power Outages



Maintenance

44 percent of facilities did not have maintenance tools/devices for newborn care equipment.

Availability of Maintenance Devices for Newborn Care Equipment





Photos by GHSC-PSM.

Recommendations

- ✓ The MOH and GHS should consider expanding infrastructure for maternal and newborn care (NICU, postnatal unit, maternal theatre, KMC unit and special baby care unit) in both new and existing health facilities to ensure equitable access to all levels of services critical for protecting the health of SSNBs as well as women seeking maternal health services.
- ✓ GHS should consider supporting health facilities to acquire and ensure effective usage of newborn care devices and equipment including CPAP, pulse oximeters, oxygen analyzers, and safe oxygen sources that are recommended for use in NICU.
- ✓ GHS should consider reviewing and implementing a standardized referral and feedback system for SSNBs to ensure continuity of care in situations where facilities lack human resources, devices and equipment that are needed for effective clinical management outcomes.
- ✓ GHS should consider budgeting and acquiring funding for the procurement of back-up power supply for health facilities to prevent disruption in newborn care and related health services that rely on uninterrupted electricity supply.
- ✓ GHS should consider identifying and building the capacity of health facilities that lack the resources or knowledge to effectively forecast and apply standard inventory management procedures for newborn medical devices.
- ✓ GHS should consider establishing a strong maintenance culture for newborn care devices and oxygen equipment by bridging capacity gaps, carrying out routine monitoring and supervision to promote adherence to standard protocols and planned preventive maintenance schedules, and acquiring basic tools and equipment needed for routine management.
- ✓ The MOH Family Health Division should consider conducting regular in-service training and supervision for midwives and nurses as part of efforts to improve and sustain the delivery of high-quality care for SSNBs.