



**PUBLIC HOSPITAL-BASED  
CARE OF SMALL NEWBORNS  
IN NIGERIA**



**Save the Children**

## **PUBLIC HOSPITAL-BASED CARE OF SMALL NEWBORNS IN NIGERIA**

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## ADDITIONAL DOCUMENTATION

*The following documents are available on request from Dr Suleiman Bello Mohammed, [mbskt@yahoo.co.uk](mailto:mbskt@yahoo.co.uk).*

- Appendix A: National Health Research Ethics Committee (NHREC) approval letter
- Appendix B: Approval letter for the Ethics Review Committee, Save the Children
- Appendix C: Script 1: Script for contact with reproductive health (RH)/maternal and child health (MCH)/integrated management of childhood illnesses (IMCI) officer at state level
- Appendix D: Script 2: Script for contact with hospital management board or other relevant officer at state level as referred to by RH/MCH/IMCI officer
- Appendix E: Script 3: Script for contact with hospital in-charge or medical manager
- Appendix F: Script 4: Care practices for small newborns in hospitals across Nigeria – telephone survey
- Appendix G: In-depth assessment tool
- Appendix H: Key informant interview guides
- Appendix I: Permission document for hospital directors/in-charges
- Appendix J: Informed consent for photos (mothers/caregivers)
- Appendix K: Verbal consent (hospital informants)
- Appendix L: Informed consent document (key informants)

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## ABBREVIATIONS AND ACRONYMS

<b>ACCESS</b>	Access to Clinical & Community Maternal, Neonatal and Women's Health Services
<b>CHEW</b>	Community health extension worker
<b>CHX</b>	Chlorhexidine
<b>CMAC</b>	Chairperson of the medical advisory committee
<b>CMD</b>	Chief medical director
<b>CPAP</b>	Continuous positive airway pressure
<b>EmONC</b>	Emergency obstetric and newborn care
<b>ENC</b>	Essential newborn care
<b>ENCC</b>	Essential newborn care course
<b>FMOH</b>	Federal Ministry of Health
<b>HMB</b>	Hospital management board
<b>HMIS</b>	Health Management Information System
<b>ICCM</b>	Integrated community case management
<b>IMCI</b>	Integrated management of childhood illnesses
<b>IMNCH</b>	Integrated Maternal Newborn and Child Health
<b>IV</b>	Intravenous
<b>KMC</b>	Kangaroo mother care
<b>LBW</b>	Low birth weight
<b>LGA</b>	Local government area
<b>MCH</b>	Maternal and child health
<b>MCSP</b>	Maternal and Child Survival Program
<b>MEAL</b>	Monitoring, evaluation, accountability and learning
<b>MPDSR</b>	Maternal and Perinatal Death Surveillance Review
<b>MSS</b>	Midwives Service Scheme
<b>NANPAN</b>	National Association of Nigeria Paediatric Nurses
<b>NC</b>	North-central (geopolitical zone)

<b>NE</b>	North-east (geopolitical zone)
<b>NGO</b>	Non-governmental organisation
<b>NW</b>	North-west (geopolitical zone)
<b>NHREC</b>	National Health Research Ethics Committee
<b>NiENAP</b>	Nigeria Every Newborn Action Plan
<b>NISONM</b>	Nigerian Society of Neonatal Medicine
<b>NMR</b>	Neonatal mortality rate
<b>PAN</b>	Paediatric Association of Nigeria
<b>PATH</b>	Partnerships for Transforming Health Systems
<b>PHC</b>	Primary healthcare centre
<b>PRRINN-MNCH</b>	Partnership for Reviving Routine Immunisation in Northern Nigeria—Maternal Newborn and Child Health Initiative
<b>QI</b>	Quality improvement
<b>RH</b>	Reproductive health
<b>RMNCAH+N</b>	Reproductive, maternal, newborn, child and adolescent health and nutrition
<b>SCBU</b>	Special care baby unit
<b>SDGs</b>	Sustainable Development Goals
<b>SMOH</b>	State ministry of health
<b>SOGON</b>	Society of Gynaecology & Obstetrics of Nigeria
<b>SOP</b>	Standard operating procedure
<b>SE</b>	South-east (geopolitical zone)
<b>SS</b>	South-south (geopolitical zone)
<b>SW</b>	South-west (geopolitical zone)
<b>TBA</b>	Traditional birth attendant
<b>TETFund</b>	Tertiary Education Trust Fund
<b>USAID</b>	United States Agency for International Development



ALTHOUGH NIGERIA has made significant progress in reducing under-5 mortality, it did not meet the child mortality target specified by Millennium Development Goal. Currently, the Sustainable Development Goals (SDGs) call for Nigeria to eliminate preventable child deaths and substantially lower child mortality by 2030.

About one-third of deaths to children under 5 in Nigeria occur in the first month of life, making improving newborn health a top priority for reducing overall child mortality. Every year in Nigeria, 240,000 newborns — 7 per cent of the global neonatal mortality burden — die during their first month. Complications of prematurity, complications during birth, and infections remain the leading causes of these deaths. Most of these deaths are preventable with proven and cost-effective interventions such as antenatal care, safe childbirth, medical interventions to deal with complications, and essential newborn care.

One such intervention is kangaroo mother care (KMC). First developed in Colombia, KMC involves early and continuous skin-to-skin contact between the small newborn (<2000g) and the mother or other caregiver, frequent and exclusive breastfeeding, early discharge from the health facility, and a strict follow-up schedule. The World Health Organisation has endorsed KMC, and some Nigerian hospitals started adopting it after 2008. At the 2014 meeting of the Kangaroo Mother Care Acceleration Partnership in Rwanda, the Nigerian delegation drafted a country plan that called for an operational guide to facilitate effective introduction and scale-up of facility-based KMC. To develop the guide, the delegation agreed that a national assessment of KMC implementation to date was needed. This report provides the findings and suggested recommendations emanating from the study, which was carried out in 2016.

The study was conducted in two phases. The first phase was a telephone-administered survey of 757 public tertiary and secondary hospitals about the provision of care for small newborns, including facility-based KMC. The second phase comprised two separate data collection activities: an in-depth assessment of 36 hospitals — six hospitals per state in each of six geopolitical zones — and semi-structured individual interviews with 22 key informants representing different roles within the health system.

In the first phase, referred to as the landscape survey, most facilities that responded said they provided for the essential health needs of newborns. The most commonly available newborn care services were sepsis treatment, IV fluid therapy, and oxygen therapy. Training packages with modules on prevention and treatment of newborn sepsis have been presented in the majority of states. Some facilities, especially tertiary facilities, provide respiratory support using improvised continuous positive airway pressure (CPAP) devices. Thermal care, either in the form of incubators or radiant warmers, was not widely available in the facilities surveyed. This lack of equipment, combined with the country's frequent power outages, signals the need for scale-up and improved quality of KMC where it is being implemented. About two-thirds of the states have adopted chlorhexidine gel as the standard for cord care. However, only 34 per cent of facilities reported procuring and distributing the gel, although there was much variance between states. Six states had a usage rate of between 79 and 94 per cent of responding facilities, and 10 states had a usage rate lower than 17 per cent. One state had no facility reporting chlorhexidine usage. About 25 per cent of the surveyed facilities said they were implementing KMC, with 61 per cent of that total at general hospitals. However, proportionally more tertiary and specialist hospitals were providing KMC services: they comprised 11 per cent of facilities participating in the survey but 22 per cent of facilities providing KMC services. Fifty-eight per cent of facilities provide KMC in the postnatal/lying-in ward (possibly because many general hospitals combine maternity-newborn sections and do not have neonatal units).

The second phase of the study, referred to as the in-depth assessment, provided details about the coverage and quality of small newborn care and of KMC practice, especially below the tertiary hospital level. There was tremendous variation

## SUMMARY

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in the level and quality of care provided in secondary hospitals, even when the necessary equipment was available. One recurring theme was that many secondary hospitals referred premature or low birth weight (LBW) newborns to a higher level of care, even when it might have been feasible for them care for the newborns. Another theme was that mothers with sick or small newborns did not return to the hospital for follow-up appointments. Informants cited various strategies, including home visits and community outreach, to encourage mothers to bring their babies back for follow-up care.

The in-depth assessment revealed that very little KMC is practised. Furthermore, where services are available, the practice is erratic and the uptake of facility-based care in the public sector is low. Virtually no continuous KMC takes place, although many facilities have sufficient space or could adapt existing space. Mothers often leave the facility too soon and then cease KMC. Furthermore, there are few guidelines for proper practice of KMC, and record-keeping is poor.

The survey, hospital assessment, and key informant interviews provide an extremely rich picture of newborn care in Nigeria and highlight many areas for improvement. This report includes detailed recommendations for action at many levels to enhance care, including better equipped facilities, increased training, smarter staff management, community awareness-raising, and closer coordination among government, development partners, and hospitals. While there are examples of good quality care for small or preterm babies that include KMC, Nigeria will need to pay greater attention to addressing the many factors hindering provision of high-quality KMC and comprehensive care for small newborns in order to meet the targets established in the SDGs.

GLOBALLY, NEARLY 2.7 MILLION newborn deaths are recorded annually, most from three preventable and treatable conditions: complications of prematurity, intrapartum-related complications (including “birth asphyxia”), and infections.<sup>2</sup> Direct complications of prematurity (birth before 37 weeks gestation) are the leading cause of death in under-5 children globally, accounting for 18 per cent of deaths in that age group and 35 per cent of deaths in the first month of life.<sup>3,4</sup> Preterm babies require special attention, particularly with regard to warmth, feeding, hygiene practices, and prompt identification and treatment of complications. More widespread use of proven interventions that ensure such special care could reduce preterm-related deaths by an estimated 58 per cent.<sup>5</sup>

One such intervention is kangaroo mother care (KMC). First developed in Colombia,<sup>6</sup> KMC involves early and continuous skin-to-skin contact between the small newborn (<2000g) and the mother or other caregiver, frequent and exclusive breastfeeding, early discharge from the health facility, and a strict follow-up schedule.<sup>7,8</sup> If properly delivered, this intervention could reduce the risk of hypothermia by 66 per cent, sepsis and hospital-acquired infection by 45 per cent, and neonatal mortality by 37 per cent.<sup>8</sup> In addition, KMC has been found to increase weight, head circumference and length gain, breastfeeding, and mother-infant attachment.<sup>9</sup> It is now recognized as an integral part of the continuum of care for preterm babies in the World Health Organization’s KMC Practical Guide of 2003<sup>10</sup> and the Integrated Maternal Newborn and Child Health (IMNCH) Strategy of the Federal Ministry of Health (FMOH) of 2007.<sup>11</sup> However, studies on implementation status in countries that have institutionalised provision of KMC in their facilities have revealed challenges related to introduction, ownership, quality of care, and sustainability.<sup>12</sup>

Globally the coverage of KMC and similar feasible, cost-effective interventions is low. This may be because “interventions that have the greatest impact are ... dependent on health-system infrastructure, capacity, and resources,”<sup>13</sup> which are often inadequate. Improving effective coverage requires improving the quality of care of clinical services, particularly in populations in need, by ensuring an adequate number of skilled and motivated staff are available and equitably distributed, as well as financial protection to ensure adequate access and utilization of available services and innovative leadership to address bottlenecks.<sup>13</sup>

## 1.1 Health services in Nigeria

Nigeria is a country of about 923,768 km<sup>2</sup> situated in the Gulf of Guinea, West Africa, with an estimated population of 182 million in 2015. The country has a federal political and administrative system with three tiers: central (federal), state, and local. The country is divided into 36 states and a Federal Capital Territory where the capital, Abuja, is located. The states are further subdivided into 774 local government areas (LGAs). The states are grouped into six geopolitical zones: north-west (NW), north-central (NC), north-east (NE), south-west (SW), south-east (SE), and south-south (SS)<sup>14,15</sup>

The public health system is decentralized, with three levels of care modelled along the administrative divisions of the country. At the centre, the federal government, through the Federal Ministry of Health (FMOH), is in charge of policy formulation, policy enforcement, regulation, establishment of standards, training and curriculum development, and international representation on Nigeria’s health issues. The FMOH also oversees the affairs of the country’s federal tertiary hospitals. The main health service providers are the state governments through their ministries of health (SMOHs), which oversee the affairs of all the general hospitals, usually through state hospital management boards (HMBs). They also implement the policies formulated by the FMOH. Some SMOHs manage state tertiary or specialist hospitals. The local governments’ health departments oversee primary healthcare centres (PHCs), health centres, health posts, and dispensaries. Their activities are coordinated by national and state primary healthcare development agencies (PHCDAs).<sup>14,16,17</sup>

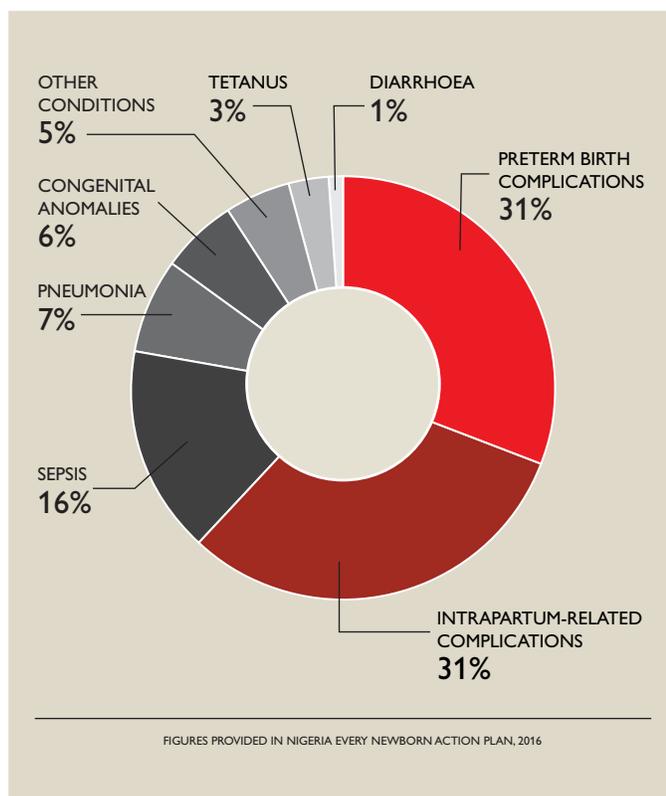
# 1. BACKGROUND

Nigeria's health spending in 2014 was 3.7 per cent of its gross domestic product and 8.2 per cent of its total budget. However, three-quarters of health spending is private, mostly out-of-pocket costs for healthcare users. Government health spending was \$217 per person in 2014. In 2016, the allocation for health as a share of the total budget was 4.6 per cent.<sup>18</sup> This spending level is well below the 2001 Abuja Declaration committing African Union countries to allocate at least 15 per cent of their budgets “to improve the health sector.” However, according to the National Health Policy for 2016 to 2021, “there are currently no clearly defined roles and responsibilities with regard to the provision and financing of health among the three tiers of government.”<sup>19</sup>

## 1.2 Newborn health in Nigeria

An estimated 7 million live births occur in Nigeria each year, with 240,000 babies dying in the first month of life, a neonatal mortality rate of 34 deaths per 1,000 live births.<sup>20</sup> Only 36 per cent of deliveries occur with skilled birth attendants in healthcare facilities. Nigeria accounts for 7 per cent of global newborn deaths — the highest volume in Africa and second highest in the world.<sup>21</sup> Newborn deaths account for 32 per cent of all under-5 deaths in Nigeria.<sup>14</sup> Prematurity and its complications (31 per cent), intrapartum-related complications (31 per cent), and newborn sepsis (16 per cent) remain the leading causes of these deaths (Figure 1).<sup>14,22</sup> An estimated 14 per cent of Nigerian babies are born with a low birth weight<sup>23</sup> and an estimated 12 per cent are born prematurely.<sup>24</sup>

**FIGURE 1: CAUSES OF NEWBORN DEATHS, 2013**



Although Nigeria has achieved significant reductions in under-5 mortality, it did not achieve its target for Millennium Development Goal 4.<sup>25</sup> In the SDG era, Nigeria must therefore strengthen efforts to address newborn health to achieve the targets set by the SDGs and the global Every Newborn Action Plan.<sup>14,26,27</sup> Of particular importance is care for very small newborns: those with a gestational age of less than 33 weeks or weighing less than 1500g at birth. Nigerian documents suggest that premature or low birthweight (LBW) babies should be referred to a higher level hospital for care, along with babies with danger signs of infection, breathing problems, hyper- and hypothermia, feeding problems, convulsions, jaundice, or cord abnormalities.<sup>23,28</sup>

## 1.3 History of KMC in Nigeria

KMC is an effective, low-cost intervention to help small newborns survive. It was first introduced to Nigeria in the late 1990s by a resident paediatrician at the University of Lagos Teaching Hospital after she had received training in Colombia.<sup>23,29</sup> The first Nigerian scientific study comparing KMC with conventional care was undertaken in three hospitals in Lagos in 2001.<sup>30</sup> The study found KMC reduced the risk of hypothermia by more than 90 per cent compared with conventional care; while KMC babies in the study had more cases of hyperthermia (>37.5 C), the risk was not significant. Mothers reported feeling that KMC was safe and preferred it to conventional care because it did not separate them from their infants. Some mothers, however, had problems adjusting to the method. The study concluded that KMC was a preferable method for managing stable LBW infants where equipment for thermal regulation is lacking or unreliable.<sup>30</sup>

More systematic introduction of KMC as a method for caring for small babies only began in Nigeria in 2007, with the Partnership for Reviving Routine Immunisation in Northern Nigeria and the Maternal Newborn and Child Health Initiative (PRRINN-MNCH) and the Access to Clinical and Community Maternal, Neonatal, and Women's Health Services (ACCESS)/USAID programme in four northern states.<sup>29</sup> This led to the development of a KMC training manual for Nigeria by the FMOH in conjunction with the Nigerian Society of Neonatal Medicine (NISONM) in 2008 (revised in 2010).<sup>31,32</sup> Between 2009 and 2011, more 150 healthcare providers in the states of Kano, Yobe, and Zamfara were trained by 31 master trainers in the PRRINN-MNCH programme. Twenty-two health facilities in these states were reached through training and the provision of a KMC kit (wrap, cup and spoon, and nappy) and other equipment (weighing scale, Ambu bag, and mask).<sup>29</sup> There is no definitive record of the number of healthcare workers trained through the ACCESS programme between 2006 and 2012 (Kano, Zamfara, and Katsina); however, a reported 300 national KMC training manuals were distributed through ACCESS-supported facilities.<sup>33</sup>

An evaluation of the ACCESS programme highlighted two major shortcomings with regard to KMC. The first was the absence of indicators tracking trends in the use of KMC services. The second was the way KMC had been introduced to health facilities, providers, and users and the discontinuation of KMC services as a result of poor utilisation. These findings are important to consider when designing future interventions:

KMC appears to have been introduced in a manner that providers found to be time and space intensive, and less than mother-friendly. Providers felt the procedure was too time consuming and paperwork intensive. State and LGA officials from both Kano and Zamfara said that women felt stigmatized by their segregation in the KMC wards and that the intervention should not have been facility based, but rather home based. It was felt that mothers of LBW babies would have preferred to use the technique in the privacy, familiarity, and comfort of their own homes. ... Introducing this intervention closer to the community and home may have resulted in better utilization and effectiveness under the ACCESS/MCHIP Project as the technology is simple and appropriate for low-resource settings.<sup>33</sup>

KMC has been integrated into policy documents such as in the IMNCH Strategy,<sup>11</sup> Infant and Young Child Feeding Guidelines,<sup>34</sup> the National Child Health Policy, the Essential Newborn Care package,<sup>35</sup> and the integrated Facility-Based Newborn Care package developed by the FMOH in 2014.<sup>28,35</sup> KMC is also a featured priority of the Nigeria Every Newborn Action Plan (NiENAP).<sup>14</sup>

Despite the commitment to KMC expressed in various policy documents, no information was available on the coverage of KMC in Nigeria by 2016. A Nigerian delegation led by the FMOH participated in a 2014 meeting in Kigali, Rwanda,

# 1. BACKGROUND

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of eight countries selected for the acceleration of KMC scale-up as part of the Kangaroo Mother Care Acceleration Partnership (KAP) where updates and experiences on implementing KMC were shared. The Nigerian team included representatives from the FMOH, NiSONM, and Save the Children's Saving Newborn Lives program. The meeting produced a country plan for Nigeria, which called for an operational guide for the effective introduction and scale-up of facility-based KMC.

Because little was known about how the care of small newborns was organised in the country, the delegation agreed to conduct a national assessment of small newborn care in public hospitals with an emphasis on KMC implementation. The aim was to identify opportunities and gaps in small newborn care and KMC implementation as part of an integrated scale-up of newborn care in Nigeria, later articulated in the Nigeria Newborn Action Plan (NiENAP).<sup>14</sup> The findings from the study were meant to inform the development of a national operational guide for facility-based care of small newborns, with specific reference to KMC. The study was approved by the FMOH and received ethical clearance from the National Health Research Ethics Committee (NHREC) (Appendix A). A second approval was obtained from the Ethics Review Committee of Save the Children USA (Appendix B).

The study had two phases. The first phase described the landscape of current provision of care services for small newborns, including facility-based KMC, across Nigerian public hospitals. A cross-sectional survey design was used to generate summary statistics of existing services for small and sick newborns, including the extent to which KMC services were available.<sup>36</sup> The second phase comprised two parallel data collection activities: an in-depth assessment of 36 hospitals in six states and semi-structured individual interviews with 22 key informants representing different roles within the health system.

The first phase, or landscape survey, provided a snapshot of newborn care services in Nigeria as reported by informants from hospitals. The second phase, or in-depth assessment, was designed to document the actual provision of care to small newborns and, where KMC services were available, to gain a better understanding of the utilisation of the services and the way KMC was practised. The combined results of the study identified opportunities and gaps to help shape the development of national operational guidelines for KMC to be implemented in the context of an integrated scale-up of newborn care in Nigeria, as articulated in the NiENAP.<sup>14</sup>

### 2.1 Landscape survey

THE SAMPLE FOR landscape survey was drawn from the 2011 National Directory of Health Facilities of the FMOH, which identified all secondary and tertiary public hospitals managed and financed by federal or state governments. This produced a list of 73 tertiary and 969 secondary hospitals, supplemented by SMOHs contacted for the study. The secondary hospitals comprised state general and specialist hospitals and included some private-public partnership facilities from the SMOHs. Also included were a few zonal hospitals and other hospitals functioning under the auspices of LGAs. Tertiary hospitals included both state and federal hospitals.

Excluded from the study were:

- Hospitals managed and financed by private individuals or organizations with no known private-public partnerships
- All primary healthcare facilities managed and financed by local governments
- Mono-specialty facilities that did not provide maternity and/or newborn care services

Data were collected by a team of 12 paediatric nurses identified by the National Association of Nigerian Paediatric Nurses (NANPAN). These nurses were practicing in a newborn unit and trained in KMC.

The data collectors were trained by a national consultant and given a general orientation on KMC. At the end of their training they were required to demonstrate:

- Familiarity with the survey method
- A clear understanding of the content of the data collection tools
- Ability to conduct telephone interviews professionally and ethically

The survey was conducted by telephone in August 2016. Each data collector covered three to four states using four standardised tools or scripts (Appendices C-F) applied sequentially. The first component of each script was an introduction and required obtaining verbal consent from the respondent. All data collected were checked by the national consultant for internal consistency and completion prior to data entry (Table 1).

### 2.2 In-depth hospital assessment

Hospitals were selected for the in-depth assessment from those responding to the landscape survey using a stratified purposive sampling strategy that selected six hospitals from six states, each representing one of the six geopolitical zones. The hospitals must have had prior training or support for KMC by implementing partners, or planned training, or support for KMC. The sample for each state was further refined to ensure the following:

- Hospitals represented different levels of care (secondary and tertiary).
- Tertiary hospitals represented different administrative entities (federal and state).
- Hospitals had different “histories” or trajectories of KMC implementation (currently implementing KMC; previously implementing KMC; not implementing KMC but with services for small newborns).

Within each hospital, informants were mainly health workers providing services in maternity or the newborn care units (or both), but could also include hospital managers. In addition, registers and records, to the extent available, were reviewed.

## 2. METHODOLOGY

Three teams of three data collectors each were recruited to conduct the in-depth assessment. Each team comprised a leader (a paediatrician or other medical doctor), a paediatrician, and a neonatal nurse, all with previous training in KMC. The teams were divided between the six states. Team members had immersion training in using the assessment tool (Appendix G) and the interview guides for key informant interviews (Appendix H).

An investigator team visited each of the six hospitals identified for inclusion in each of the six selected states. One day was allowed for each hospital visit. The state selected in the SW geopolitical zone was used as part of the immersion training for all three teams, who visited and assessed hospitals in this state under the guidance of the international consultant. Debriefing after each visit included a discussion on experiences, interpretation issues, and reaching consensus on findings. Team 1 then continued with visits in one state in the SE zone. Team 2 visited one state in each in the SS and NC geopolitical zones, whereas Team 3 covered one state each in the NE and NW zones.

**TABLE 1: OVERVIEW OF THE DATA COLLECTION PROCESS — LANDSCAPE SURVEY**

SCRIPT	ADMINISTERED TO	COVERED
1	State officers: reproductive health (RH), maternal and child health (MCH), or integrated management of childhood illnesses (IMCI)	<ul style="list-style-type: none"> <li>• Adoption of CHX gel for cord care</li> <li>• Number of healthcare workers trained in courses covering newborn care</li> <li>• Contact for Script 2</li> </ul>
2	Contact person at the hospital management board or relevant officer at state level	<ul style="list-style-type: none"> <li>• Numbers and types of public hospitals in state</li> <li>• List of public hospitals in the state</li> <li>• Contact details for each hospital</li> </ul>
3	Hospital in-charge or medical manager	<ul style="list-style-type: none"> <li>• Whether facility provided care for small newborns, i.e., with birth weight &lt;2000g</li> <li>• In-facility contact to provide more details on the provision of such care</li> </ul>
4	Respondents working in the newborn unit of the hospital	<ul style="list-style-type: none"> <li>• Hospital's newborn unit cot capacity, newborn care options available, and follow-up practices</li> <li>• If any history of KMC provision, dates of commencement and interruption, protocols used, space where provided</li> <li>• Use of CHX for cord care</li> <li>• Space provided for recording spontaneous comments</li> </ul>

The assessment tool explored various areas of small newborn care and KMC, including the following:

- Facility readiness across a range of services provided: equipment and supplies, guidelines, and records and registers
- History of KMC implementation, including barriers and enablers
- Financial support and resources
- Human resources and staffing available, including training and support from other staff
- Review of registers and records to extract data on KMC service provision
- Practices and procedures, including perceptions of KMC, by those providing care

The hospital in-charge or medical manager gave written permission for the team to visit their facility and to take pictures of the newborn unit (Appendix I). Photos of mothers practising KMC were taken as memory aids, as part of the assessment of the quality of KMC provided. Each mother received an explanation of the study and of her right to refuse participation, and was asked to give written informed consent (Appendix J). All health workers were asked for their consent to be photographed.

The first part of each visit was an informal discussion with some of the staff involved in the care of small newborns to get a sense of the newborn care setting and the way services are provided in the hospital. Participants gave verbal consent (Appendix K) and the discussion was audio-recorded, also with their permission. The second half of the visit was conducted in the areas where newborn care was provided, such as a separate special care baby unit (SCBU) or the maternity and postnatal wards in the smaller hospitals. This included questions and observations, including record review, to confirm some of the information provided in the initial discussion.

### 2.3 Key informant interviews

Key informants were purposively sampled from across the country to include experienced individuals from different levels (national, subnational, local) who could provide rich information about small newborn care and KMC and on the history of KMC in Nigeria. Snowball sampling was applied to identify other potential information-rich participants. Sampling continued until theoretical saturation had been reached (i.e., no more new issues were mentioned). Twenty-two participants were interviewed, more than the 15 anticipated. They included representatives of federal and state ministries of health, key newborn care development partners, and members of professional associations. Interviewers followed a guide (Appendix H). The key informant interviews explored the following:

- The informant's involvement in care for small newborns, including KMC
- Enablers, opportunities, and challenges of implementing KMC
- Existing guidelines and materials, capacity-building, and resource allocation
- Recommendations for sustainable scale-up

All key informants signed an informed consent document before being interviewed (Appendix L). Most interviews were audio-recorded with the written consent of the participant.

## 2. METHODOLOGY

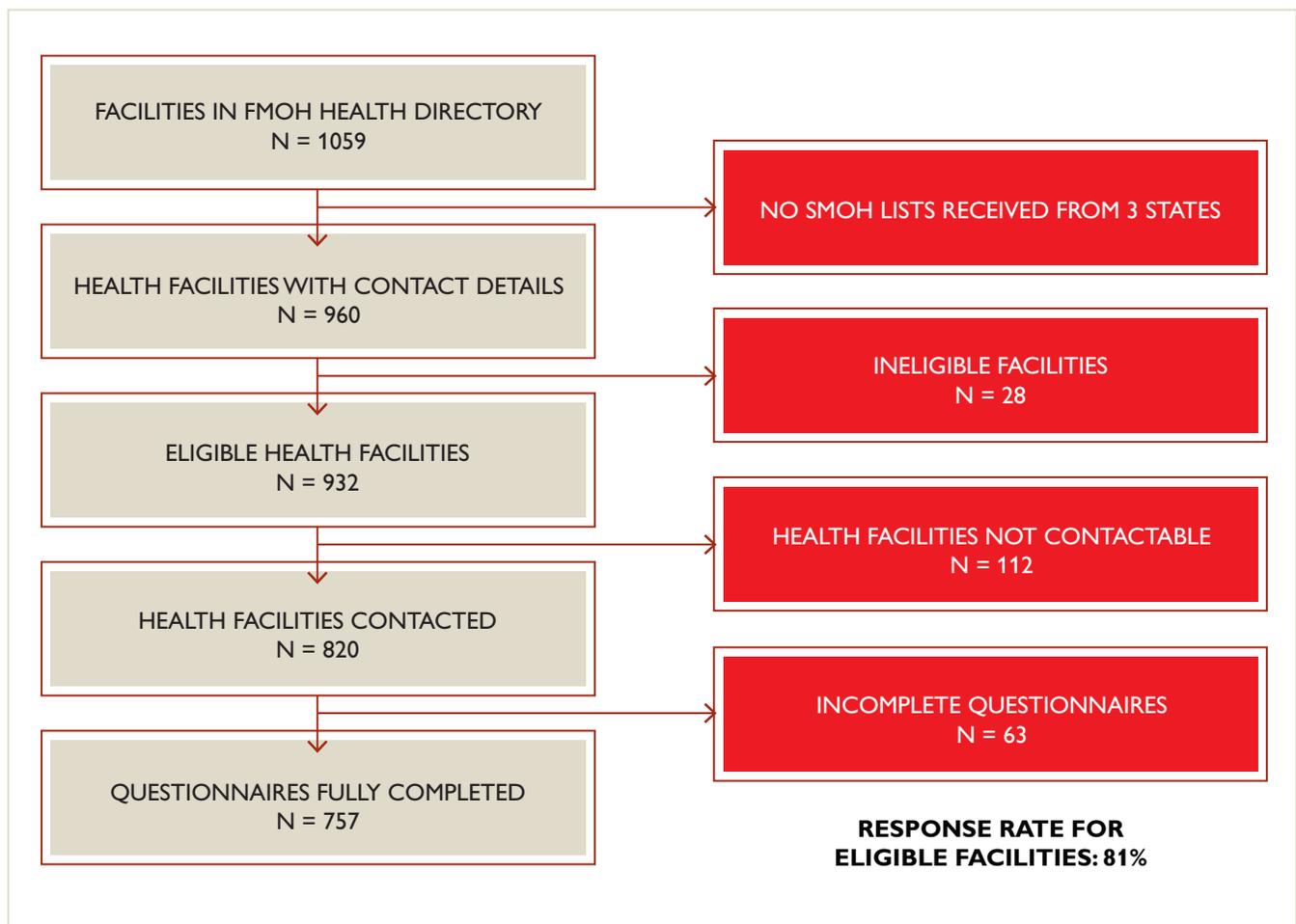
### 2.4 Results

#### 2.4.1 Landscape survey

The survey obtained the contact details of 960 facilities from 34 states. Twenty-eight were ineligible for inclusion because they did not provide maternity or paediatric services, and three did not respond. A total of 757 facilities were successfully contacted, a response rate of 81 per cent. Figure 2 shows the flow of identifying and contacting hospitals. Respondents providing information on the care of small newborns included medical officers (44 per cent), nursing officers (29 per cent), and consultants (7 per cent).

Thirteen states had a facility response rate of more than 90 per cent, in 12 states the response rate was 80–90 per cent, and in 5 states the response rate was 70–80 per cent. Four states had low response rates of 38–63 per cent, of which two reported that their contact lists contained many unreachable phone numbers. One state reported difficulty obtaining permission from the SMOH to conduct the survey and was experiencing strikes by health services personnel during the survey period.

**FIGURE 2: FLOW OF DATA COLLECTION — LANDSCAPE STUDY**



Two-thirds of facilities contacted were general hospitals, whilst federal and state tertiary and specialist hospitals formed a tenth of the responses (Figure 3). Fourteen per cent of hospitals were grouped together as “other.” Some of these may function similarly to general hospitals, but because states name their hospitals in different ways it was not possible to verify the specifics of these hospitals for all states. The facilities also included 31 health centres, most of which were described as “comprehensive.”

### 2.4.2 Hospitals participating in the in-depth assessment

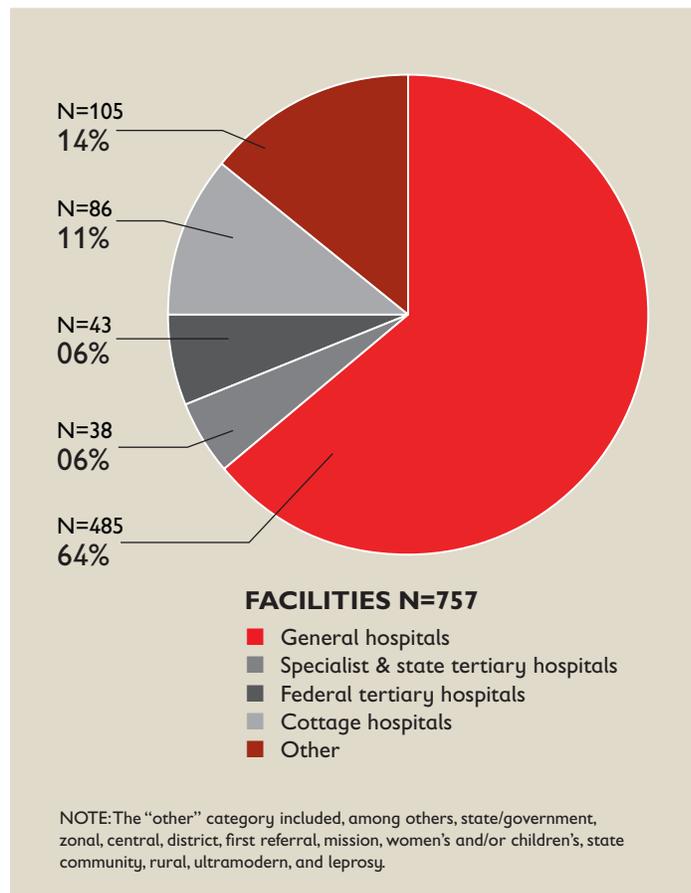
The hospital assessment sample included six federal medical centres or teaching hospitals, three state teaching or specialist hospitals with higher levels of paediatric care, and 27 secondary-level hospitals (Table 2). A challenge for the study design was the lack of uniformity in the nomenclature of secondary facilities. Most were called “general” hospitals, but this group also included hospitals with other designations. There were also wide variations in the level of care provided by these secondary hospitals, as discussed below.

Table 3 summarises the status of KMC implementation in the hospitals targeted for the in-depth assessment. For seven hospitals there was a discrepancy between what was found onsite and what had been reported in the landscape survey. Three hospitals that had reported in the survey that their KMC services had never been interrupted were found to have implemented KMC previously but were not practising it at the time of the hospital visit. Four others that had never implemented KMC had reported in the previous survey that they had never interrupted KMC services. Possible reasons for these discrepancies with the landscape survey include the following:

- Informants were not well informed about the actual state of affairs (e.g., whether service had been interrupted).
- Poor understanding of the concept of KMC (counselling mothers on skin-to-skin care or having staff trained in KMC was confused with actual provision of KMC services).

Hospitals were also probed about their baby-friendly status because breastfeeding, a major component of KMC, is also a key element of the Baby-Friendly Hospital Initiative.<sup>37</sup> Ten hospitals reported that they were baby-friendly: two hospitals in each of four states (NE, NW, NC, SW) and one hospital each in two states (SS, SE). Two hospitals indicated that they had been reassessed for baby-friendly status in the previous five years (NE, SW). No evidence was provided to support the baby-friendly claims.

**FIGURE 3: PARTICIPATING FACILITIES, BY TYPE**



## 2. METHODOLOGY

**TABLE 2: PARTICIPATING HOSPITALS BY LEVEL OF CARE (N=36)**

LEVEL OF HOSPITAL	SS	SE	NE	NW	NC	SW	TOTAL	
							N	%
Federal medical centre/teaching hospital	1	1	1	1	1	1	6	17
State teaching or specialist hospital	–	–	–	–	1	2	3	8
Secondary (general) hospital	5 <sup>a</sup>	5 <sup>b</sup>	5 <sup>c</sup>	5	4 <sup>d</sup>	3	27	75
<b>TOTAL</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>36</b>	<b>100</b>

*a* Included two central hospitals  
*b* Included one mission hospital (public-private partnership)  
*c* Included one cottage hospital  
*d* Included one state hospital  
 – No information reported

**TABLE 3: IMPLEMENTATION STATUS OF KMC IN PARTICIPATING HOSPITALS (N=36)**

LEVEL OF HOSPITAL	SS	SE	NE	NW	NC	SW	TOTAL	
							N	%
<b>Not implementing KMC</b>	3	3	4 <sup>a</sup>	2	3	4	20	56
<i>Federal tertiary &amp; state specialist hospitals</i>	–	–	1	–	–	3	4	–
<i>Secondary (general) hospitals</i>	3	3	3	2	3	1	16	–
<b>Interrupted, not resumed</b>	1	–	2	1	–	–	4	11
<i>Federal tertiary &amp; state specialist hospitals</i>	–	–	–	–	–	–	–	–
<i>Secondary (general) hospitals</i>	1	–	2	1	–	–	4	–
<b>Implementing</b>	2	3	–	2	3 <sup>b</sup>	2	12	33
<i>Federal tertiary &amp; state specialist hospitals</i>	1	1	–	1	1	–	4	–
<i>Secondary (general) hospitals</i>	1	2	–	1	2	2	8	–
<b>TOTAL</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>36</b>	<b>100</b>

*a* This includes one hospital with a preterm room earmarked for KMC, but all staff members with step-down training had been transferred and “they have not taught KMC to any mothers yet.”  
*b* One of these hospitals stated: “Only two babies initiated on KMC as outpatients following training.”  
 – No information reported

### 2.5 Data management and analysis

The data obtained from the landscape survey were checked and then entered into an Excel database developed by the international consultant by the Monitoring, Evaluation, Accountability, and Learning (MEAL) team of Save the Children Nigeria. Data were cleaned by the international consultant and the MEAL team. Formulas were inserted for descriptive statistics, such as means, frequencies, and proportions to minimize calculation errors.

For the hospital assessment, expanded notes of audio-recordings of the discussions with hospital informants were treated similarly to data generated for key informant interviews. Quantitative data and open-ended responses to items in the in-depth assessment tool (Appendix G) were entered in password-protected Excel spreadsheets that were only accessible to the authors of the report. Descriptive statistics were generated from responses to the quantitative items in the assessment tool. Content analysis was performed on the data derived from discussions and the open-ended responses.

The initial analysis of data derived from the key informant interviews followed a framework approach aimed to inform health policy<sup>38</sup> (i.e., the development of national KMC guidelines). Expanded notes were made of all audio-recordings of these interviews, with verbatim transcriptions of some key passages. The investigators familiarised themselves with the data and did some inductive and deductive coding. Themes were identified deductively from some of the interview questions (e.g., stakeholder involvement in newborn care, resources and funding, views on KMC, use of data, achievements, challenges, and recommendations). Additional themes and sub-themes were generated inductively from the data (e.g., role of different development partners, government commitment, initiatives related to newborn care, role of training, infrastructure, and equipment).

All materials containing data (hard copies of documents, audio-recordings, and other electronic files) were stored in a locked cabinet at the Save the Children offices in Abuja. Only staff directly involved in the study had access to the raw data. Expanded notes and transcriptions were made of audio-recordings (key informant interviews and hospital visits) by the data collection teams involved in the visits. Identifying information for individuals was removed from these documents. All electronic data documents were password protected and no personal identifiers were used in the summary of the findings.

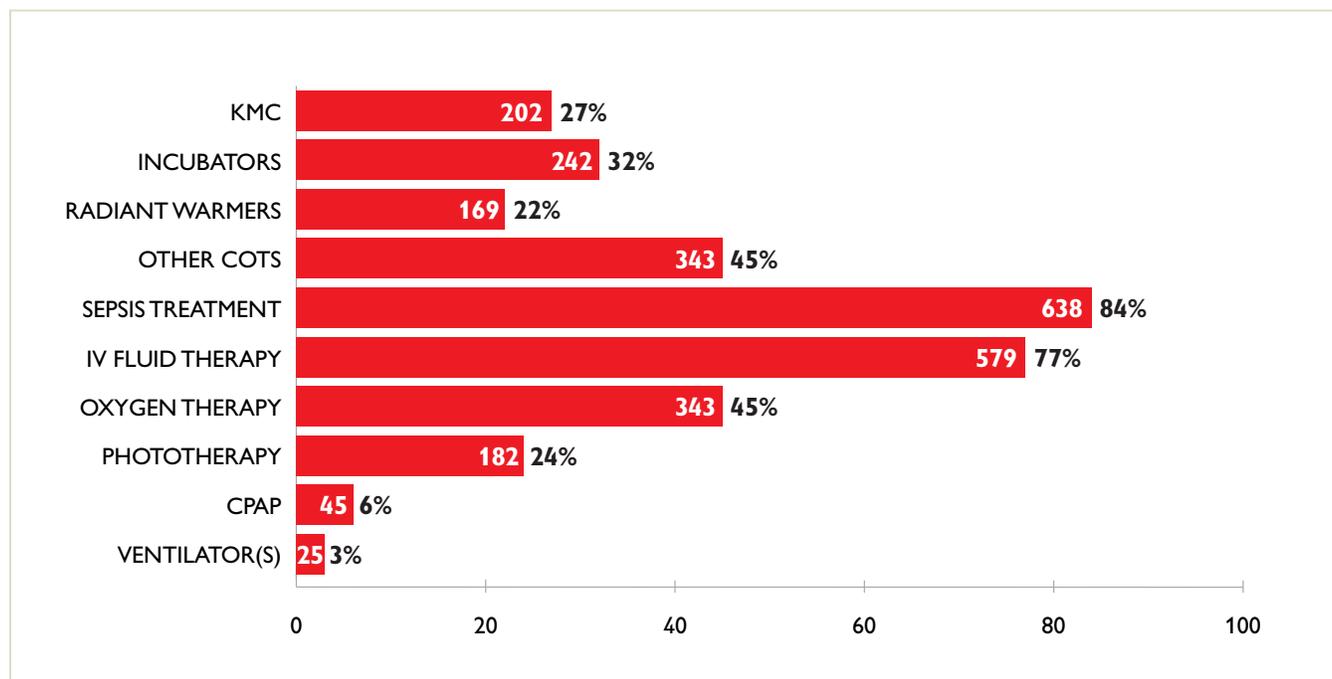
### 3. FINDINGS

THE MAIN FINDINGS are presented below, beginning with a snapshot of care for newborns — small or preterm newborns in particular. This is followed by an in-depth look at KMC in public hospitals and the factors that affect how widely it is practiced. Finally, the results of the interviews with 22 key informants are presented, covering a wide range of topics and issues related to newborn care and KMC in public hospitals.

#### 3.1 Snapshot of newborn care services

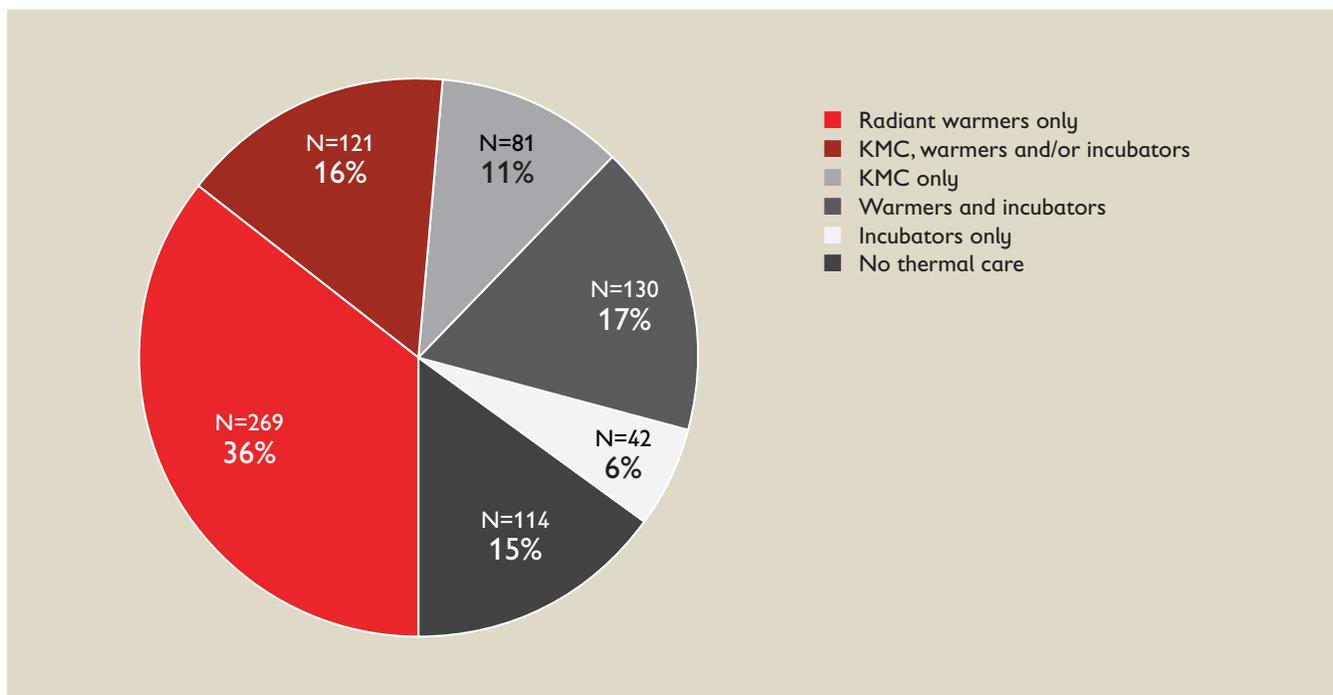
The landscape survey found that the most common elements of newborn care available as reported by hospitals were sepsis treatment (84 per cent) and IV fluid therapy (77 per cent) (Figure 4). Almost half (45 per cent) of the 757 hospitals surveyed could provide oxygen therapy for newborns. Some informants from the 6 per cent of facilities providing CPAP support indicated (unprompted) that they used improvised devices. Just 27 per cent of the hospitals reported that they provided KMC, a primary focus of this assessment.

**FIGURE 4: REPORTED TYPES OF NEWBORN CARE AVAILABLE IN 34 NIGERIA STATES (N=757)**



Thermal care was available in the form of incubators in one-third of facilities and (radiant) warmers in about one-fifth of facilities (Figure 5). Seventeen per cent of facilities reported the availability of both incubators and warmers. Eleven per cent of facilities without incubators or warmers provided KMC services (Figure 5).

FIGURE 5: PROVISION OF THERMAL CARE FOR NEWBORNS (N=757)



### 3.1.1 Use of chlorhexidine to prevent infection

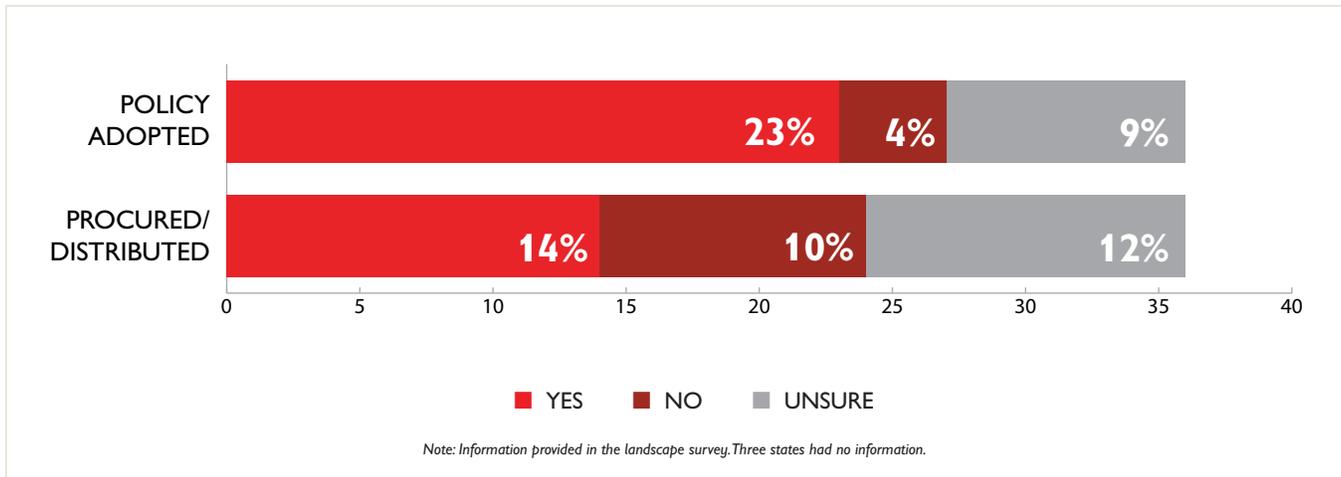
Use of CHX on the umbilical cord to prevent infection is especially important because newborn infections contribute to 20 per cent of all newborn deaths in Nigeria, and the umbilical stump is the main route of entry. The WHO has recommended optimal cord care at birth and during the first week of life, including use of CHX in areas where the neonatal mortality rate (NMR) is above 30 per 1000 live births.<sup>42</sup> CHX was first introduced in Nigeria through the USAID/TSHIP (United States Agency for International Development/Targeted States High Impact Project) projects in Sokoto and Bauchi states as 7.1% chlorhexidine digluconate aqueous solution or gel, delivering 4% chlorhexidine. As one of the 13 life-saving commodities adopted for accelerated access and use in Nigeria, it is currently being scaled up for use in communities and facilities.<sup>21</sup>

Thirty-four per cent of the 757 healthcare facilities participating in the survey reported that they were using CHX gel for cord care of newborns, but the extent of usage varied greatly by state, from 0 to 94 per cent. Six states had between 79 and 94 per cent of facilities reporting use, while 10 states had below 17 per cent of facilities reporting use. In one state, no facility reported CHX usage. CHX usage rates were especially low – less than 20 per cent — for states in the NC and SS regions, and highest in the NE and NW regions, where they exceeded 50 per cent.

Newborn care coordinators of 36 states reported on their state's policies and procurement of CHX for cord care. Policies had been adopted in 64 per cent of these states, but CHX had been procured and distributed in just 39 per cent of states (Figure 6).

### 3. FINDINGS

**FIGURE 6: STATUS OF CHX IN NIGERIA STATES (N=33)**



#### 3.2 Newborn care staff

The staff available to care for newborn babies is key to their survival and well-being while in the hospital. Doctors, nurses, technicians, administrators, and support staff all play vital roles in the delivery and care of new babies. The landscape survey found that a lack of skilled staff, which might hinder provision of high-quality newborn care, including KMC. One hospital reported there was no medical doctor or nurse in the maternity section. Nearly 96 per cent of facilities reported that protocols and standard operating procedures (SOPs) were non-existent or had not been implemented. The hospital assessment revealed more details about staff shortages, lack of training, and confusion about roles of various staff in the delivery and care (discussed below). In some hospitals in the in-depth assessment, staff were on strike because of pay and work conditions.

The 36 hospitals in the second phase provided perspectives of the roles and responsibilities of staff in management and support positions with regard to newborn care. Some hospitals cited strong support from senior management. Informants stated that “the role of management cannot be overemphasized,” (SW) and “[management] has shown concern, commitment, and care. They were able to create demand by advocacy, understanding barriers to accessing care, and making changes to their services to satisfy customer yearnings.” (SW)

The Chief Medical Director (CMD) is usually the in-charge of a tertiary hospital and the Medical Director the in-charge of a secondary hospital. Informants’ responses raised a number of roles of these directors in the care of small newborns (Table 4), including support, educational, and advocacy, funding and procurement decisions and sign-offs, involvement in infrastructure upgrades and maintenance. The responses also raised the importance of the director’s personal background and the dual roles of clinician and chief administrative officer.

Hospital informants had fewer comments about the role of the head of clinical services or the chairperson of the medical advisory committee (CMAC). Focus areas mentioned by individual states included standing in for the medical director (NE), prioritising newborn care (NW), facilitation of patient referrals (SS), and ensuring the functioning of laboratory services (NE). In one state a few hospitals indicated that the head of clinical services did not have significant input in the care of small newborns, stating for example: “He does not think he has much role to play” or “the medical officer in-charge said his hands are tied.” (SS)

**TABLE 4: PERSPECTIVES OF THE ROLES OF THE CHIEF MEDICAL DIRECTOR OR MEDICAL DIRECTOR**

ROLE	EXAMPLES
<b>DUAL AND SINGLE ROLES</b>	
<i>Chief administrative officer</i>	<ul style="list-style-type: none"> <li>• “Ensures effective running of facility” (NE)</li> <li>• “Ensure hospital functioning” (NW)</li> </ul>
<i>Clinician</i>	<ul style="list-style-type: none"> <li>• “Attends to patient delivered with problems e.g., severe birth asphyxia” (NC)</li> <li>• “Supervises doctors’ ward rounds” (NE)</li> <li>• “Second responder during calls” (NE)</li> </ul>
<i>Hospital Management Board</i>	<ul style="list-style-type: none"> <li>• “Medical director is ... mainly involved in clinical practice. Hospital Management Board takes care of most administrative issues” (SE)</li> </ul>
<b>FUNDING AND PROCUREMENT DECISIONS AND SIGN-OFF</b>	
<i>Acquisition of equipment and supplies</i>	<ul style="list-style-type: none"> <li>• “Provision of equipment – incubation” (NC)</li> <li>• “Ensure free services for neonates, e.g., O2, suction machine” (NW)</li> <li>• “Provision of new-born supplies, e.g., CHX” (NE)</li> </ul>
<i>Sourcing for additional funds</i>	<ul style="list-style-type: none"> <li>• “Helps in sourcing funds from NGOs, etc.” (SW)</li> </ul>
<i>Support for training</i>	<ul style="list-style-type: none"> <li>• “Sponsored the CPAP training” (NC)</li> </ul>
<i>Procurement</i>	<ul style="list-style-type: none"> <li>• “As difficult as in other hospitals, but CMD [chief medical director] ensures prioritization” (SE)</li> </ul>
<i>Attention to families in need</i>	<ul style="list-style-type: none"> <li>• “The medical director of the hospital also actively follows up and supports referred cases and assists even financially” (SW)</li> <li>• “Waivers for indigent patient” (SS)</li> </ul>
<b>INFRASTRUCTURE UPGRADES AND MAINTENANCE</b>	
	<ul style="list-style-type: none"> <li>• “Aims at establishing newborn unit” (NE)</li> <li>• “Follows up with Ministry to ensure quick completion of permanent site” (NE)</li> <li>• “Ensure blood bank and ambulance are functioning &amp; always ready” (NW)</li> <li>• “Encourage staff to train and educate mothers [before] early discharge due to lack of space” (NW)</li> </ul>
<b>STAFF SUPPORT</b>	
	<ul style="list-style-type: none"> <li>• “Staff motivation” (NW)</li> <li>• “Encourage staff to train and educate mothers [before] early discharge due to lack of space” (NW)</li> <li>• “Provide extra staff support if staff are overwhelmed” (NW)</li> <li>• “Ensure effective interdepartmental relationships” (NW)</li> </ul>

CONTINUED NEXT PAGE

### 3. FINDINGS

**TABLE 4: PERSPECTIVES OF THE ROLES OF THE CHIEF MEDICAL DIRECTOR OR MEDICAL DIRECTOR (CONTINUED)**

ROLE	EXAMPLES
<b>EDUCATION OF PARENTS AND STAFF</b>	
	<ul style="list-style-type: none"> <li>• “Organize in-house training of staff” (NW)</li> <li>• “Patient education on newborn care“ (NE)</li> </ul>
<b>ADVOCACY</b>	
	<ul style="list-style-type: none"> <li>• “Advocacy for assistance from NGOs” (SW)</li> <li>• “Advocate for staff recruitment” (NC)</li> <li>• “Advocates and encourages mothers on routine immunization, exclusive breastfeeding, and cord care” (NE)</li> </ul>
<b>PERSONAL BACKGROUND DETERMINES SUPPORT FOR NEWBORN CARE</b>	
	<ul style="list-style-type: none"> <li>• “Supportive — post currently occupied by a consultant neonatologist” (SE)</li> <li>• “Actively involved in newborn care as he is one of the 3 doctors in the facility” (NE)</li> </ul>

Informants had more to say about the roles of the heads of nursing. Their roles included acting as functionary, mediator, supporter, supervisor, trainer, and carer (Table 5).

Informants said the roles of the heads of hospital secretaries or administrators included acting as supporting day-to-day operations, administration, funding, procurement, and infrastructure (Table 6).

Informants from three tertiary and two secondary hospitals described the role of procurement and maintenance officials in terms of what they thought should be done, but did not provide an actual position title. Senior management also played a role in supporting procurement of specific equipment in one facility.

Hospitals were probed about the role that professionals other than doctors and nurses play in the care of small newborns. This could include dietitians/nutritionists, physiotherapists, social workers, pharmacists, psychologists, and ophthalmologists. These cadres of professionals were not available in most of the hospitals assessed. Where a specific professional category was available, none formed an integral part of general newborn care or KMC but were rather used “on request.” A number of hospitals referred to social workers in relation to the care of small newborns where families could not afford to pay. In one hospital, the informant stated that unskilled or lower-level staff are the backbone of the hospital and constitute a majority of the workforce” (NW).

#### 3.2.1 Human resource availability

Hospitals allocate staff in different ways. Staff work either in the neonatal unit only or in more than one department at the same time or on the same day (Table 7). The study documented the numbers and cadres of staff available in hospitals in each state. It also reviewed policies on staff rotation.

TABLE 5: DESCRIPTIONS OF THE ROLES OF THE HEAD OF NURSING OPERATIONS

ROLE	EXAMPLES
<b>FUNCTIONARY</b>	
	<ul style="list-style-type: none"> <li>• “As longest member of staff present since before the bombing, he ensures smooth running of activities and transitioning” (NE)</li> <li>• “Ensures that things work well in the hospital” (SS)</li> <li>• “Ensures nursing services are up to standard” (SW)</li> </ul>
<b>ORGANISER OF NURSING STAFF</b>	
	<ul style="list-style-type: none"> <li>• “Checks nursing staff strength, daily reports, sends coverage nurses, sorts out problems” (SE)</li> <li>• “Rotates all the staff by way of transfer at the same time” (NC)</li> </ul>
<b>MEDIATOR AND SUPPORTER</b>	
<i>Between patients and management</i>	<ul style="list-style-type: none"> <li>• “Negotiates between patients and management” (SS)</li> <li>• “Coordinates provision of free services for neonates” (NW)</li> </ul>
<i>Between nurses and doctors</i>	<ul style="list-style-type: none"> <li>• “Ensures harmonious relationship with doctors” (NE)</li> </ul>
<i>Among nursing staff</i>	<ul style="list-style-type: none"> <li>• “[Deals with problems with] ... the staff in the unit” (NC)</li> </ul>
<b>SUPERVISORY AND SUPPORT ROLE</b>	
<i>Equipment and materials</i>	<ul style="list-style-type: none"> <li>• “Ensures prompt repair of faulty equipment” (SS)</li> <li>• “Requests equipment and materials needed for newborn care” (NE)</li> </ul>
<i>Nurses</i>	<ul style="list-style-type: none"> <li>• “Supportive supervision” (NC)</li> <li>• “Monitors nurses’ role in newborn care” (NE)</li> </ul>
<b>TRAINER</b>	
	<ul style="list-style-type: none"> <li>• “Attends seminars and workshops organized” (NC)</li> <li>• “Step-down meetings for staff” (NC)</li> </ul>
<b>CARE PROVIDER</b>	
	<ul style="list-style-type: none"> <li>• “Involved in nursing care for the newborn” (NC)</li> <li>• “Provides support for teenage mothers (SS)</li> </ul>

### 3. FINDINGS

Table 8 summarises the numbers of hospitals in each state providing particular staff cadres caring for newborns, whereas Table 9 provides the total number staff appointed for newborn care in the hospitals visited by cadre for each region. These numbers should be interpreted with caution, as staff in some hospitals were shared with other departments.

In the second phase of the assessment, the vast majority of the 36 hospitals (94 per cent) referred to staff shortages as a challenge to the provision of care for small newborns. One informant stated: “Poor manpower as same staff, including cleaners, attend to all” (NW). Some of the smaller secondary hospitals described dire staff situations. The assessment team noted the following for one hospital:

**TABLE 6: DESCRIPTIONS OF THE ROLES OF THE HEAD OF HOSPITAL SECRETARIES OR ADMINISTRATORS**

ROLE	EXAMPLES
<b>Day-to-day running of hospital</b>	<ul style="list-style-type: none"> <li>• “Carries out day-to-day activity of the hospital” (SS)</li> <li>• “Ensures regular updated reports of challenges with newborn care” (NE)</li> </ul>
<b>Administration</b>	<ul style="list-style-type: none"> <li>• “100% administrative support” (NW)</li> <li>• “Administration : ensures effective communication, correspondence, and discipline” (SW)</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>• “Source for funds” (NE)</li> </ul>
<b>Procurement</b>	<ul style="list-style-type: none"> <li>• “Ensures provision of equipment is followed up and supplied” (NE)</li> </ul>
<b>Infrastructure</b>	<ul style="list-style-type: none"> <li>• “Makes sure that there is water and bulbs in the hospital” (SS)</li> <li>• “Actively involved in improving infrastructure, e.g., solar system in maternity ward” (NE)</li> </ul>

**TABLE 7: NEWBORN CARE STAFF ALLOCATIONS BY ZONE (N=33)**

		SS	SE	NE	NW*	NC	SW**	TOTAL
Staff dedicated to the newborn unit only		2	1	1	1	1	3	9
Staff covering newborn care and maternity at the same time	Some	1	–	–	–	1	2	3
	All	3	5	5	3	4	1	21
Newborn staff shared with other departments on the same day	Some	2	1	–	–	1	2	6
	All	2	4	–	–	2	–	8
<p>* No information for two hospitals            ** No information for one hospital            – No information reported</p>								

“The hospital does not operate a unit system; hence, the only doctor treats all patients and all the nurses run a two-day shift (i.e., one nurse on duty for two full days; another takes over on the third day and runs his/her own two days).” (SE)

Information was also collected on hospitals’ staff rotations. Caring for small and sick newborns requires special skills that need to be practised regularly. Too many rotations or rotating too many staff members at the same time can compromise the quality of care. Thirty-one hospitals provided information on staff rotations (Table 10), and a few hospitals also shared information on staff transfers between hospitals. Transfers appeared to be irregular (on request) or random. In one state mention was made of six-monthly transfers of doctors (NE).

**TABLE 8: HOSPITALS WITH A PARTICULAR CADRE OF STAFF CARING FOR NEWBORNS (N=33)**

CADRE	SS	SE	NE	NW <sup>a</sup>	NC	SW <sup>b</sup>	TOTAL
<b>Nursing staff</b>							
Basic nurses	1	1	5	3	3	2	15
Paediatric nurses	2	4	4	1	–	3	15
Basic/community midwives	–	–	5	4	1	–	10
Post-basic midwives/nurses	6	6	–	1	5	4	22
<b>Medical staff</b>							
Paediatric consultants	2	1	1	1	1	4	10
Residents/registrar	3	1	21	1	1	–	8
Medical officers	3	5	6	3	5	5	27
Youth corps doctors	2	1	1	–	2	–	6
Interns/house officers	2	1	–	4	–	2	9
O&G consultant	1	–	–	–	–	–	1
<b>Other</b>	2	3	–	2	3 <sup>b</sup>	2	12
CHEWs	1	1	–	1	1	–	4
Attendants/assistants <sup>c</sup>	1	2	–	1	2	2	8
<b>TOTAL</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>36</b>

a No information for two hospitals

b No information for one hospital

c Also includes carers, ward orderlies, and maids

– No information reported

CHEW = community health extension worker

O&G = obstetrics and gynaecology

### 3. FINDINGS

In most tertiary hospitals nurses did not rotate outside paediatric departments, although they could rotate between different paediatric units with varying frequency:

- “Paediatric nurses do not rotate outside the department, but they rotate between newborn unit, EPU [emergency paediatric unit], and children’s ward every six months.” (SS)
- “Nurses’ rotation in the hospital is annual but rotation is uncommon in the SCBU.” (SS)
- “Matron in charge has not rotated in the last 10 years.” (NC)
- “Most paediatric senior nurses there permanently for seven or eight years.” (SW)

**TABLE 9: TOTAL NUMBER OF STAFF CARING FOR NEWBORNS IN HOSPITALS VISITED, BY REGION (N=33)**

CADRE	SS	SE	NE	NW <sup>a</sup>	NC	SW <sup>b</sup>
<b>Nursing staff</b>						
Basic nurses	1	9	29	9	3	22
Paediatric nurses	14	4	4	4	3	22
Basic/community midwives	–	–	23	12	4	–
Post-basic midwives/nurses	44	46	–	1	38	27
<b>Medical staff</b>						
Paediatric consultants	4	4	1	2	1	5
Residents/registrar	3	10	5	6	3	1
Medical officers	7	10	13	7	7	18
Youth corps doctors	3	1	1	–	2	–
Interns/house officers	4	3	–	4	–	6
O&G consultant	1	–	–	–	–	–
<b>Other</b>	2	3	–	2	3 <sup>b</sup>	2
CHEWs	–	1	5	4	2	–
Attendants/assistants <sup>c</sup>	10	34	10	0	25	27
<p><i>a</i> No information for two hospitals  <i>b</i> No information for one hospital  <i>c</i> Also includes carers, ward orderlies, and maids  – No information reported  CHEW = community health extension worker  O&amp;G = obstetrics and gynaecology</p>						

In some of the secondary hospitals there were no rotations or only rotation on request, while in others the rotations took place annually or biannually. One district hospital in SW had the policy of not rotating one-third of nurses to ensure continuity and to teach new nurses before the next round of rotations. In the tertiary hospitals consultants did not rotate. In some of the secondary hospitals doctors rotated every six months, whereas in the smaller hospitals they never rotated because they were responsible for the entire hospital. A few hospitals referred to their rotation policy, but indicated that it was not followed very strictly: "Rotations are irregular, and may be done by as much as three years." (NW)

**TABLE 10: STAFF ROTATIONS FOR NEWBORN CARE WITHIN STUDY HOSPITALS BY STATE (N=31)**

CADRE	SS <sup>a</sup>	SE <sup>b</sup>	NE	NW	NC	SW	TOTAL
<b>Nursing staff</b>							
<i>None, irregularly, or on demand</i>	2	–	1	2	5	2	<b>12</b>
<i>Different schedules for different categories<sup>c</sup></i>	1	–	1	1	1	–	<b>4</b>
<i>Annually</i>	1	–	3	1	–	4	<b>9</b>
<i>Biannually</i>	–	2	1	1	–	–	<b>4</b>
<i>Annually or biannually</i>	1	–	–	–	–	–	<b>1</b>
<i>Unknown</i>	–	–	–	1	–	–	<b>1</b>
<b>Medical staff</b>							
<i>None, irregularly, or on demand</i>	2	1	2	2	5	–	<b>12</b>
<i>Monthly</i>	–	–	1	–	–	–	<b>1</b>
<i>Three-monthly</i>	–	–	–	1	–	–	<b>1</b>
<i>Six-monthly</i>	1	–	1	–	–	2	<b>4</b>
<i>Different schedules for different categories<sup>d</sup></i>	2	1	1	1	1	3	<b>9</b>
<i>Unknown</i>	–	–	1	2	–	1	<b>4</b>
<b>TOTAL</b>	<b>5</b>	<b>2</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>31</b>

*a* No information for one hospital

*b* No information for four hospitals

*c* E.g., paediatric nurses did not rotate but most basic midwives and others might rotate every 1-3 years.

*d* More common in teaching hospitals, with consultants not rotating, registrars rotating every 3 or 6 months, medical officers between 1 and 6 months, and house officers every 2 weeks, 2 months, or 3 months.

– No information reported

## 3. FINDINGS

### 3.2.2 Newborn care training

As part of the landscape survey, 36 state-level officers provided information on training incorporating newborn care that had been conducted in their state, with special reference to the care of small newborns (Script 1). Training could include the Essential Newborn Care Course (ENCC), KMC, integrated management of childhood illnesses (IMCI), and Emergency Obstetric and Newborn Care (EmONC). Table 11 shows the number of states that confirmed the presentation of specific training packages. Fourteen states could give exact numbers; others responded “yes” or “no.” For

**TABLE 11: NEWBORN CARE TRAINING IN 36 STATES**

	NUMBER OF STATES		PERCENTAGE “YES”
	YES	UNSURE	
ENCC	27	1	75
EmONC	20	1	56
KMC	24	1	67
IMCI	24	1	67
Other*	3	0	8

\* Integrated Community Case Management (ICCM) (n=2); Quality of Care (n=1)  
Source: Responses from state officials obtained in the landscape survey.

our analysis, all positive responses have been converted to “yes.” Two states had “unsure” responses with regard to some of the packages.

However, lack of adequate training was mentioned by informants in both phases of the assessment as hindering newborn care. The quality or retention of the training may not be high, as suggested by statements from some informants in the in-depth study, or else the staff being reached may not be the ones engaged in newborn care.

The second phase looked at the numbers of staff specifically trained in KMC. Tables 12 and 13 show the number of facilities with KMC-trained staff and the total number of staff ever trained in KMC in each state. The larger number of trained staff in the NW state (n=47) is related to the PRRINN-MNCH and ACCESS programmes operating between 2006 and 2011; however, these staff did not receive the full package of essential newborn care (ENC) training

because it was not available at the time. The other state with the largest number of trained staff (n=54) was being targeted by a development partner for the implementation of KMC at the time of the assessment (NC). In three states, KMC training was associated with ENC training.

**TABLE 12: NUMBER OF FACILITIES WITH STAFF EVER TRAINED IN KMC IN THE STUDY HOSPITALS (N=33)**

	SS	SE	NE	NW*	NC	SW**	TOTAL	
							N	%
Nurses	2	3	3	3	5	Unsure	18	55
Doctors	1	4	4	Unsure	5	5	19	58
Other	–	2	–	Unsure	–	Unsure	2	6
No trained staff	4	2	2	1	1	–	10	30

\* No information for two hospitals  
\*\* No information for one hospital  
Unsure: At least one staff member probably trained, but respondents unsure of how many number.  
– No information reported for this category

**TABLE 13: NUMBER OF STAFF EVER TRAINED IN KMC IN THE STUDY HOSPITALS (N=33)**

	SS	SE	NE	NW <sup>A</sup>	NC	SW <sup>B</sup>	TOTAL
Nurses	3	12	5	47 <sup>c</sup>	35	5	<b>107</b>
Doctors	2	6	5	Unsure	19	13	<b>45</b>
Other	–	2	–	Unsure	–	-	<b>2</b>
<b>TOTAL</b>	<b>5</b>	<b>20</b>	<b>10</b>	<b>47</b>	<b>54</b>	<b>18</b>	<b>154</b>
Staff Trained in ENC	2	20	0	0	54	17	<b>93</b>

*a No information for two hospital*  
*b No information for one hospital*  
*c Participants referred to the 46 nurses trained through PRRINN-MNCH in 2008-2011. Some of these had died and some had been transferred. Therefore, not all trained nurses still worked in newborn care.*  
 – No information reported

### 3.3 Deliveries and newborn bed capacity

It was difficult to assess the caseload of newborns and LBW babies during the in-depth facility assessments. The assessors extracted relevant information available from delivery registers and from admission and discharge registers where possible. The number of babies delivered, and especially the number of LBW babies, was often incomplete or unavailable; definition of LBW differed between <2500g and <2000g across facilities. Smaller hospitals often had only a delivery register; in two cases the register contained the number of deliveries and nothing more. Some hospitals recorded neither birth weight nor gestational age and thus did not identify small or premature newborns. In some hospitals only the numbers of deliveries were available, whereas in others only numbers of newborn admissions could be provided. The numbers of deliveries per hospital were often not available from federal tertiary and state specialist hospitals with separate newborn care units detached from maternity; in many cases, assessors did not have time to visit the maternity section. Information was missing for some months in a few hospitals. Further hampering the assessment was that hospital workers in some states had been on strike for a number of months for not having been paid: “No baby on admission because of industrial action” (SS).

The number of deliveries appeared to be quite low in some secondary hospitals, especially in states experiencing strikes in the health sector. The situation at one such hospital for which no records were available was described by the assessment team:

This general hospital has only one medical officer who is in charge. Also has four nurses (post-basic qualification); matron in-charge was off duty. Deliveries are taken here but patronage is very low because of competition from TBAs [traditional birth attendants] and chemists. At times, only six deliveries in a month, including caesarean section. However, newborn babies are not admitted here as there are no facilities for their care. They are immediately referred to the [Federal Teaching Hospital]. KMC has never been practised here and none of the staff has been trained in KMC. (SE)

### 3. FINDINGS

In some hospitals only the number of LBW deliveries was available, and in others only the numbers of babies admitted to the neonatal unit or SCBU. In other hospitals it was not clear whether or not babies on the registers had been born in the hospital (inborn or outborn). There were also hospitals that only recorded the admission of sick babies and had no record of well babies.

At each hospital, participants were also asked about the number of LBW babies born relative to their total number of deliveries. Here again the responses varied because of different ways small babies are counted in relation to all babies delivered. Twelve hospitals (33 per cent) could not provide any records or registers from which the number of LBW babies delivered or admitted could be calculated. Another 10 (28 per cent) reported that they delivered or admitted 15 or fewer LBW babies in the previous three months.

Slightly more than half of hospitals (53 per cent) had an official number of beds allocated for newborns (Table

**TABLE 14: HOSPITALS WITH AN OFFICIAL BED ALLOCATION FOR NEWBORNS (N=36)**

	SS	SE	NE	NW	NC	SW	TOTAL	
							N	%
Yes	5	4	1	1	3	5	19	53
No	1	1	5	5	1	1	14	39
Unknown	–	1	–	–	2	–	3	8
<b>TOTAL</b>	6	6	6	6	6	6	36	100
– No information reported								

14). Federal tertiary, teaching, and state specialist hospitals had more dedicated beds in SCBUs than other hospitals, ranging between 19 and 64 (Table 15). In most secondary-level hospitals the postnatal ward beds were used as newborn beds when needed. From the available floor plans, only six secondary hospitals in four states had a cubicle with incubators for small and sick newborns (SS, SE, SW, NC). Two functioned as separate SCBUs, one in a paediatric ward and the other three as part of the maternity-postnatal ward set-up.

#### 3.4 Organisation of inborn and outborn services

There appears to be a tradition in Nigeria of separating babies born in a hospital (inborns) and those born elsewhere (outborns), especially at tertiary and specialist hospitals. Babies may be admitted and treated in separate sections of the hospital or treated in separate cubicles in the same neonatal unit, depending on where they were born (Table 16). Three (8 per cent) of the federal medical centres had separate inborn and outborn units, each with its own nursing staff component. In one state, two hospitals (one specialist and one secondary) only cared for inborns, and one specialist hospital cared for outborns (because the maternity section was under reconstruction (SW)). A further nine hospitals (25 per cent) had separate areas for inborns and outborns (including the remaining three federal medical centres), but the same nursing staff component looked after babies in both areas. Twenty-one secondary hospitals (58 per cent) without a dedicated newborn unit cared for inborns and outborns together in the same area, often in the postnatal ward. In all hospitals the same doctors cared for both inborns and outborns.

**TABLE 15: NEWBORN BED CAPACITY PER HOSPITAL (N=33)**

HOSPITAL	SS	SE	NE	NW	NC	SW
1	22*	36*	20*	34*	23*	64*
2	–	3	5	30	6	16
3	19	6	21	–	2	19*
4	10	0	12	3	0	6
5	5	0	–	12	13	26*
6	8	4	23	24	14	18

– Information not available or not reported  
 \* Federal tertiary and state specialist hospitals; the remaining numbers refer mostly to the number of postnatal beds available in secondary hospitals

**TABLE 16: ORGANISATION OF INBORN AND OUTBORN SERVICES (N=36)**

ORGANISATION OF SPACE	NURSING STAFF	SS	SE	NE	NW	NC	SW	TOTAL	
								N	%
Separate inborn and outborn units/areas*	Separate staff components	–	1	1	1	–	–	3	8
	Some or all staff shared	2	–	–	2	3	2	9	25
Inborns and outborns together	Same staff component	4	4	5	3	3	1	21	58
Outborns only	One staff set	–	–	–	–	–	1	1	3
Inborns only**	One staff set	–	–	–	–	–	2	2	6
No newborn care provided		–	1	–	–	–	–	1	3
<b>TOTAL</b>		<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>36</b>	<b>100</b>

\* All hospitals had the same component of medical staff attending both inborn and outborn areas  
 \*\* Outborns were referred to another hospital  
 – No information reported

## 3. FINDINGS

**FIGURE 7: A SPECIAL BABY CARE UNIT IN A FEDERAL MEDICAL CENTRE**



### 3.5 Financing

According to hospital informants, health services for children under 5 were supposed to be free, but this was not always the practice. Interpretations differed about what was “free.” In some cases, drugs were free but parents still paid “occasional out-of-pocket expenses” (SW) while in the hospital. Parents were also the most frequent source of funding mentioned by informants; parents were also most frequently reported as paying out-of-pocket for care of small newborns. Some mentioned that parents paid “70 per cent of admission deposit; 30 per cent to government” (NC); or that “parents pay for drugs, tests, etc.” (SW).

State funding appears to have been nearly non-existent in some hospitals; in others it existed in principle but was disbursed irregularly. In one state four hospitals referred to monthly imprest\* from the SMOH but lamented that disbursements were irregular (NE). In two other states, allocations from LGAs or the state were mentioned (NW, NC). A budget allocation for newborn care was not routine in all hospitals. As one hospital reported, “There is no allocation from hospital budget for newborn services because the state ministry of health had not authorized it.” (NC) One hospital in NW referred to the state providing free drugs for newborn care.

Hospitals in two states had allocations from the general hospital budget or from hospital management (NW, SW). Hospitals in two states referred to internally generated revenue (IGR) but distributed the money differently. In one hospital “90 per cent of the generated funds are sent to the facility to run its services” (SS), whereas in another “70 per cent of internally generated revenue [was] remitted to state government” (NC). Hospitals in three other states (NE, SW, SE) indicated the existence a drug revolving fund (DRF): “Small revolving fund within the unit for drugs and minor equipment, high-volume consumables, e.g., hand sanitizers. Part of the fund is remitted to the management for maintenance” (SE). Two hospitals said that hospital officials, e.g., the head of department or matron, used personal

\* An accounting method whereby funds are expended and then replenished to a fixed amount periodically.

resources (SS, NC); in three states (NE, NW, NC) staff were said to contribute resources but it is not clear if the resources were from the general hospital budget or from staff members' own pockets: "The staff in the hospital contribute money to assist indigent patients" (NC). One informant in SS commented on funds needed for KMC: "no need for finances, practiced within available resources."

Many hospitals relied on other external sources to cover some of their newborn care costs. Most of these were not routine contributions, but came from specific requests, projects, or specific improvements. Some contributions were specifically for equipment such as incubators, Resuscitaires, and phototherapy units (SW) or to subsidise indigent patients (NC). In one state, two hospitals mentioned contributions from individuals, such as the wife of the LGA chairman (SS). Implementing partners featured in three states and included the Centre for Integrated Health Providers (NE), the USAID Maternal and Child Survival Program (MCSP) (NC), Partnerships for Transforming Health Systems (PATH2) and partners supporting Helping Babies Breathe (SW). Other groups and organisations mentioned included: unspecified non-governmental organisations (NGOs) (NC, SW); charities and philanthropies (SW); Rotary (SS, SW); Hospital Friends Committee (NW); Islamic Medical Association of Nigeria (NE); Youth Corpers (NE); Evangelical Church Winning All (formerly the Evangelical Church of West Africa) (ECWA) (NE); and the Catholic church (NC). The assessment team also heard that "other individuals also donate money for abandoned babies — two cases recorded in the last 6-12 [months]."

### 3.6 Quality of care

Quality of care is influenced by many factors and conditions. Some have already been discussed in this report. Training, for example, is a vital requirement for providing skilled services. Other factors include leadership, management support, and sufficient funding as well as clinical practices related to skills, organisation, and management. This section focuses on the following components contributing to quality care: doctors' ward rounds, guidelines and protocols, record-keeping, admissions, weight-monitoring, and death reviews. More specific information related to quality of care for small newborns and KMC are in subsequent sections.

#### 3.6.1 Doctors' ward rounds

Ward rounds by doctors are important to ensure that patients are receiving quality clinical attention. Hospital informants in the in-depth assessment were asked in initial discussions to estimate the frequency and regularity of doctors' ward rounds. Responses for all 36 hospitals are shown in Table 17; however, these figures could only be confirmed for 10 hospitals.

#### 3.6.2 Guidelines and protocols

Guidelines and protocols help ensure that staff follow the latest recommended practices and in the right sequence to ensure optimal care. The in-depth assessment tool listed possible guidelines, protocols, and SOPs that the assessment teams were to check for availability and use. In some cases the documents were reported as available but could not be shown — the protocol or guideline document may have been locked or filed away. In other cases, informants were not aware of them. For the 26 hospitals for which data were available, about 19 per cent provided documents pertaining to infection control policy for newborns, but just 8 per cent had documents outlining a newborn care policy (Table 18). Informants were not specifically asked if they considered documents from training materials as policies or guidelines.

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**TABLE 17: FREQUENCY OF DOCTORS' WARD ROUNDS (N=36)**

FREQUENCY	SS	SE	NE	NW	NC	SW	TOTAL	
							N	%
Once per day	5	3	1	1	1	5	16	44
Twice per day	–	–	–	–	–	1	1	3
Once per day during week	–	1	–	1	–	–	2	6
Once per week	–	–	–	1	–	–	1	3
Twice per week	–	–	–	1	–	–	1	3
Three times per week	–	–	3	2	–	–	5	14
No fixed schedule	–	–	2*	–	–	–	2	6
No records to verify response	1	1	–	–	5**	–	7	19
No newborn care	–	1	–	–	–	–	1	3

\* Depends on availability of doctor or on demand  
 \*\* No admissions in four of these hospitals in the last three months due to strike  
 – No information reported

**TABLE 18: AVAILABILITY OF GUIDELINES AND PROTOCOLS PERTAINING TO NEWBORN CARE (N=26)**

DOCUMENTS	SS	SE	NE	NW	NC	SW	TOTAL	
							N	% <sup>a</sup>
Infection control policy	–	2	1 <sup>c</sup>	1	1	–	5	19
Feeding policy	–	2	1 <sup>c</sup>	–	1	–	4	15
Newborn care policy	1	1	–	–	–	–	2	8
Other <sup>b</sup>	1	–	–	–	–	2	3	12

<sup>a</sup> Missing information from 10 hospitals  
<sup>b</sup> E.g., admission and/or discharge policies; protocols for the treatment of various newborn conditions  
<sup>c</sup> Documents could not be located  
 – No information reported

Informants were also probed about the existence of documents pertaining specifically to the care of LBW and premature babies. Few hospitals had such guidelines. Informants were requested to show any materials available that could be used as a guideline. Only one hospital, in NW, offered KMC training materials to the assessment team.

### 3.6.3 Record-keeping

General records, admissions, weight monitoring, and records in the postnatal ward are important tools for monitoring care; however, many hospitals do not keep adequate records (Figure 9). The assessment teams did not note whether all hospitals were using nationally endorsed registers, but they did observe erratic record-keeping in some of the secondary hospitals visited. The photos show that some hospitals did not use national certified registers. Where documents were observed, it was not always possible to assess the quality of the records as it would have required clinical assessment of the newborns or access to other clinical information.

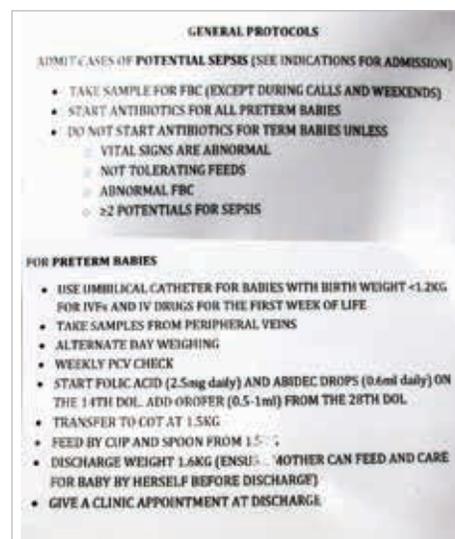
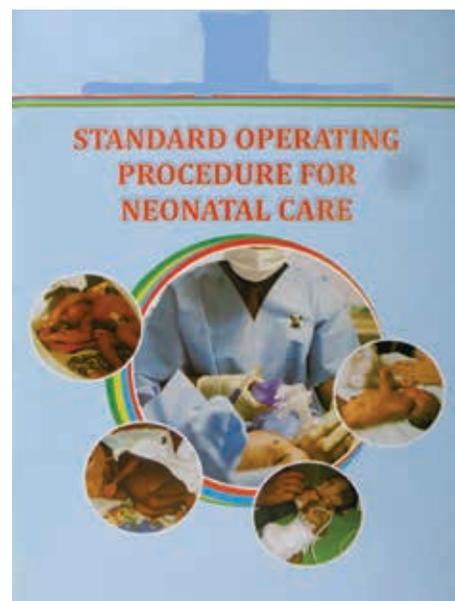
Table 19 gives an overview of the types of records observed in the hospitals visited; data were captured for only 25 of the 36 facilities. Some records were in combined format, for example an admission and discharge register in one. About three-fourths of the hospitals had admission and discharge registers, which were sometimes combined. While documentation of vital signs was noted in 80 per cent of facilities with data available, less than one-half had feeding charts or follow-up sheets.

Little information collected about records in the postnatal ward could shed light on quality of care. For some hospitals no records were observed or no register was available. Others had a “delivery register only” (SE) or an admission and discharge register: “No separate register for KMC clients but same register called ‘admission and discharge’ is used for all patients in prenatal and postnatal wards” (SE). A number of hospitals had more elaborate documentation, as reflected in the following observations:

- “Files of postnatal mothers, files of ANC mothers, files of sick babies” (SS)
- “Babies and mothers have separate files.” (SW)
- “Vital signs, drugs given, history of deliveries” (SS)
- “Mother’s admission and update notes on mothers and babies” (SW)
- “Regular record in exercise books” (SE)

For two states no information was collected.

**FIGURE 8: PROTOCOLS AND SOPS**

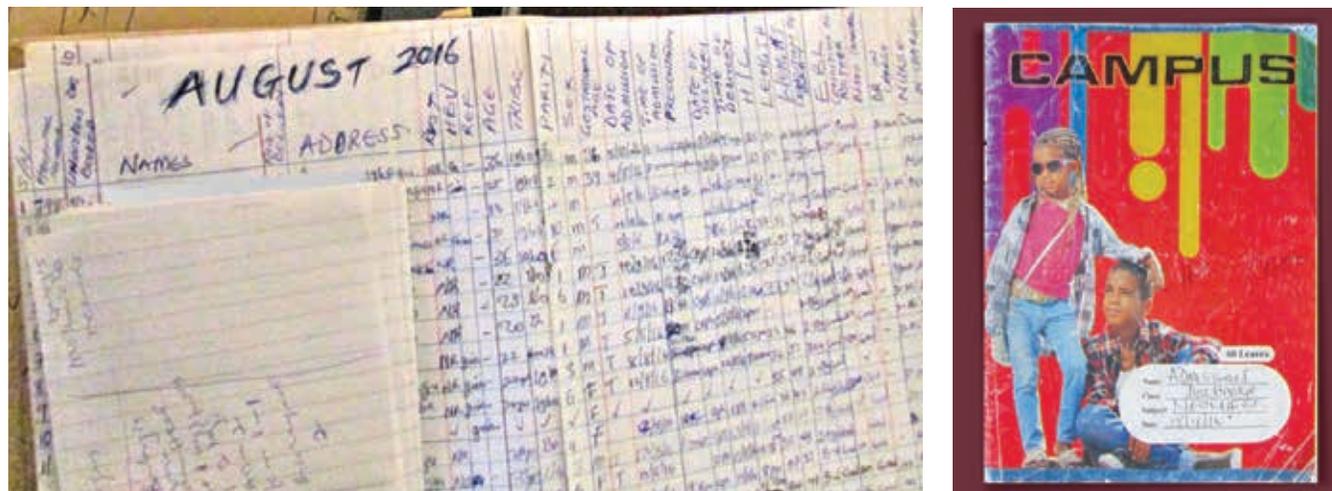


### 3. FINDINGS

**TABLE 19: TYPES OF RECORD-KEEPING DOCUMENTS OBSERVED (N=25)**

	SS	SE <sup>a</sup>	NE <sup>b</sup>	NW <sup>b</sup>	NC	SW	TOTAL N	% <sup>c</sup>
<b>REGISTERS</b>								
Birth/delivery register	5	3	1	–	5	3	<b>17</b>	68
Ward register	5	1	1	1	5	2	<b>15</b>	60
Postnatal register	3	1	–	–	4	2	<b>10</b>	40
Admission register	5	2	1	1	5	5	<b>19</b>	76
Discharge register	5	2	1	1	5	4	<b>18</b>	72
Follow-up register	4	–	–	–	2	1	<b>7</b>	28
<b>RECORDS AND FORMS</b>								
Vital signs	6	1	1	1	6	5	<b>20</b>	80
Feeding chart	4	1	1	–	2	2	<b>10</b>	40
Input/output chart	6	1	1	1	5	4	<b>18</b>	72
Weight chart	2	1	1	1	5	4	<b>14</b>	56
Nurses' notes	3	1	1	1	3	4	<b>13</b>	52
Doctors' notes	6	1	1	1	6	4	<b>19</b>	76
Follow-up sheets	5	1	–	–	3	2	<b>11</b>	44
Prescription sheet	6	2	1	1	4	3	<b>17</b>	68
Laboratory request	5	2	1	1	6	3	<b>18</b>	72
Laboratory results	6	1	1	1	6	3	<b>18</b>	72
Blood transfusion forms	6	1	1	1	5	2	<b>16</b>	64
Admission form	5	–	–	–	5	2	<b>12</b>	48
Road to health booklet	1	–	–	–	–	1	<b>2</b>	8
Monthly report form	–	–	–	1	2	1	<b>4</b>	16
<p><i>a Completed for five hospitals only</i>  <i>b Completed for one hospital only</i>  <i>c Calculated out of 25 to compensate for missing information from 11 hospitals</i>                      – No information reported</p>								

FIGURE 9: EXAMPLES OF ADMISSION AND DISCHARGE REGISTERS IN SECONDARY HOSPITALS



### 3.6.4 Admissions

Admissions records help hospitals track the care and monitoring of patients. The assessment teams reviewed 51 files of newborn admissions in 12 facilities. Several factors contributed to this low number of files reviewed: few or no admissions in the previous three to six months, minimal uptake of newborn care services, referral of all small newborns to a higher level of care, or industrial action by staff. Also, all babies did not have a separate file; if their information was included in their mother's file, it may not have been accessible to the assessment team. Because of the low numbers, no conclusions can be made about the quality of care around admissions.

Informants' observations on the day of the hospital visits illustrate the difficulty of obtaining accurate information because of different recording-keeping practices and referral criteria, even among hospitals that were supposedly providing the same level of care. In many instances, newborns are referred to other facilities, or notes on their care are kept within clinical files for the mother; this may be perceived as a lower prioritization of care for newborns versus care of mothers, since documentation is centered around the mother. Alternately, it could be perceived as care focused on the mother-newborn dyad. The assessment was unable to tease out these distinctions.

- “No records seen ... ALL babies are referred to [federal teaching hospital].” (SE)
- “No file for review. Newborn babies are not admitted in the hospital.” (NC)
- “No newborn in the past three months. There is no separate file for newborn, seen with the mother's file.” (SE)
- “No babies with birth weight  $\leq 2.5$  kg. ... they refer all preterm to the teaching hospital at ...” (SS)
- “There was no separate file for baby. Uses mother's own file but there was no small newborn on admission. No access to mothers' files. The newborns are managed in the maternity ward or private ward.” (SE)
- “Only sick babies have records documented (share folder with mother).” (NE)

## 3. FINDINGS

### 3.6.5 Weight monitoring

Monitoring newborns' weight is important to track whether the care is helping stabilize or improve the baby's condition, or whether deteriorating health calls for additional interventions. Table 20 summarises the frequency of weighing of newborns following the delivery period. This may include weight measurement for all babies and not only for small newborns. For 39 per cent of the hospitals visited, the frequency of weighing could not be verified. 28 per cent of hospitals weighed newborns once per day. However, the assessment team recorded the following for one hospital: "Weight is to be checked daily, but we noticed it is done every two days" (SW). Some hospitals did not weigh all babies:

- "Weight not done, only babies above 1800g that are stable are kept for observation for 24-48 hours before discharge." (SS)
- "Only premature babies in incubator and those with failure to thrive [are weighed]." (SS)
- "Only on doctor's request" (SS)

A number of hospitals had no information available on the weighing of babies because small and sick babies were referred to a higher level of care.

From the hospitals for which information could be obtained, individual weight charts were most frequently used to document weight, followed by the baby's general observation sheet and the mother's file (Table 21). However, in at least five hospitals with weight records, recordings were irregular or erratic. Informants explained this may be because "the nurse on duty is overwhelmed" (SW) or "recorded irregularly in nurse progress notes because the scale is in labour ward" (SW).

Information on the availability and functionality of scales for weighing babies was only available for all hospitals in two states (SS, NC). In most states the federal medical centre had digital scales; in one state three hospitals had functional digital scales (NC), possibly because a development partner was involved at that time (Figure 10). The digital scales had 5-10 gram increments, whereas the manual scales all had 50 gram increments.

**TABLE 20: FREQUENCY OF MONITORING OF NEWBORN WEIGHT, OUTSIDE OF THE DELIVERY ROOM (N=36)**

	SS	SE	NE	NW	NC	SW	TOTAL	
							N	%
Once every day	3	1	1	1	2	2	10	28
Every two days	–	1	–	–	1	2**	4	11
Once per week	1	–	–	–	–	1**	2	6
Only on doctor's request	1	–	–	–	–	–	2	6
Not done*	1	–	–	–	3	–	4	11
Unknown	–	4	5	5	–	1	14	39

\* Could include a once-off admission/discharge weight

\*\* Observed to be erratic in one hospital each

– No information reported

**TABLE 21: LOCATION OF RECORDING WEIGHT FOR NEWBORNS (N=36)**

	SS	SE	NE <sup>a</sup>	NW <sup>a</sup>	NC	SW	TOTAL N	%
Individual weight chart for each baby	3	–	1	1	2	2	9	25
Baby’s general observation sheet	–	2	–	–	–	2	4	11
Special weight book for all babies	–	–	–	–	–	–	0	0
Ward register	–	1	–	–	–	–	1	3
Mother’s file/card	1	–	–	–	2	1	4	11
Other	–	–	–	–	1 <sup>b</sup>	1 <sup>c</sup>	2	6
Unknown	2	3	5	5	1	–	16	44

- a Completed for one hospital only*
- b “Recorded on admission/delivery sheet” (NC)*
- c “At the bottom of the temperature chart” (SW)*
- No information reported*

**FIGURE 10: SCALES AND THEIR TREATMENT**



Scales should be placed on a stable surface and kept in the same position, preferably on a trolley that can be moved around. No objects should be placed on the scales.

## 3. FINDINGS

### 3.6.6 Death reviews

A surveillance system to track the number of deaths and provide information about the cause of death and underlying contributing factors and actions can help address contributing factors and prevent future deaths. In the in-depth assessment's introductory discussion, hospital informants were asked whether death review meetings were conducted regularly. Eighteen hospitals indicated that they conducted some form of these meetings (Table 22). Of these, three hospitals in two states (SE, SW) mentioned the Maternal and Perinatal Death Surveillance Review (MPDSR) and could provide documentation used. Meetings occurred weekly, monthly, or quarterly. In the tertiary hospitals meetings were held in the paediatric department. In smaller hospitals meetings were conducted for the whole hospital together, with some holding "impromptu meetings" (NW): "Last one done more than three months ago, only once this year" (SS). In NC, state meetings had been suspended because of the health worker strike. One hospital cited the cessation of death reviews meetings "because we're short staffed" (SW).

**TABLE 22: STUDY HOSPITALS CONDUCTING DEATH REVIEWS (N=36)**

	SS	SE	NE	NW	NC	SW	TOTAL	
							N	%
Yes	4	3	1	4	1	5*	18	50
No	2	2	5	2	4	1	16	44
Unknown	–	1	–	–	1	–	2	6
<b>TOTAL</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>36</b>	<b>100</b>

\* In one hospital not done routinely, but included in the hospital's clinical management meetings  
 – No information reported

## 3.7 Care for premature and small newborns

### 3.7.1 Admission criteria

Although secondary hospitals included in the in-depth assessment provided 24/7 maternity services, few were prepared to admit and care for small newborns weighing <2000g. Of the 26 hospitals in the assessment with information on this question, 17 used birth weight as admission criterion for small newborns. Only nine hospitals plotted gestational age – mostly the tertiary and other specialist hospitals. Information on admission and referral criteria for babies born <2000g or of a gestational age less than 37 weeks was not available for all hospitals. In all six states most of the secondary hospitals referred babies <2000g to another facility, except when parents refused the transfer, often because of financial reasons. There were, therefore, many missed opportunities for providing KMC to small newborns and reducing referrals.

### 3.7.2 Availability of equipment, drugs, and supplies

The assessment tool used in the survey contained an extensive list of equipment, supplies, and drugs for care of small newborns. Table 23 gives an overview of the information on equipment gleaned from informants. The availability of weighing scales is discussed above. More specialised equipment was available in tertiary hospitals, such as bubble CPAP and pulse oxymeters. Equipment with more than eight responses indicate that that equipment was also available in some of the secondary hospitals.

TABLE 23: AVAILABLE EQUIPMENT FOR LBW OR PREMATURE NEWBORNS BY STATE (N=26)

	SS	SE	NE	NW <sup>a</sup>	NC <sup>a</sup>	SW	TOTAL N	% <sup>b</sup>
<b>RESUSCITATION</b>								
<b>Bag &amp; mask</b>								
<i>Bag</i>	4	4	1	1	4	5	19	73
<i>Mask Size 0</i>	1	4	1	1	1	4	12	46
<i>Mask Size 1</i>	4	4	1	1	3	5	18	69
<i>Resuscitaire<sup>c</sup></i>	–	–	–	1	–	–	1	4
<b>Mannequin for practice</b>								
<i>NeoNatalie normal</i>	1	2	1	–	1	3	8	31
<i>NeoNatalie preemie</i>	1	2	–	–	1	–	4	15
<b>STABILISATION</b>								
<i>Ventilator<sup>d</sup></i>	–	1	1	–	–	–	2	8
<i>Bubble CPAP<sup>d</sup></i>	1	2	–	1	1	3	8	31
<b>Oxygen via</b>								
<i>Mask</i>	3	3	1	1	1	3	12	46
<i>Head box/hood</i>	–	2	–	–	–	–	2	8
<i>Nasal prongs</i>	4	2	1	1	2	5	15	58
<i>Oxygen concentrator</i>	3	3	1	1	2	3	13	50
<i>Oxygen cylinder<sup>c</sup></i>	–	–	–	–	–	1	1	4
<i>Apnoea monitor<sup>c,d</sup></i>	1	–	–	–	–	–	1	4
<b>THERMAL CARE</b>								
<i>Incubators</i>	3	2	1	1	3	5	15	58
<i>Radiant warmers</i>	3	4	1	1	2	5	16	62
<i>Warm room with cots/cribs</i>	4	2	–	1	1	1	9	35

CONTINUED NEXT PAGE

### 3. FINDINGS

**TABLE 23: AVAILABLE EQUIPMENT FOR LBW OR PREMATURE NEWBORNS BY STATE (N=26)**

	SS	SE	NE	NW <sup>a</sup>	NC <sup>a</sup>	SW	TOTAL N	% <sup>b</sup>
<b>NEWBORN MANAGEMENT</b>								
Bilirubinometer(s) <sup>d</sup>	1	1	–	–	–	1	3	12
Phototherapy	4	2	1	1	2	5	15	58
Glucometer(s)	3	2	1	1	2	5	14	54
Pulse oxymeter(s)	2	1	1	1	1	2	8	31
Thermometer(s)	5	3	1	1	6	5	21	81
<p><i>a Completed for only one hospital in the state</i>  <i>b Calculated out of 26 to compensate for missing information from 10 hospitals</i>  <i>c May be an underestimation; response elicited under “other” and all informants may not have thought of the availability of this equipment</i>  <i>d Only available in tertiary hospitals</i>                      - No information reported</p>								

It was, however, difficult to get all the information requested because of time constraints and the unwillingness of some informants to share information. Where information was available, much was self-reported and not confirmed by data collectors. Although the assessment team could observe that some of the equipment existed, they could not always verify functionality (Figure 11). In two states (NE and NW), information was only available for the federal medical centres; equipment was not surveyed in the remaining 10 hospitals in those states. As a result of data collection constraints, these numbers should be interpreted with caution. Because the 10 hospitals without information were secondary hospitals, the numbers in the table should be considered an overly optimistic report of the state of affairs in the sample selected for the in-depth assessment.

Probing for the availability of drugs and supplies was even more difficult than probing for equipment. For the 10 hospitals in NW and NC where equipment information was not available, drug and supplies information was also not available. Information was also not available for one of the SW hospitals. Table 24 lists the drugs and supplies included in the assessment tool that shows how many hospitals reported on a particular item. In one hospital in SS, antibiotic items were marked as being “always available,” but an open-ended comment read “Most antibiotics not stocked because of strike.” Notably, only half of the hospitals from which responses were obtained stocked CHX gel for cord care.

On average, the availability of the items was only verified by data collectors in 50-60 per cent of cases. Tick boxes for hospitals not stocking a particular item were often not completed by the assessment teams. Stock-outs in the past three months were reported rather erratically and only once for three items: cylinder oxygen, Dextrostix, and CHX gel.

FIGURE 11: EQUIPMENT OBSERVED IN NEWBORN CARE FACILITIES



### 3. FINDINGS

**TABLE 24: DRUGS AND SUPPLIES AVAILABLE IN HOSPITALS**

ITEM	RESPONDING HOSPITALS (TOTAL N)	AVAILABLE*		NOT STOCKED	
		N	%	N	%
<b>OXYGEN</b>					
<i>Piped O2</i>	22	6	27	16	73
<i>Cylinder O2</i>	24	13	54	11	46
<b>IV FLUIDS</b>					
<i>Glucose 5%</i>	25	19	76	6	24
<i>Glucose 10%</i>	24	15	63	9	38
<i>Normal saline (sodium chloride 0.9%)</i>	25	20	80	5	20
<i>Paediatric saline</i>	25	15	60	10	40
<i>Ringer's lactate</i>	25	11	44	14	56
<i>Glucose 50%</i>	25	18	72	7	28
<b>ANTIBIOTICS</b>					
<i>Ampicillin injection/IV</i>	25	7	28	18	72
<i>Aminoglyconate (Gentamicin) injection/IV</i>	25	21	84	4	16
<i>Procaine/PenG penicillin injection/IV</i>	24	2	8	22	92
<i>Flucloxacillin</i>	24	3	13	21	88
<i>Ceftriaxone IV/injection</i>	25	18	72	7	28
<i>Cefotaxime IV/injection</i>	22	2	9	20	91
<i>Other (Cefluroxime, Ceftazidime, Amoxicillin, Augmentin)</i>	25	14	56	11	44
<b>INFECTION CONTROL</b>					
<i>Sterilising agent for feeding utensils (boiling water, sodium hypochloride)</i>	10	10	**	**	**
<i>Sterilising agent for ward surfaces (sodium hypochloride, Savlon/Dettol)</i>	21	21	**	**	**
<i>Soap</i>	24	23	96	1	4
<i>Sanitising hand spray/gel</i>	25	23	92	2	8
<i>Hand towels</i>	25	16	64	9	36
<i>Hand drier</i>	3	3	**	**	**

TABLE 24: DRUGS AND SUPPLIES AVAILABLE IN HOSPITALS

ITEM	RESPONDING HOSPITALS (TOTAL N)	AVAILABLE*		NOT STOCKED	
		N	%	N	%
<b>BABY CARE PRODUCTS</b>					
<i>Dextrostix (for glucometer)</i>	25	15	60	10	40
<i>Diapers/nappies</i>	25	4	16	21	84
<i>Skin care products (olive oil/coconut oil/baby oil)</i>	24	3	13	21	87
<b>CORD CARE</b>					
<i>4% CHX gel</i>	25	13	52	12	48
<i>Methylated spirit</i>	5	5	**	**	**
* Always or sometimes					
** Items mentioned under “other;” no probing for not stocking the product					

### 3.8 KMC services

Although KMC is an effective and low-cost intervention for small and preterm newborns, it is not widely practiced in Nigeria’s public health sector. The telephone survey found that just 27 per cent reported providing KMC, 202 facilities total, and the vast majority of those had started services quite recently. Informant and in-depth interviews show this overestimated the actual services provided, in part because of differing definitions of KMC. Among those reporting KMC in the landscape survey, one-quarter of respondents were unsure when KMC was introduced in their facility. Of the 160 facilities where the respondents could recall a year, 80 per cent had started since 2012. Figure 12 shows the cumulative trend in KMC initiation in these facilities.

Ten facilities reported they had initiated KMC, but that services had been interrupted and not resumed. Two of these facilities cited loss of trained staff and loss of NGO support as reasons for ceasing KMC services.

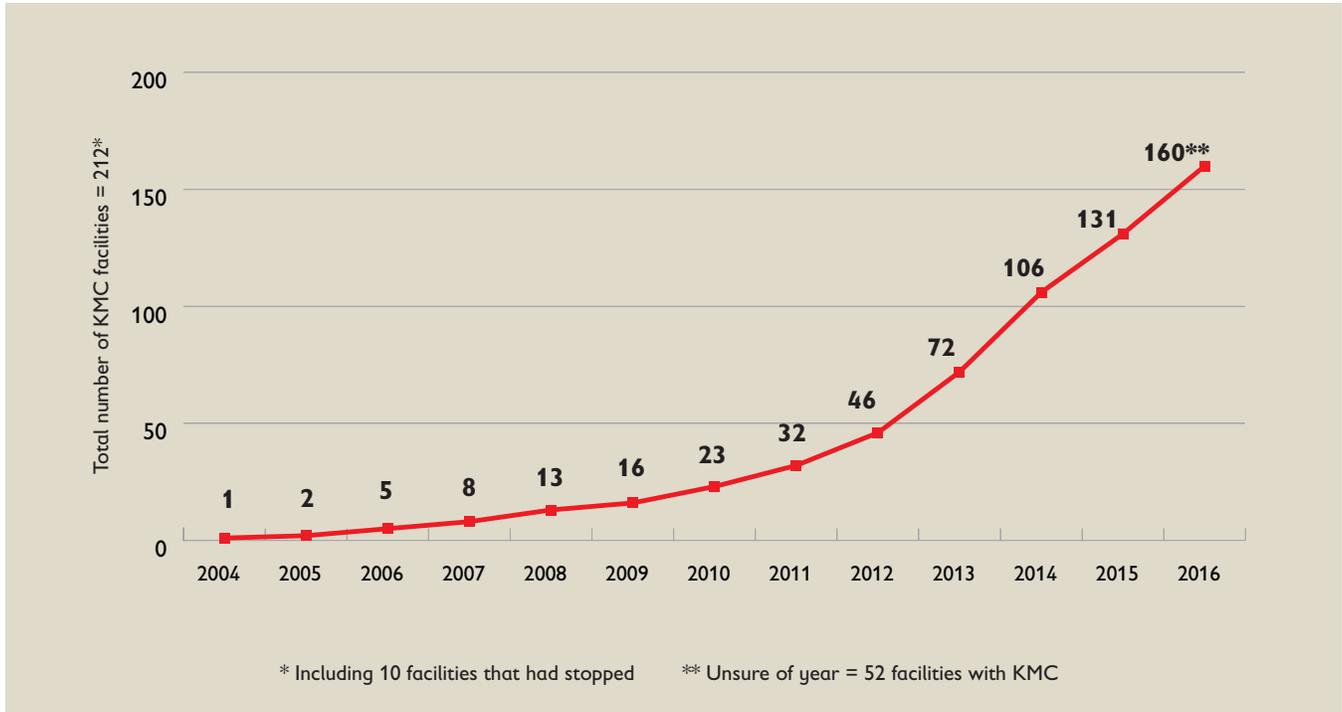
#### 3.8.1 Facilities providing KMC services

A majority (61 per cent) of facilities providing KMC services in the survey were general hospitals. However, tertiary and specialist hospitals were more likely to provide KMC services than other types of facilities. Although state tertiary and specialist hospitals and federal tertiary hospitals comprised just 11 per cent of facilities participating in the survey, they accounted for 22 per cent of facilities providing KMC services.

KMC facilities provided more newborn care services than other facilities. This is partly explained by the fact that the survey included facilities that refer all LBW babies to higher levels of care, and thus would not normally offer specialized newborn services. Of the KMC facilities, 50 per cent had incubators and 43 per cent had radiant warmers for thermal care (Figure 14). KMC was the only reliable source of warmth for babies (apart from the occasional mention of hot water bottles and blankets) in 81 of the 202 KMC hospitals (40 per cent). As with all facilities, the services most often available in KMC facilities were treatment for sepsis, IV, and oxygen therapy, with very few facilities providing respiratory support in the form of CPAP and mechanical ventilation.

### 3. FINDINGS

**FIGURE 12: CUMULATIVE NUMBER OF FACILITIES EVER INITIATING KMC SERVICES (N=160)**



**FIGURE 13: FACILITIES REPORTING PROVIDING KMC, BY TYPE (N=202)**

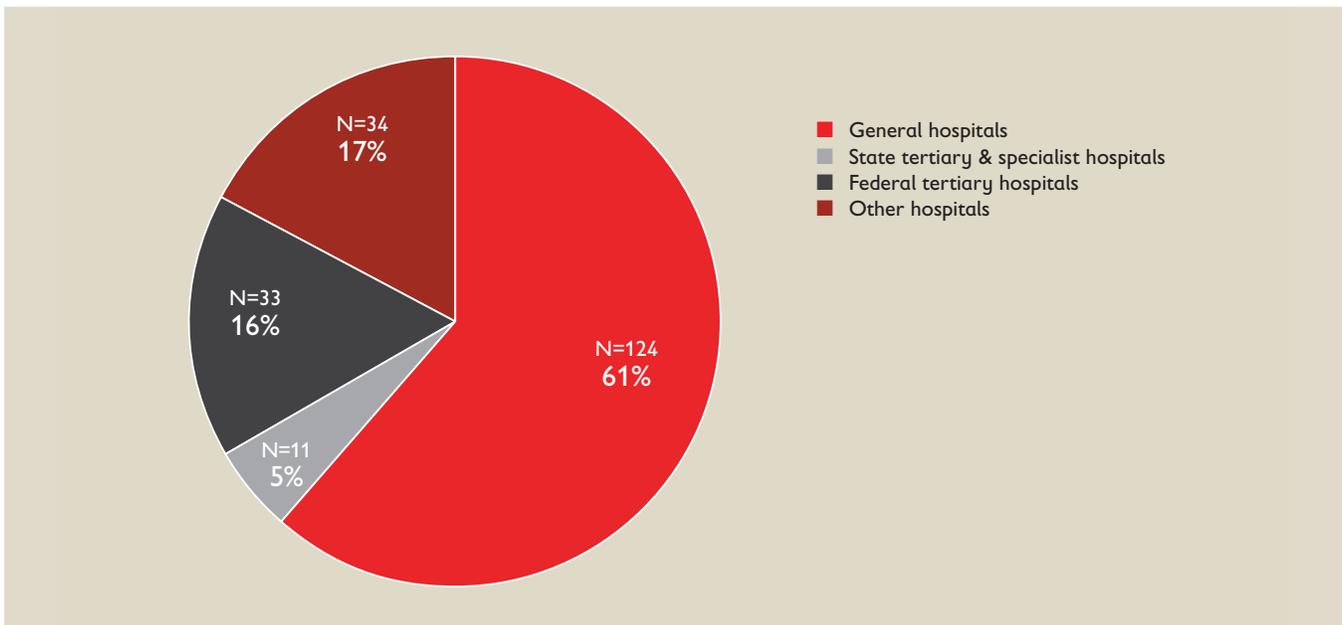
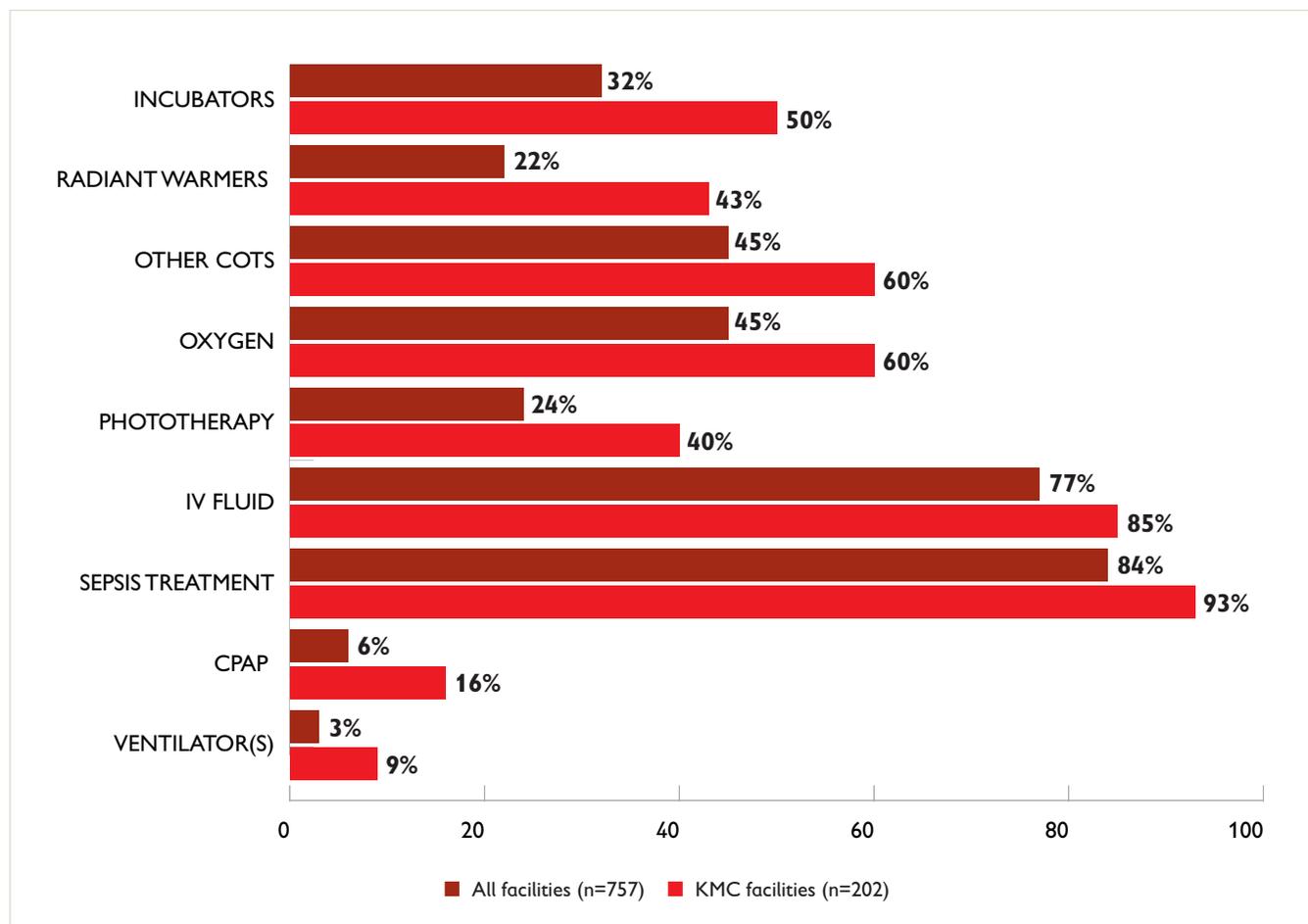


FIGURE 14: COMPARISON OF SERVICES AVAILABLE IN ALL FACILITIES VERSUS THOSE WITH KMC



In four states (SS, SE, NW, NC) tertiary hospitals in this assessment tended to have been the first to take on KMC between 2008 and 2010, before it spread to other hospitals. Two other hospitals in NW were also early adopters, probably because of the PRRNN-MNCH initiative. Hospitals in SE and NC where a development partner had been active in the two years prior to the assessment started implementing KMC in 2015 and 2016. Hospitals in the remaining states appeared to have started between 2013 and 2014.

Facilities provided space for KMC in different ways. Most indicated that KMC was integrated in the postnatal/lying-in ward (59 per cent). Other places with smaller but similar numbers of responses included a separate KMC ward (11 per cent), next to the incubator (10 per cent), and in the nursery (9 per cent). Six per cent of facilities allowed KMC practice in the breastfeeding room.

## 3. FINDINGS

**FIGURE 15: POSTERS ON THE KMC POSITION**



### *3.8.2 KMC practice*

Four components form the backbone of the KMC package: KMC (skin-to-skin) position, nutrition (exclusive breastfeeding), discharge and follow-up, and support. KMC position refers to prolonged Skin-to-skin-care, the “hallmark” of the KMC package.<sup>39</sup> Information on the other three components was gathered from all hospitals — whether or not they implemented KMC — which could be useful for future KMC practice and planning for KMC services.

In six of the 12 KMC-implementing hospitals, the decision that a small newborn was eligible for KMC was made by the doctor with some input from nurses (Table 25). In one hospital the decision was described as a joint one between doctors and nurses (SW). In three hospitals nurses were the predominant decision-makers (NW, NC, SW). (Table 26 gives an indication of informants’ views on the criteria for stability.)

KMC eligibility criteria were not available in written format as part of guidelines or protocols in any of the 12 hospitals providing KMC. Some hospital respondents spontaneously provided eligibility criteria for placing babies in the KMC position; the main criterion was that the baby should be stable (Table 26). The weight criteria cited by the six hospitals that defined a baby’s stability in terms of weight varied widely, ranging from 900g (NW) to 1500g (SE) to 2000g–2300g (NC). This points to missed opportunities for practising KMC.

### *3.8.3 Documentation and record-keeping for KMC*

Just 6 of the 12 hospitals implementing KMC presented records on KMC from which statistics could be extracted (Table 27). No hospitals in the NE and NC states had records or registers. Hospitals generally did not keep records of the number of babies initiated on KMC. Only one hospital could provide statistics on intermittent KMC (SE). Babies were observed in the KMC position in just two hospitals (NW, SW).

### *3.8.4 Time in KMC position*

Informants were probed on the minimum and maximum hours per day babies were in the KMC position. Eight hospitals could give an estimate, with one to six hours of intermittent KMC per day being the norm (Table 28). One hospital that did not have a baby in KMC at the time of the visit and had no KMC records claimed to practise continuous KMC in the postnatal ward: “Mothers do not do anything. They are expected to rest in their beds. They therefore practice KMC for long, about 22 hours on average.” (SS)

In six of the 12 KMC-implementing hospitals, the decision that a small newborn was eligible for KMC was made by the doctor with some input from nurses (Table 25). In one hospital the decision was described as a joint one between doctors and nurses (SW). In three hospitals nurses were the predominant decision-makers (NW, NC, SW).

**TABLE 25: DECISION ON BABY'S READINESS FOR SKIN-TO-SKIN CARE IN KMC IMPLEMENTING HOSPITALS (N=12)**

	SS	SE	NE*	NW	NC	SW	TOTAL
Joint decision doctors and nurses	0	0	–	0	0	1	1
Doctor(s), with input from nurses	2	2	–	0	2	0	6
Mostly nurses	0	0	–	1	1	0	2
Nurses only	0	0	–	0	0	1	1
Unknown	0	1	–	1	0	0	2
<b>TOTAL</b>	<b>2</b>	<b>3</b>	<b>–</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>12</b>

\* No KMC at the time of the hospital visits  
– No information reported

**TABLE 26: STABILITY AND ELIGIBILITY CRITERIA FOR SKIN-TO-SKIN POSITION BY HOSPITAL (N=12)**

	SS	SE	NE*	NW	NC	SW	TOTAL
Baby reached certain weight	–	1	–	1	3	1	6
Baby reached certain gestational age	–	–	–	–	–	–	0
Off oxygen	1	1	–	1	1	1	5
Off IV lines	1	–	–	–	1	1	3
Breathing stabilised	1	–	–	1	2	1	5
Heartbeat stabilised	1	–	–	1	2	1	5
Feeding well	1	–	–	1	1	1	4
No respiratory distress	1	–	–	1	2	1	5
Mother must be ready	–	–	–	–	–	1	1
Unknown	–	2	–	2	1	1	6

\* No KMC in this state at the time of the hospital visits  
– No information reported  
Note: More than one criterion could be selected.

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**TABLE 27: NUMBER OF BABIES ADMITTED TO KMC IN PREVIOUS THREE MONTHS BY HOSPITAL AND REGION (N=12)**

HOSPITAL	SS	SE	NE	NW	NC	SW	TOTAL
1	17	25	NI	12	NR	NI	
2	NI	1	NI	NR	NR	*	
3	NI	2	NI	*	NR	NI	
4	NI	NI	NI	*	NI	5	
5	NR	NI	NI	NI	NI	NI	
6	NI	NI	NI	NI	NI	NR	
<b>Total</b>	<b>17</b>	<b>28</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>5</b>	<b>62</b>

\* Hospital information not available

NI = not implementing KMC

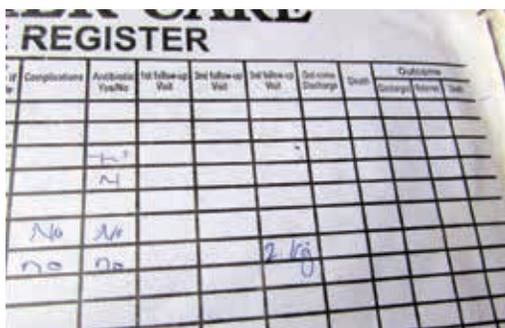
NR = no records available

Note: Six of the 12 hospitals implementing KMC produced records for KMC admissions.

**FIGURE 16: KMC REGISTERS IN HOSPITALS THAT DISCONTINUED KMC SERVICES**



KMC Register last completed in 2013



Same register without completion of follow-up



Blank register in another hospital (2013)

Table 29 summarises how informants reported babies were secured in the KMC position. Information on methods for securing the baby in KMC position was captured in 8 of the 12 hospitals practicing KMC. A few hospitals used more than one method. The use of a local cloth was the preferred tying method, with four hospitals reporting the use of a special KMC wrapper. Four hospitals kept the babies untied in the skin-so-skin position. In the case of special wrappers, the material was procured in different ways: mothers (SS), the family (NC), or hospital management (SE). The wrappers were made by a local tailor (SS), a hospital tailor (SE), or a matron (NC).

In 10 of the 12 KMC-implementing hospitals where informants were KMC-trained, informants were asked to demonstrate and explain how they would put a baby in the skin-to-skin position. The assessment team checklist included all the aspects that health workers should be mindful of when explaining the KMC position to mothers. Table 30 lists the aspects mentioned by informants. In all 10 explanations the chest-to-chest position was mentioned. Other frequent explanations included the head turned to the side and that the baby should have a cap. Three important positioning elements frequently not mentioned were for the head to be in the “sniffing” position, the neck to be straight and not bent, and the legs to be flexed. Informants in the SE state, which recently had training in KMC, fared better than the others, listing all but one aspect of KMC positioning. Nurses in one general hospital in SW with a more systematic KMC programme were also able to mention most of the aspects in the list.

Hospitals in three states offered self-reported information on where mothers sat when they had the baby in the KMC position. In three hospitals mothers sat next to the incubator (SS, SW). Four hospitals allowed KMC next to the baby’s cot (SS, NC, SW), whereas the breastfeeding room was used in one hospital (NC).

Informants were further probed about hospital schedules for having babies in the KMC position. Three hospitals had specific schedules or fixed times for KMC (none in writing), six had no schedule, and one was unsure whether there was a fixed schedule. The three hospitals with schedules described them as follows:

- “After feeding” (SS)
- “Only during morning hours 8-12 noon” (NC)
- “In the morning/after feeding 3-4 hours” (SW)

There were a few anecdotal reports of a baby transported in the KMC position, one for referral and one returning to the follow-up clinic in the KMC position.

**TABLE 28: MINIMUM AND MAXIMUM HOURS OF SKIN-TO-SKIN CARE PER DAY (N=8)**

ZONE	MINIMUM (HOURS)	MAXIMUM (HOURS)
SS	6	10
	2	6
	22	22
SE	1	2
<i>NW inborn</i>	8	24
<i>Outborn</i>	2	4
NC	4	6
SW	8	14
	1	3

### 3. FINDINGS

**FIGURE 17: BABIES OBSERVED IN KMC POSITION**



**FIGURE 18: INTERMITTENT KMC**



**FIGURE 19: SPECIAL WRAPPERS FOR TYING A BABY IN THE KMC POSITION**



**TABLE 29: METHODS OF SECURING BABIES IN THE SKIN-TO-SKIN POSITION (N=8)**

	SS	SE	NW	NC	SW	TOTAL
Held untied in skin-to-skin position	–	1	–	1	2	4
Sheets or draw sheets	–	–	–	1	–	1
Local cloth	2	2	1	1	1	7
Special KMC wrapper	1	2	–	1	–	4

*Note: Hospitals may use more than one method.  
– No information reported*

**FIGURE 20: DEMONSTRATING PROPER KMC POSITION**

### 3.8.5 Factors influencing KMC quality of care

The landscape survey asked respondents information about factors that can affect the quality of the KMC care provided. These included staff training, existence of protocols and SOPs for KMC and related care, and the collection and availability of data pertaining to the initiation and practice of KMC (Table 31).

More than half (56 per cent) of facilities currently implementing KMC reported that at least one staff member had received training (integrated or stand-alone). The number of KMC-trained staff members ranged between one and 200 staff per facility offering KMC; in three states, no responding facility reported having staff trained in KMC.

Only 20 per cent of facilities reported having a written KMC protocol or SOP. Of those facilities with a protocol, one-half had a separate KMC protocol that was not integrated with other newborn care documentation.

### 3. FINDINGS

**TABLE 30: ITEMS INCLUDED IN EXPLANATIONS OF HOW TO PLACE A BABY IN THE KMC POSITION (N=10)**

SKIN-TO-SKIN EXPLANATION	SS			SE		NW	NC		SW		TOTAL
Face can be seen				•	•	•			•	•	5
Head in “sniffing” position				•	•				•		3
Mouth and nose not covered	•			•	•	•			•	•	6
Head turned to one side	•	•	•	•	•	•	•	•		•	9
Neck straight, not bent				•	•	•				•	4
Chest-to-chest with mother	•	•	•	•	•	•	•	•	•	•	10
Legs flexed		•					•	•		•	4
Mother not in flat position					•	•				•	3
Back of baby covered with blanket		•		•	•				•	•	5
Baby has cap/hat on	•	•	•	•	•		•			•	7
Baby has socks on (optional)				•	•	•					3
<b>NUMBER OF HOSPITALS</b>	<b>3</b>			<b>2</b>		<b>1</b>	<b>2</b>		<b>2</b>		<b>10</b>

**TABLE 31: FACTORS INFLUENCING QUALITY OF KMC CARE (N=202)**

CHARACTERISTIC	FACILITIES (N)	PERCENTAGE OF TOTAL (N=202)
<b>At least one staff member trained in KMC</b>	113	56
<b>Written KMC protocol/SOP</b>	41	20
<i>Of which had separate KMC protocol</i>	21	(51% of 41)
<b>Babies in KMC in previous three months</b>	160	79
<i>Of which able to provide figures</i>	106	(66% of 160)
<i>Of which unable to provide figures</i>	54	(34% of 160)
<b>No babies during previous three months</b>	42	21

Of the 160 (79 per cent) of facilities reporting they had babies in KMC during the previous three months, 66 per cent (106) could provide statistics. Among facilities reporting any babies receiving KMC in the past three months, the patient numbers ranged between 1 and 100. In four states, one facility each reported having 100 babies in the previous three months. Twenty-eight facilities reported having treated fewer than 20 babies per facility in KMC in the previous three months; 15 of these provided KMC for fewer than six babies. In five states, no hospital could give specific numbers.

The in-depth hospital assessment provides a more complete picture of the actual situation for KMC in Nigeria's medical facilities and the many factors that hinder its practice. Facility respondents provided insights into other possible factors influencing the quality of newborn care overall (Table 32).

In four states (SS, SE, NW, NC) tertiary hospitals in this assessment tended to have been the first to take on KMC between 2008 and 2010, before it spread to other hospitals. Two other hospitals in NW were also early adopters, probably because of the PRRNN-MNCH initiative. Hospitals in SE and NC where a development partner had been active in the two years prior to the assessment started implementing KMC in 2015 and 2016. Hospitals in the remaining states appeared to have started between 2013 and 2014.

The events that triggered hospitals to implement KMC revolved around special programmes that involved training, especially those organised by implementing partners. Hospitals in two states (SS, NC) referred to training and/or exposure to KMC at a University Teaching Hospital another state and another mentioned training provided at the Paediatric Association of Nigeria's (PAN) conference in 2010 (NC). After training, some hospitals followed a process of orienting other hospital staff on KMC. Informants said that "Subsequently, there is a culture of stepping down training at the facility" (SE), and that "Nurse ... had a step-down training for the five midwives then in the facility" (NE).

Informants cited examples of how they treated eligible babies after the training and witnessed positive outcomes:

- "After training at ..., a baby was delivered with a weight of 2kg and KMC was commenced." (SE)
- "On return from the training, [the head nurse] met a preterm on admission (37 weeks, 1700g) and started the practice." (NE)
- "The doctor and matron attended ENCC training and were exposed to KMC and they realised what they were doing was not adequate and they were motivated to come home and correct their inadequacies by implementing KMC. When they resumed work, they traced a set of twins that had been discharged home not on KMC and trained them on KMC. The two babies were followed up and did very well." (NC)

### *3.8.6 Factors contributing to lack of continuity of service provision*

As mentioned, four hospitals in three geopolitical zones previously implementing KMC had interrupted their services by the time of the assessment visit because of breakdowns in equipment, loss of facility-based champions, loss of trained staff, end of implementing partner support, or infrastructure degradation. Less commonly cited reasons for interrupting KMC services included finances, space, infrastructure, human resource issues, and unavailability of guidelines.

Even hospitals with trained staff and champions seemed to struggle to get KMC services institutionalised with a proper routine and systematic application. One assessment team summarised the position in a non-implementing hospital in NW visited in October 2016: "Matron-in-charge of maternity resumed on 15-08-2016 and is a KMC champion. She said she put two mothers on KMC in her first week [showed us pictures on her phone]; on resumption, however, [she] has been overwhelmed by work and hasn't done so since then."

## 3. FINDINGS

Another factor that influencing the quality of care and sustainability of KMC services in a hospital is the low numbers of KMC babies cared for in hospitals claiming to implement KMC. Many secondary hospitals appear to refer all LBW babies or those <2000g to a higher level of care. Staff in one of the hospitals in SE reporting KMC implementation only received training in 2016 and considered the placement of one baby in the KMC position as provision of KMC services: “After training ... a baby was delivered with a weight of 2kg and KMC was commenced. No preterm/low birth baby since then.”

### 3.8.7 Factors related to space allotted for KMC

Four hospitals had special spaces or rooms designated for KMC: two tertiary and two secondary hospitals. However, in the two secondary hospitals these rooms were not used for KMC. One hospital in NW had plans for a larger KMC space in an expanded area under renovation. The only hospital in NE claiming to provide KMC services had a “preterm room, which was planned to be an improvised KMC room, but with [the] manpower shortage and more urgent plans for building a newborn unit with three beds ... they have not taught KMC to any mothers yet.”

Although it was not recorded systematically, the assessment teams observed that some hospitals had sufficient space to practice continuous KMC, e.g., in a corner in the postnatal ward. However, staff did not seem to be able, or motivated, to seek creative solutions to the need for KMC space. Professionals often did not have the courage or will to reorganise the space for KMC. It is not clear to what extent lack of space or staff shortages were legitimate reasons for not providing

KMC services. For example, informants in two hospitals in SW said there was a lack of space for implementing any KMC or continuous KMC; however, the assessment team observed ample space that could have been converted without additional cost.

**FIGURE 21: KMC ROOM IN A FEDERAL MEDICAL CENTRE**



Seating arrangements for mothers practising intermittent KMC were observed in eight hospitals. Ordinary chairs with back and arm rests were available in seven hospitals, and one hospital had chairs with a back rest only. One hospital that discontinued KMC services because the incubator became dysfunctional had 10 foldout-type chairs that enabled sleeping (SS). A few hospitals also referred to beds that were available for mothers (SS, NW).

Of the 36 facilities, 12 were currently implementing KMC, 20 had not started KMC implementation, and four had once implemented KMC but were not at the time of the assessment (Table 3). Hospitals that had not started to implement KMC were asked why they had not initiated KMC services. Reasons included:

- Absence of LBW deliveries: “No preterm baby since trained.” (SE)
- Staff and management ignorance, inter alia, due to lack of training:
  - “Medical officer has not heard of KMC.” (SS)
  - “Management not educated on KMC.” (NE)

- Lack of lodging space: “Two beds in mothers’ lodging. Rest on mattresses on floor.” (SW)
- Health workers’ perceptions of parents: “The medical officer in charge believes that mothers are not neat enough to practice KMC.” (SS)

Of the non-implementing hospitals, 7 indicated they had no plans for KMC implementation. Another seven hospitals indicated they were planning to implement KMC, once conditions were met. Conditions mentioned included:

- Absence of LBW deliveries, even when staff is trained and willing
- Funding issues
- Waiting for step-down training to be completed
- Waiting for buildings to be completed

### 3.8.8 KMC nutrition

KMC nutrition refers to exclusive breastfeeding wherever possible. The items in the assessment tool pertaining to feeding of newborns were completed for all hospitals, not only those practising KMC. Informants were questioned about mothers’ ability to be present for all feeding sessions, feeding schedules for LBW and premature babies, criteria for introducing direct feeding from the breast, the calculation of feeding volumes, feeding records, feeding commodities and utensils, and the use of breastmilk substitutes.

Table 33 summarises responses to specific items on feeding. Information was available for more than half of the hospitals on mother’s ability to feed her baby at night, which is important for initiating breastfeeding. One hospital explained what would happen if a mother could not come for all feeds: “Staff/relatives get expressed breastmilk for feeding from mother. Rarely use breastmilk substitutes” (SS). However, formula was widely used in hospitals, as discussed below.

Premature infants cannot be fed only on demand – they need to be fed every two or three hours, depending on the baby’s weight.<sup>10</sup> Less than one-third of hospitals had a fixed schedule, whereas one-quarter indicated that they did not have a schedule. Only one hospital indicated that babies were placed in the KMC position before starting with gavage feeding.

**FIGURE 22: MOTHERS’ CUBICLE IN A POSTNATAL WARD WITH POTENTIAL FOR CONTINUOUS KMC**



**FIGURE 23: CHAIR CONVERTIBLE TO A BED**



*Note: This type of bed is not appropriate for 24-hour continuous KMC.*

### 3. FINDINGS

**TABLE 32: FACTORS IDENTIFIED BY IN-DEPTH ASSESSMENT RESPONDENTS INFLUENCING QUALITY OF NEWBORN CARE**

FACTOR	EXAMPLES
<b>STAFFING ISSUES</b>	<p><b>Staff shortages</b></p> <ul style="list-style-type: none"> <li>• “Presently have no medical doctor or nurses so the maternity section is not functioning.” (NC)</li> <li>• “There is no staff to do follow-up because they are understaffed, but they tell the mother to return, of which most do not.” (SW)</li> <li>• “They had a paediatrician years back [who] cared for preterms but now they don’t [care for preterms] since they have none anymore.” (SW)</li> </ul> <p><b>Industrial action</b></p> <ul style="list-style-type: none"> <li>• “The hospital has been on strike for more than a month.” (NC)</li> </ul> <p><b>Lack of skilled staff and skills retention</b></p> <ul style="list-style-type: none"> <li>• “There are incubators but no experienced or trained staff to man the machines.” (NW)</li> <li>• “The facility has some basic equipment to care for pre-terms and LBW babies but lacks well-trained manpower.” (SE)</li> </ul>
<b>INFRASTRUCTURE AND SUPPLY CHALLENGES</b>	<p><b>Non-functioning equipment, stock-outs, erratic power supply</b></p> <p>“They have incubators/radiant warmers but do not use them due to lack of electricity.” (NE)</p> <p>“They have oxygen cylinder but there is no oxygen.” (NW)</p> <p>“The incubator is not functioning, so not in use.” (NE)</p>
<b>ALTERNATE THERMAL CARE METHODS</b>	<ul style="list-style-type: none"> <li>• “Babies are wrapped in blankets to keep them warm. Hot water bottle also used.” (NC)</li> <li>• “Use of head lamp to keep babies warm.” (NW)</li> <li>• “We don’t have heated nursery but make the room conducive for the babies.” (NC)</li> </ul>
<b>PARENT ATTITUDES AND FINANCIAL CONSTRAINTS</b>	<ul style="list-style-type: none"> <li>• “Mothers do not comply to KMC when introduced unless you are there to watch closely.” (NC)</li> <li>• “It is provided but not constant, [only when] patients are cooperative enough.” (NW)</li> <li>• “They refer, but the patients do not go due to financial constraints; so they manage the babies, so the mothers will not go home and allow the babies to die.” (NC)</li> </ul>
<b>POLITICAL AND ENVIRONMENTAL TURMOIL</b>	<ul style="list-style-type: none"> <li>• “Fulani headmen invasion into the community has affected hospitalization of patients; hence the hospital is non-functional.” (NC)</li> </ul>

When premature babies are fed expressed breastmilk, hospital staff need to adhere to specific guidelines for the volume of expressed breastmilk that these babies need per feed.<sup>10</sup> Informants in 11 hospitals reported that they calculated volumes; in 10 hospitals doctors did the calculation and in one hospital doctors and nurses did the calculation together; the remaining hospital informants were uninformed about calculations of expressed breastmilk. Calculations were done with a calculator, not with a special table. No hospital visited displayed a poster showing recommended feeding frequency and the volume of milk per feed according to baby's weight. Table 34 gives an overview of the reported criteria used for introducing the baby to suckle directly from the breast from 12 hospitals where information was available.

**TABLE 33: SUMMARY OF REPORTED FEEDING PRACTICES (N=36)**

ITEM	YES	SOMETIMES	NO	UNSURE	UNKNOWN
Mothers can come for all feeding sessions at night	20	1	2	–	13
Fixed feeding schedule for LBW and premature babies	11	1	9	–	15
Volumes calculated for expressed breastmilk	10	1	8	3	14
Use of formula	20	–	2	–	14
– No information reported					

**TABLE 34: REPORTED CRITERIA FOR INTRODUCING DIRECT FEEDING AT BREAST (N=12)**

	SS	SE	NE <sup>a</sup>	NW <sup>a</sup>	NC	SW	TOTAL
Baby still on tube/gavage feeding <sup>b</sup>	1	1	1		–	1	4
After oral feeding started	1	–	–	1	1	2	5
Baby reaches a certain weight	–	1	–	1	–	–	2
Baby reaches a certain gestational age	3	–	–	–	–	–	3
As soon as possible, regardless of weight or gestational age	3	–	–	–	–	–	3
Each baby assessed individually <sup>c</sup>	2	–	1	1	4	2	10
Other <sup>d</sup>	3	–	–	–	–	1	4
<p><sup>a</sup> Completed for one hospital only</p> <p><sup>b</sup> Not all hospitals practised gavage feeding</p> <p><sup>c</sup> The tool did not make provision for probing what was taken into account with an individual assessment</p> <p><sup>d</sup> Included comments like “Immediately after birth” (SS); “As soon as baby has good suck reflex” (SS); “Depends on baby’s clinical condition.” (SW)</p> <p>– No information reported</p>							

### 3. FINDINGS

The assessment teams also investigated the use of feeding records: what was recorded and where recordings were made. 15 hospitals had feeding documented in some fashion. Only two hospitals had feeding records for all admitted babies, one federal teaching hospital (SE) and one state specialist hospital (SW). One hospital only had records for sick babies (SS), whereas 12 hospitals had records for babies fed expressed breastmilk and/or supplements. The type of information recorded on feeding is shown in Table 35 and the location of documentation on feeding information is summarised in Table 36.

**TABLE 35: FEEDING RECORDS FOR EACH FEED BY GEOPOLITICAL ZONE (N=15)**

	SS	SE	NE <sup>a</sup>	NW <sup>a</sup>	NC	SW	TOTAL
Hospitals with records	4	2 <sup>b</sup>	1 <sup>c</sup>	1 <sup>c</sup>	2 <sup>c</sup>	5 <sup>d</sup>	15
Time	4	1	1	1	2	5	14
Volume	4	1	1	1	2	5	14
Notes on direct breastfeeding	0	1	1	1	–	4	7
Other	1 <sup>e</sup>	–	1 <sup>f</sup>	–	–	1 <sup>g</sup>	3

*a Only completed for one hospital*  
*b Only completed for and observed in one hospital*  
*c No records observed, only self-report*  
*d Records observed only in two hospitals*  
*e Sick babies*  
*f Residual, vomiting, abdominal distension*  
*g Type of feed; method of feeding; vomiting; bowel opening; urine output*  
 – No information reported

**TABLE 36: LOCATION OF DOCUMENTATION OF FEEDING INFORMATION (N=15)**

	SS	SE <sup>a</sup>	NE <sup>a</sup>	NW <sup>a</sup>	NC	SW	TOTAL
Hospitals with records	4	1	1 <sup>b</sup>	1 <sup>b</sup>	2 <sup>b</sup>	5 <sup>c</sup>	15
Baby's general observation sheet <sup>d</sup>	–	–	–	–	1	3	4
Special feeding sheet/chart	2	1	1	–	1	3	8
Nurses' notes	–	1	1	1	1	2	7
Doctors' notes	1	1	1	–	1	–	4
Prescription sheet	1	–	–	–	1	–	2

*a Only completed for one hospital*  
*b No records observed, only self-report*  
*c Records observed only in two hospitals*  
*d Could be part of the input/output sheet*  
 – No information reported

Table 37 gives an overview of the availability of feeding supplies and utensils. Cups were the most available item, reported in 18 (73 per cent) of the 26 hospitals for which information was available. Syringes and spoons were mentioned by about one-half of these hospitals. There also appears to be a preference for using nasogastric tubes over orogastric tubes.

Where breastmilk substitutes were used, they were mostly provided by the baby's family (n=16); five hospitals also indicated other sources for substitutes: "donors, government" (SW) and "social welfare for abandoned babies" (NE). Very few hospitals used breastmilk fortification for premature babies. One hospital used soybean oil (NC). Informants in 20 hospitals indicated that they used formula as a breastmilk substitute; only two indicated that they did not use any formula (SS, SE). Two hospitals that referred to a formula (SS, SW) may have meant that it was used as a complement to breastmilk.

**TABLE 37: FEEDING COMMODITIES AND UTENSILS (N=26)**

	SS <sup>a</sup>	SE	NE <sup>b</sup>	NW <sup>b</sup>	NC <sup>c</sup>	SW <sup>d</sup>	TOTAL
Nasogastric tubes	3	2	1	1	1	1	9
Orogastric tubes	3	0	0	1	1	1	6
Cups	5	3	1	1	4	4	18
Syringes	6	2	1	1	1	1	12
Spoons	3	1	1	0	3	3	11
<p><i>a</i> Equipment not verified  <i>b</i> Only completed for one hospital  <i>c</i> Equipment only verified for two hospitals  <i>d</i> Equipment only verified for three hospitals</p>							

**TABLE 38: CRITERIA FOR USING BREASTMILK SUBSTITUTES (N=26)**

CRITERION	SS	SE	NE*	NW*	NC	SW	TOTAL
Mother not always available	2	3	1	1	3	4	14
Mother not producing enough milk	4	3	1	1	2	4	15
Baby not gaining weight sufficiently	1	–	–	–	1	1	3
Mother HIV positive**	2	3	1	–	1	3	10
Other	3	–	1	–	2	1	7
<p>* Completed for one hospital only  ** When mother opts for breastmilk substitutes (SE, SW)  – No information reported</p>							

### 3. FINDINGS

Table 38 refers to the criteria for the use of breastmilk substitutes. In more than half of the 26 hospitals for which information was available, the unavailability of the mother was mentioned as a criterion, as was mothers who were not producing enough milk. Other criteria related to maternal factors included mothers' HIV status, "very sick mothers" (SS, NC); "deceased mothers" (NC); and "caesarean section" (SW). Factors related to the baby were: "baby sick and cannot suck well" (NC); "baby with cleft palate" (SS); and "IDM/LGA" (infants of diabetic mothers and babies large for gestational age) (NE).

#### 3.8.9 Support for the mother

Support for the mother is supposed to be provided in hospitals by the healthcare staff and from the family and community after discharge. This component was not explored in depth in this assessment because of the focus on facility-based care and limited contact with parents and families. Also, this element cannot be observed adequately in a short period of time. However, some qualitative information was collected on feeding support and support for mothers. Feeding support included "monitor/teach mothers how to feed their babies, especially first-timers" (NC) and "counselling on breastfeeding techniques" (NC). It further entailed treating inverted nipples, initiating early breastfeeding, encouraging exclusive breastfeeding, and counselling on positioning and attachment, expressing breastmilk, and cup-and-spoon feeding.

- "Nurses do gavage feeding, nurses also do initial cup-and-spoon feeding before mothers take over, teach the mothers breastfeeding." (SS)
- "Nurses do the cup feeding, teach mothers, and supervise." (SS)

Mothers may also receive emotional support, education, and supervision "on newborn care ... and personal hygiene" (NE), hand washing, "how to bathe the baby" (SS), and "immunisation" (NW).

However, family members are usually the main support system for mothers with small newborns. The in-depth assessment probed respondents on whether visitors were allowed in the hospital or neonatal unit. In the rest of the hospitals for which information was available visitors were allowed, with fathers and grandparents mentioned most (Table 39).

**TABLE 39: NUMBER OF HOSPITALS REPORTING TYPE OF VISITORS ALLOWED, BY GEOPOLITICAL ZONE\*\* (N=36)**

	SS	SE	NE*	NW*	NC	SW	TOTAL
Father	5	4	–	–	5	4	<b>18</b>
Grandparents	4	4	–	–	4	2	<b>14</b>
Siblings	–	2	–	–	4	–	<b>6</b>
Friends	1	1	–	–	4	–	<b>6</b>
Other relatives	1	1	–	–	–	–	<b>2</b>

Note: Totals add to more than 36 because more than one type of visitor could be allowed in a facility

\* Information missing

\*\* No visitors were allowed at federal medical centres in five states and one general hospital in SW.

– No information reported

Of hospitals where visitors were allowed, four indicated that there were no specific visiting hours. The remainder restricted hours for visits. The most common visiting hours were 4-6pm. Five hospitals had longer visiting hours (e.g., 2-6pm or 2:30-5:30pm) or additional visiting slots during weekends (e.g., 11am-12noon). Two hospitals had an early morning time as well.

Support after discharge from hospital was explored through an item on home visits. Six hospitals indicated that home visits were done for some babies, either by a matron, nurse, CHEW (community health extension worker) or social worker. This appears to be an irregular practice, as illustrated by the following observations:

- “Only preterm LBW babies who are on KMC” (SS)
- “Once in 2 weeks [by nurse]” (SS)
- “Babies whose mothers the staff know [by CHEW]” (NW)
- “Only the preterm babies on KMC and babies that discharged against medical advice [by matron]” (NC)
- “Babies that reside close [by nurses]” (NC)
- “Babies of financially handicapped mother; babies in need of infant formula [by social worker]” (SW)

Further subsections also discuss different forms of support that a mother may need from the hospital and health system and from the community.

### 3.8.9.1 Mothers’ lodging

When a small or sick newborn requires hospitalisation, the mother has to be able to stay as well to provide breastmilk for her baby. It is most convenient when she can stay near her baby. Table 40 gives a breakdown of where mothers of small newborns were accommodated and whether they received meals. Most hospitals included in the in-depth assessment lodged mothers in the postnatal ward, with their babies if there was no newborn unit and without their babies where there was a SCBU. However, fewer reported housing mothers with small babies, versus housing mothers with sick babies. This could be a result of hospitals often referring babies born <2000g, as mentioned previously. Some of the tertiary hospitals had more than one postnatal ward; most mothers of inborns and outborns were not kept separately. In some hospitals the postnatal ward was combined with the gynaecological or general female ward. A few hospitals had special mothers’ rooms, and in one hospital mothers of outborn babies stayed with their babies in the paediatric ward. In most cases, the postnatal ward or other lodging for mothers was either adjacent to or within 50 meters of the newborn unit where the baby stayed. In three hospitals the postnatal ward was on a different floor in the same hospital (SW) and at another the distance was about 100 meters (SE). The number of beds in these wards varied greatly among the states. The number of beds in postnatal wards ranged from 2 to 45 in SE, 12 to 15 in NW, and 18 to 29 beds in SW.

The availability and source of food for mothers varied greatly across responding hospitals. One-third of hospitals (n=12) provided meals for all or some mothers with babies in hospital. In two states, no hospital provided food (NE, NC). In contrast one SW hospital reported: “Food is provided by the hospital management whether they eat or not.” For most mothers who did not get all their meals in hospital, families were the main source of food. In three NW hospitals stating that all mothers were provided meals, it was noted that they only provided food for some meals.

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**TABLE 40: AVAILABILITY OF LODGING AND FOOD FOR MOTHERS WITH HOSPITALISED BABIES (N=26)**

	SS	SE	NE <sup>a</sup>	NW <sup>a</sup>	NC	SW	TOTAL
<b>WHERE MOTHERS ARE LODGED</b>							
<b>Postnatal ward</b>							
Number of beds (range) <sup>b</sup>	5–12	2–45	7–23	12–15	5–13	18–29	–
<b>Special room for mothers</b>	1	1 <sup>c</sup>	1 <sup>c</sup>	U	1	3	7
Number of beds	15 <sup>d</sup>	U	U	U	5	2 <sup>e</sup>	–
<b>KMC space/room</b>	–	1	–	U	–	–	1
Number of beds	–	U	–	U	–	–	–
<b>WHO STAYS IN POSTNATAL WARD?</b>							
<b>Antenatal mothers</b>	1	3	3	–	1	1	9
<b>Postnatal mothers with their babies</b>	4	5	4	3	6	4	26 <sup>a</sup>
Postnatal mothers with small babies in newborn unit	1	2	1	1	3	5	13
Postnatal mothers with sick babies in newborn unit	4	4	–	1	6	3	18
<b>Mothers with children in the paediatric ward</b>	1	1	–	–	1	–	3
<b>Other (gynaecological cases or children)</b>	1	–	2	2	1	–	6
<b>MEALS PROVIDED BY HOSPITAL</b>							
<b>For all mothers</b>	2	1	0	3	0	3	12
<b>For some mothers</b>	–	1	–	1	–	1	3
<p>U Unknown</p> <p>a 10 missing responses</p> <p>b There were 1–3 missing responses for 5 states (only complete for NC); for some of the federal medical centres and specialist hospitals numbers were not available because of the split between the obstetrics and paediatric departments.</p> <p>c Mothers of outborn babies stay in mothers' room.</p> <p>d 7 inborn and 8 outborn beds adjacent to the neonatal units</p> <p>e Only known for one hospital</p> <p>– Not applicable or information not recorded.</p>							

Reasons for only providing meals to some mothers included the following:

- Only those whose families could not afford to provide meals: “Mothers that cannot afford to bring meals.” (NW)
- Meals only provided for a limited time: “Only for three days” after birth. (SW)
- Only for mothers of inborn or outborn babies: “Only mothers of inborn babies get meals.” (SW)
- One hospital referred to food being offered by “volunteers if no family” (NW) and in another hospital “mothers buy food from the hospital canteen” (NE).

### 3.8.10 Discharge

Hospitals used different criteria when deciding whether to discharge small newborns and to follow-up after discharge (Table 41). However, these differences seemed to be unrelated to whether a hospital was implementing KMC. Only one hospital was reported to have written discharge criteria available (NC). Some of the hospitals included in the table did not provide care for small newborns or did not have any small newborns on admission during the previous three months and thus might not be aware of discharge criteria.

Discharge criteria was available for 16 hospitals. Informants in most hospitals for which information was available referred to a discretionary criterion for discharge readiness by assessing each baby individually. Three-quarters of hospitals reported that achieving a weight milestone was a criterion, although the exact weight required for discharge varied. While other criteria were mentioned, they were sometimes nonspecific, including descriptions such as “stable,” “no longer sick,” and “resolved initial problems.” One hospital had “no set criteria to decide on discharge” (NC). Six hospitals referred to the mother’s willingness to continue KMC.

Informants were also asked who makes decisions to discharge. Discharge decisions were mainly made by doctors, and in some hospitals with input from nurses (Table 42). One hospital used a discharge scoring sheet (checklist) for every baby (SS).

**TABLE 41: HOSPITALS REPORTING CRITERIA FOR DETERMINING DISCHARGE READINESS, BY CRITERIA AND GEOPOLITICAL ZONE (N=16)**

CRITERION*	SS	SE	NE**	NW**	NC	SW	TOTAL
Individual for each baby (discretionary)	5	3	1	1	2	4	16
Baby reached certain gestational age	–	–	–	1	–	1	2
Baby reached certain weight	2	1	–	–	2	4	9
Baby gains weight consistently	1	–	–	1	1	3	6
Baby regained birth weight	–	–	1	1	1	1	4
Mother willing to continue KMC (where applicable)	1	1	–	1	2	1	6
Other	3	1	1	–	3	2	10

\* Hospitals could use more than one criterion  
 \*\* Completed for one hospital only  
 – No information reported

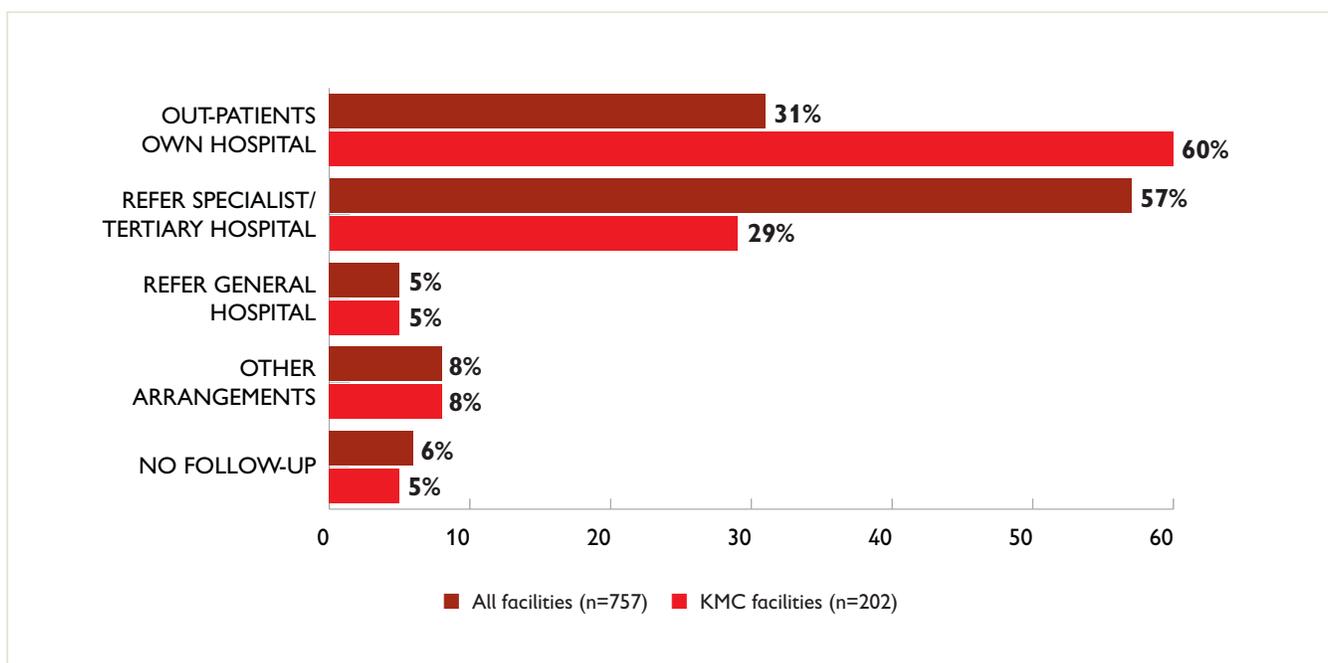
### 3. FINDINGS

**TABLE 42: HOSPITALS REPORTING DECISION-MAKING AUTHORITIES BY AUTHORITY AND GEOPOLITICAL ZONE (N=26)**

DECISION-MAKER	SS	SE	NE*	NW*	NC	SW	TOTAL
Doctor only	4	3	–	–	3	1	11
Joint decision, doctors and nurses	–	–	1	1	–	3	5
Doctor, with input from nurses	2	1	–	–	1	1	5
Mostly nurses	–	–	–	–	1	–	1
<b>TOTAL</b>	<b>6</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>6</b>	<b>6</b>	<b>26</b>

\* Completed for one hospital only  
 – No information reported

**FIGURE 24: FOLLOW-UP OF SMALL NEWBORNS AFTER DISCHARGE, KMC FACILITIES VERSUS ALL FACILITIES (N=202)**



### 3.8.11 Follow-up

Follow-up after mother and baby are discharged from the hospital is important for all newborns, and an essential component of KMC. The lifesaving benefits of KMC for small and preterm newborns are at risk if mothers abandon the practices when they leave the hospital. There are many reasons KMC might be discontinued, including community or family resistance to KMC or losing contact with hospital staff who might encourage mothers to return for check-ups and continue KMC.

The landscape survey found that hospitals providing KMC services are more likely than other facilities to follow up with patients from their own outpatient department after discharge (Figure 24). Hospitals without KMC services often refer small newborns to a higher level of care, where they would receive appointments for follow-up visits. These referrals might explain why a higher percentage of small newborns from non-KMC facilities are followed up at specialist and tertiary hospitals.

In the in-depth assessment, some respondents offered unprompted comments on follow-up issues, such as schedules, continuity of care, measures to enhance follow-up, and parent compliance (Table 43). While respondents cited a number of measures they used to encourage follow-up, such as telephone calls or home visits, many indicated that non-compliance was a major issue.

Another issue identified in the in-depth survey is that many secondary hospitals referred most small newborns to a higher level of care; thus it is not surprising that many would have “no follow-up plan” (SS). Information on follow-up was obtained from just 17 of 36 hospitals in the in-depth assessment. It was not possible to calculate percentages of newborns receiving follow-up because of the lack of information on LBW admissions, discussed previously.

All 17 hospitals where informants provided information on follow-up indicated that babies were supposed to follow up at the hospital where they had been treated (Table 44). Follow-up schedules ranged from initially weekly to monthly for those hospitals with a specific schedule, for example “within days (optional), weekly for a month, biweekly for two months, every four weeks for six months” (NW). Two hospitals reported having a protocol for follow-up, but it was not available in writing (NE, NW). Two hospitals (SS, SW) reported having special follow-up clinics for LBW and premature babies.

Across all six geopolitical zones there were anecdotal reports of mothers not coming back for follow-up.

- “Most don’t come back because they feel baby is normal.” (SW)
- “Mostly always attend only one clinic and discharge themselves.” (SS)
- “A lot are lost to follow-up.” (SE)
- “Most mothers don’t come for clinic.” (NE)

Possible reasons for this phenomenon were not probed.

From the 17 hospitals with information, follow-up of small newborns was most commonly in the paediatric outpatients department (OPD), followed by the general OPD. Other spaces for follow-up included a doctor’s consulting office and the neonatal, maternity, and postnatal wards. As hospitals were generally not practising continuous KMC in a separate ward, no follow-ups took place in such a space.

### 3. FINDINGS

**TABLE 43: UNPROMPTED ISSUES POSSIBLY AFFECTING FOLLOW-UP OF SMALL NEWBORNS, LANDSCAPE SURVEY**

TOPIC	EXAMPLE
<b>FOLLOW-UP SCHEDULES</b>	<p><b>Variations in schedules</b></p> <ul style="list-style-type: none"> <li>• “Every two days return and when they are 2kg they come every one week.” (SW)</li> <li>• “The patient comes back to the hospital six weeks follow-up after discharge.” (NC)</li> <li>• “We refer to specialist ... those who can afford, otherwise they come for follow-up after 1-2 days of admission.” (NE)</li> <li>• “Discharge is done after 24 hours and follow-up after one week at the post-natal ward.” (NW)</li> </ul>
<b>CONTINUITY OF CARE</b>	<p><b>Very little continuity of care</b></p> <ul style="list-style-type: none"> <li>• “Once they refer we do not follow-up because the burden is off our neck at that point.” (NC)</li> <li>• “The hospital has no doctor or nurses, only CHEW. So after delivery, mother and baby are discharged to their homes. If there is sepsis or anything abnormal, baby is transferred to hospital of choice of parents.” (NC)</li> <li>• “We follow-up only if the baby is [born in] our hospital.” (SE)</li> </ul> <p><b>Attempts at providing some continuity</b></p> <ul style="list-style-type: none"> <li>• “We send someone to the hospital when we refer to check on them and ask the patients to come back when discharged.” (SW)</li> <li>• “The patients are counselled if they can’t afford to go to another hospital. We nurse for one to two days and advise on follow-up.” (NE)</li> </ul>
<b>MEASURES TO IMPROVE FOLLOW-UP</b>	<p><b>Variety of measures (phone calls, home visits)</b></p> <ul style="list-style-type: none"> <li>• “Get the contacts of the parents of the baby to check them from time to time. They visit too if the need arises.” (NC)</li> <li>• “Home visit to parents of the babies and calls are made because we collect their contact [details].” (SW)</li> </ul>
<b>PARENT COMPLIANCE</b>	<p><b>Reports of non-compliance</b></p> <ul style="list-style-type: none"> <li>• “Most mothers do not return, even if they are asked to, but that occurs when they have complicated issues referred.” (NC)</li> <li>• “Due to distance and financial constraint some patients don’t turn up.” (NE)</li> <li>• “Most patients are leaving against medical advice; hence no follow-up.” (NW)</li> <li>• “They come only when sick.” (NC)</li> <li>• “Follow-up is difficult. Patients don’t have phones, so they can’t be followed up and they hardly return to the hospital.” (NC)</li> </ul>
<b>REPORTS OF GOOD COMPLIANCE</b>	<ul style="list-style-type: none"> <li>• “Very regular, and patients are very responsive. They hardly miss the appointment.” (SE)</li> </ul>

NOTE: Responses are from the landscape survey.

**TABLE 44: FOLLOW-UP ARRANGEMENTS FOR LBW AND PRETERM BABIES (N=26)**

	SS	SE	NE*	NW*	NC	SW	TOTAL
All should come back to hospital	5	2	1	1	4	4	<b>17</b>
Some babies come back, others referred elsewhere	1	–	–	–	–	–	<b>1</b>
Mother/caretaker decides	–	1	–	–	1	–	<b>2</b>
No follow-up services	–	1	–	–	1	–	<b>2</b>
Information on follow-up not collected							<b>9</b>
* Completed for one hospital only – No information reported							

Hospital informants reported that newborns are discharged from follow-up according to age or weight criteria. Informants from at least 12 hospitals could not cite any specific criteria for discontinuing follow-up. One hospital indicated that “patients are assessed individually” (SS). Age criteria ranged from two years in two federal medical centres (SS, NC) and up to six years in one of the state teaching hospitals (SW), with the remaining hospitals citing ages ranging from two weeks to six months. Weight criteria for discharge from special follow-up ranged from 2000g (SE, SW) to 3000g (NW, SW) and up to 6000g (SS).

### 3.9 Perceived challenges for providing care to small new

This subsection looks at the challenges and enabling factors regarding small newborn care and KMC and presents informants’ responses on what they considered important when implementing KMC. The challenges informants mentioned can be divided into broad themes: political will; finances; infrastructure; equipment, materials and supplies; human resources for health (HRH); and client and community factors. Figure 25 gives a graphic presentation of the relationship between these themes, as they emerged from participant comments.

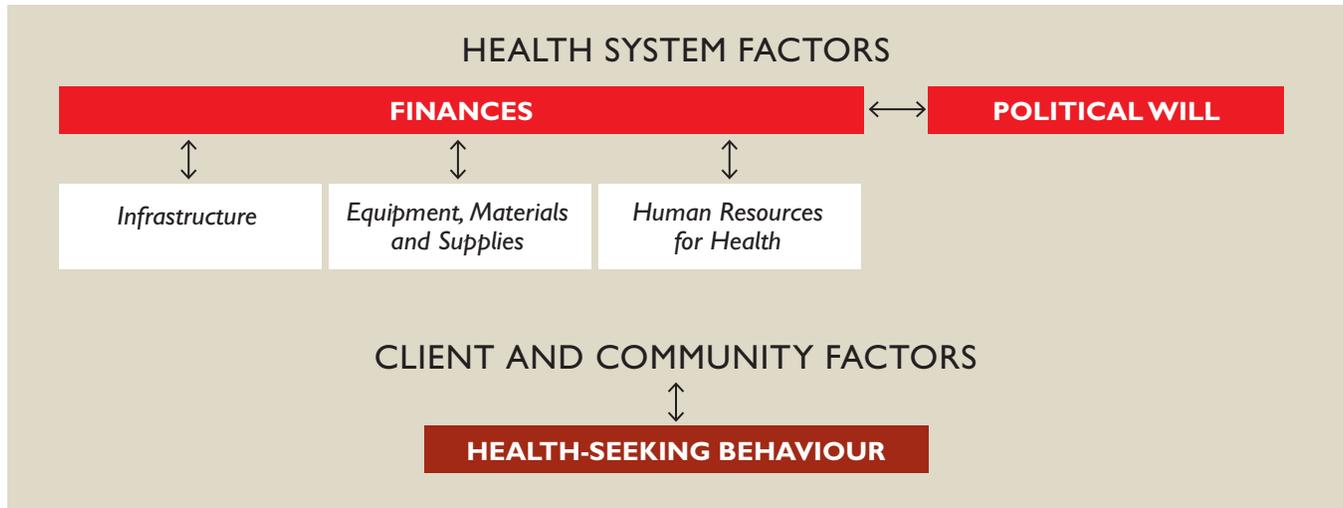
Political will and finances are overarching themes that span all levels of the health system. Political will, for example, was seen as required to support advocacy activities and allocate or release funding. Informants referred to “poor political will” (NE) and “poor enlightenment and advocacy from government” (NW). Financial challenges mainly concerned insufficient funding and high operational costs.

Beneath these overarching themes, the three main health systems challenges mentioned revolved around infrastructure; equipment, materials, and supplies; and human resources.

- **Infrastructure.** The two main issues related to infrastructure for all states were irregular power supply (n=11) and inadequate neonatal space (n=12). Other issues raised were inadequate facilities (n=6), the absence of a laboratory and a blood bank (SE), and “nil means of transport, e.g., ambulance” (NW), as well as no water supply.
- **Equipment, materials, and supplies.** The most prominent issue identified under this theme across all states was the unavailability of equipment (n=21). These included piped oxygen and concentrators, Ambu bags, incubators, radiant warmers, blankets for thermal care, suction machines, intubation equipment, phototherapy equipment, blood pressure

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**FIGURE 25: MAIN CHALLENGES IN THE PROVISION OF CARE FOR SMALL NEWBORNS**



apparatus, a delivery couch, and personal protective equipment. Other issues included faulty equipment (n=5) and shortage of supplies such as face masks, KMC materials, delivery kits (n=4), and drugs (n=3). As one informant explained, “Can’t actually do what you want to, e.g., no adrenaline or Ambu bag; most equipment not working” (SW).

- Human resources had two main themes: inadequate human resources (n=34) and inadequate staff training (n=13). Staff shortages have been described above. Specific aspects of staff training referred to included “basic skills” (SS), “personnel training deficient in all aspects” (SE), and “no in-house training” (SW). Other staff issues mentioned included: “lack of motivation” (NE) and “no staff dedicated to neonatal care” (NW).
- Client and community factors challenging newborn care revolve around health-seeking behaviour and the “poor health awareness of caregivers” (NE). The perceived consequences of poor health-seeking behaviour are delayed presentation at the hospital, refusal for the baby to be referred, and lack of cooperation with the health system. The causes of these behaviours might be associated with the financial situation of clients and local social and cultural beliefs and practices.

#### 3.9.1 Perceived challenges to the implementation of KMC

Challenges informants reported to care for small newborns also hinder the implementation of KMC. Most comments provided were related to client and community factors. The most common health system factor reported as a barrier to KMC implementation was infrastructure, often focusing on space. Table 45 summarizes the emerging themes.

#### 3.9.2 Perceived enablers to the initiation of KMC services

Informants in hospitals where KMC was being practised or had been practised previously were probed on their perceptions of what enabled KMC to be initiated in their hospital (Table 46). It is clear that the human factor was the most important. Apart from strong clinical leadership from a champion, staff and client acceptance of KMC were frequently mentioned. Training and funding were associated with special programmes presented by development partners, who may have also contributed to the strengthening of infrastructure (e.g., space).

Informants commented on what enabled their hospital to continue KMC services, which are summarized in Table 47. Because some hospitals had only started KMC services in 2015 and 2016, the sustainability of the services was not explored. Notwithstanding this limitation, the most common reason given for the facility continuing with KMC provision was the visible beneficial health outcomes for the baby. Other reasons given were client acceptance and management support.

**TABLE 45: REPORTED CHALLENGES TO THE IMPLEMENTATION OF KMC**

THEME	EXAMPLES
<b>HEALTH SYSTEM FACTORS (N = 16)</b>	
<i>Political will (n=1)</i>	<ul style="list-style-type: none"> <li>• “No support from management” (NE)</li> </ul>
<i>Finances (n=2)</i>	<ul style="list-style-type: none"> <li>• “Insufficient funds” (NE, NW)</li> </ul>
<i>Infrastructure (n=6)</i>	<ul style="list-style-type: none"> <li>• “Lack of infrastructure” (NW)</li> <li>• “Space constraints” (NC)</li> <li>• “Lack of KMC space” (NE)</li> </ul>
<i>Equipment, materials and supplies (n=2)</i>	<ul style="list-style-type: none"> <li>• “Comfortable seat not available” (SS)</li> <li>• “No bed/cots” (NC)</li> </ul>
<i>Human resources (n=4)</i>	<ul style="list-style-type: none"> <li>• “Lack of manpower” (NW)</li> <li>• “Lack of training of staff” (NE)</li> <li>• “Staff rotations” (SE)</li> </ul>
<i>Clinical care (n=2)</i>	<ul style="list-style-type: none"> <li>• “Nil guidelines and protocols” (NE)</li> <li>• “Inability to document KMC statistics” (NW)</li> </ul>
<b>CLIENT AND COMMUNITY FACTORS (N=14)</b>	
<i>Public awareness</i>	<ul style="list-style-type: none"> <li>• “Poor public awareness” (NC)</li> </ul>
<i>Client attitudes and behaviours</i>	<ul style="list-style-type: none"> <li>• “Initial client resistance (NE, NW)</li> <li>• “Ignorance on part of mothers who felt other babies were displacing their babies from the incubators. Staff had to explain that KMC was cost-effective and faster means of discharge” (SW)</li> <li>• “Patients not doing it in the right way” (SS)</li> <li>• “Cultural beliefs [mothers prefer to wear clothes instead of skin-to-skin]” (NE, NW)</li> </ul>
<i>Client uptake of available services</i>	<ul style="list-style-type: none"> <li>• “Low delivery rate/patient turnover” (SE)</li> <li>• “Women having to stay at the hospital” (SS)</li> </ul>
<i>Poverty</i>	<ul style="list-style-type: none"> <li>• “Poverty in the community” (NW)</li> </ul>

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**TABLE 46: FACTORS ENABLING THE INITIATION OF KMC SERVICES (N=16)**

FACTOR	SS	SE	NE	NW	NC	SW	TOTAL
Special programmes that included KMC	–	2	2	2	–	1	<b>7</b>
Training for staff	–	2	1	2	2		<b>7</b>
Staff acceptance	1	3	2	1	3	1	<b>11</b>
Client acceptance	1	1	2	2	3	2	<b>11</b>
Funding available	–	–	–	2			<b>2</b>
Space became available	–	3	1	1	–	1	<b>6</b>
Strong clinical leader (“champion”)	2	3	3	3	3	2	<b>16</b>
Management support	–	2	2	1	2	1	<b>8</b>

**TABLE 47: REPORTED FACTORS CONTRIBUTING TO THE CONTINUATION OF KMC SERVICES**

FACTORS	EXAMPLES
<b>Baby outcomes</b>	<ul style="list-style-type: none"> <li>• “The outcome of babies on KMC appears to be the main enabler of KMC.” (SS)</li> <li>• “The visible results” (SW)</li> <li>• “Babies are thriving.” (NC)</li> <li>• “The rapid improvement of the babies” (SS)</li> </ul>
<i>Morbidity</i>	<ul style="list-style-type: none"> <li>• “Less cross-infection from visitors” (SW)</li> </ul>
<i>Earlier discharge</i>	<ul style="list-style-type: none"> <li>• “KMC was viewed as an opportunity for discharge home.” (SW)</li> </ul>
<i>Mortality</i>	<ul style="list-style-type: none"> <li>• “Benefits are visible, e.g., neonatal mortality rate.” (NW)</li> <li>• “Helps babies to survive” (SE)</li> <li>• “Reducing number of neonatal deaths” (NE, NW)</li> </ul>
<i>Mother-infant attachment</i>	<ul style="list-style-type: none"> <li>• “Promotes love between mother and baby” (NC)</li> <li>• “Ensures mother learns to care for baby’s challenges” (SW)</li> </ul>
<b>Staff</b>	
<i>Champions</i>	<ul style="list-style-type: none"> <li>• “Champion (matron in charge)” (NW)</li> <li>• “Passion and determination” (NC)</li> </ul>
<i>Staff acceptance and support</i>	<ul style="list-style-type: none"> <li>• “Staff commitment” (NC)</li> <li>• “Staff are now supportive.” (SW)</li> </ul>
<i>Reduced staff workload</i>	<ul style="list-style-type: none"> <li>• “Gives the nurses some breathing space” (SW)</li> </ul>
<b>Infrastructure</b>	<ul style="list-style-type: none"> <li>• “Adequate infrastructure” (NE, NW)</li> </ul>
<b>Cost</b>	<ul style="list-style-type: none"> <li>• “Cheap” (SE)</li> </ul>
<b>Integrated in newborn care</b>	<ul style="list-style-type: none"> <li>• “Packaged with ENCC” (SE)</li> </ul>

**TABLE 48: REPORTED REQUIREMENTS FOR THE IMPLEMENTATION OF KMC FROM HOSPITAL INFORMANTS**

CATEGORY	EXAMPLES OF COMMENTS
<b>ADVOCACY (N=5)</b>	
	<ul style="list-style-type: none"> <li>• “Encouragement and advocacy” (NW)</li> <li>• “Forum for interaction for others to understand the benefits of KMC” (SW)</li> </ul>
<b>PUBLIC AWARENESS (N=5)</b>	
	<ul style="list-style-type: none"> <li>• “Public enlightenment” (SS)</li> <li>• “Create awareness [with] the general public.” (NC)</li> <li>• “Education and awareness creation” (NE)</li> <li>• “Community mobilization” (NW)</li> </ul>
<b>HUMAN RESOURCES</b>	
<i>Overall availability (n=9)</i>	<ul style="list-style-type: none"> <li>• “Adequate human resources” (NE)</li> </ul>
<i>Champions (n=2)</i>	<ul style="list-style-type: none"> <li>• “The champion should be someone who can push for KMC.” (SS)</li> </ul>
<i>Staff acceptance and commitment (n=5)</i>	<ul style="list-style-type: none"> <li>• “Motivated workforce” (NC)</li> <li>• “Staff desire/willpower” (NW)</li> <li>• “Pick staff dedicated to newborn care.” (NC)</li> <li>• “Hospital clinical services are the ones who make the plan ... KMC is not high on our priority list.” (SW)</li> <li>• “Good communication skills” (NC)</li> </ul>
<b>TRAINING AND RETRAINING (N=26)</b>	
	<ul style="list-style-type: none"> <li>• “Training and retraining of all staff” (NW)</li> <li>• “All champions should be trained.” (SS)</li> <li>• “Train the nurses and medical staff.” (SE)</li> <li>• “All midwives should be trained.” (NC)</li> <li>• “Training and retraining to keep the interest” (SW)</li> <li>• “Emphasis on advantages/benefits” (SW)</li> </ul>
<b>SUPPORTIVE SUPERVISION (N=1)</b>	
	<ul style="list-style-type: none"> <li>• “Mentoring following training” (SS)</li> </ul>
<b>FUNDING (N=5)</b>	
	<ul style="list-style-type: none"> <li>• “Sufficient funds” (NW)</li> <li>• “Provision of funds” (NE)</li> </ul>

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**TABLE 48: REPORTED REQUIREMENTS FOR THE IMPLEMENTATION OF KMC FROM HOSPITAL INFORMANTS**

CATEGORY	EXAMPLES OF COMMENTS
<b>INFRASTRUCTURE</b>	
Space (n=10)	<ul style="list-style-type: none"> <li>• “Provision of space” (NE)</li> <li>• “Privacy (separate unit)” (SS)</li> <li>• “KMC room” (NE)</li> <li>• “Special space for practice” (NW)</li> </ul>
Power (n=1)	<ul style="list-style-type: none"> <li>• “Stable power supply” (NE)</li> </ul>
<b>MATERIAL RESOURCES (N=9)</b>	
	<ul style="list-style-type: none"> <li>• “Provision of materials” (NE)</li> <li>• “Provision of KMC kit [stethoscope, Neonatalie, wrapper]” (NE)</li> <li>• “KMC wrappers” (SE)</li> <li>• “Allow mother to bring their local wrapper.” (NC)</li> <li>• “Availability of IEC materials – audio-visual” (NC)</li> <li>• “Translation of IEC materials to local dialects.” (NC)</li> </ul>
<b>ORIENTATION TO MOTHERS (N=4)</b>	
	<ul style="list-style-type: none"> <li>• “Explain the benefit of KMC to the parents.” (NC)</li> <li>• “Create awareness by educating mothers.” (NE)</li> </ul>

#### 3.9.3 Perceptions of requirements for the implementation of KMC

Informants in hospitals offered requirements they felt were important for the implementation of KMC, presented in Table 48. The themes overlap with challenges and enablers mentioned in the subsections above, including training and retraining of staff, space, human resources, and material resources. All four of these have implications for funding, a theme mentioned generically by five hospitals. Themes related to staff and caregiver attitudes and behaviour include the presence of champions, staff acceptance and commitment, and caregiver support. Aspects related to awareness focused on advocacy, public awareness, and orientation to mothers.

#### 3.10 Key informant interviews

During the in-depth phase, assessment teams interviewed a total of 22 key informants, 10 affiliated with the FMOH or a SMOH, 6 representing development partners, and 6 members from professional associations (NISONM, PAN, NANPAN, and the Society of Gynaecology & Obstetrics of Nigeria (SOGON)). Five informants represented the national level, with one to four informants coming from each of the six geopolitical zones (Table 49).

Informants’ experience with newborn care was diverse. Some had previously been closely involved in the care of newborns, including preterm and LVB babies, while others were from more of a general public health background or were involved in other types of programmes.

**TABLE 49: KEY INFORMANTS INTERVIEWED BY STATE AND STAKEHOLDER CATEGORIES (N=22)**

	NATIONAL	SS	SE	NE	NW	NC	SW	TOTAL
Government	1	1	2	1	2	1	2	10
Development partners	2	1	–	–	1	1	1	6
Professional associations	2	1	1	–	–	1	1	6
<b>TOTAL</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>22</b>

The interview guides (Appendix H) were designed to also include general activities and policies on newborn care that have a direct bearing on the care of small newborns and on the provision of KMC. Topics discussed with participants included the following:

- Views on priorities for newborn care
- Informant's role in and involvement with newborn care and that of the entity he or she represented
- Existing policies and guidelines related to newborn care (including KMC)
- Development and dissemination of training materials, guidelines, protocols, and job aids
- Capacity-building for newborn care
- Specific policy of and actual resource allocation for newborn care at federal and state levels
- Achievements (what is being done well) with regard to newborn care
- Challenges with regard to the provision of newborn care in general and care for small newborns
- Availability and use of data related to newborn care
- Requirements for achieving high coverage of KMC services and recommendations for the scale-up of the practice

Representatives of professional associations were also probed on knowledge of and attitudes toward KMC and the degree of support KMC had from members

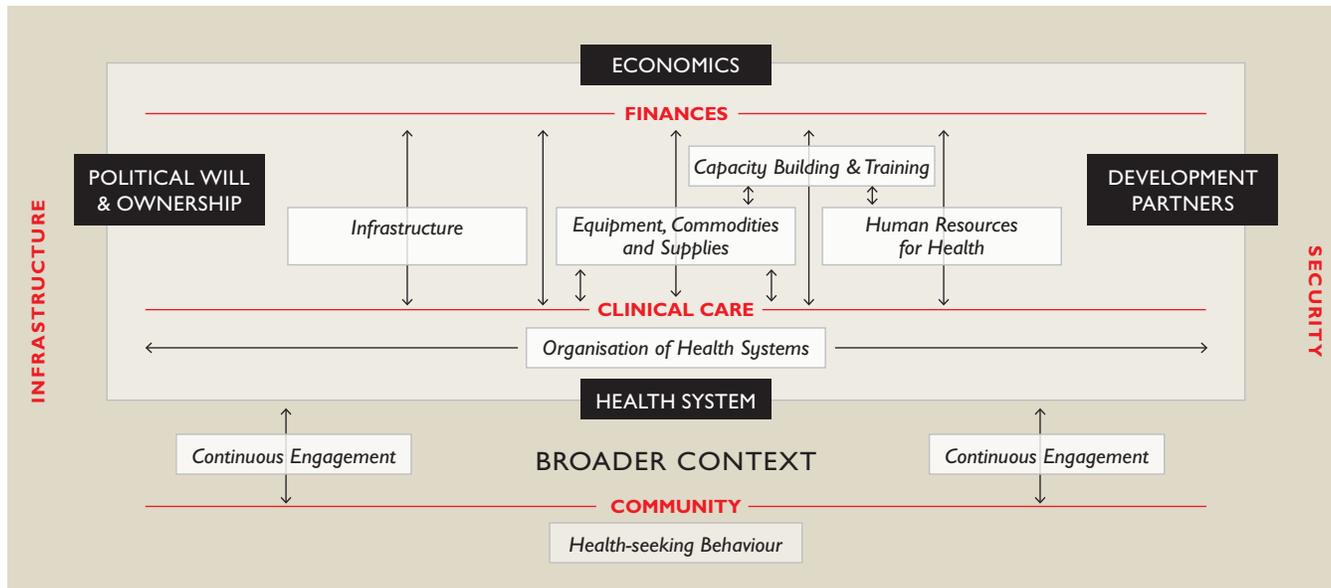
### *3.10.1 Major themes emerging from the key informant interviews*

The views of the key informants were embedded in broader contextual issues that have an influence on the health system, i.e., on the provision of healthcare in general and by implication on the care of all newborns. These factors include the geopolitical space, economics and security, infrastructure, political will and ownership, and the functioning of development partners (Figure 26).

The key factors regarding the care of small newborns that emerged from the analysis of key informant data were divided into health system factors and client and community factors, similar to the division made for the hospital visits. Health systems factors are organised around: organisation of health services; infrastructure; finances; equipment, drugs, commodities and materials; human resources; capacity-building and training; and clinical care. Client and community factors emerged largely as health-seeking behaviours and community engagement through advocacy and awareness.

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**FIGURE 26: ORGANISATION OF THEMES EMERGING FROM THE KEY INFORMANT INTERVIEWS**



To identify opportunities and gaps in KMC implementation within the context of an integrated scale-up of newborn care in Nigeria, the report on KMC perspectives is approached from the perspective of what is needed for scale-up. The premise is that KMC is not a stand-alone intervention but rather an integral part of the care of small and sick newborns. Most of the recommendations for the practice of KMC and the provision of KMC services could also be applied to the care of small and sick newborns.

Although there are references to achievements and activities done well, the main focus in this section is on challenges for which solutions have to be found: “See where the gaps are ... It boils down to health facilities [needing] to identify gaps in order of preference” (SW PA). However, there was also a sense among many of the key informants that one should build on what was being done well, using existing windows of opportunity and “sustaining the tempo” (Nat DP). “My advice is for people to take whatever we are doing well that will improve health and that we should also keep doing whatever we are doing well” (SS SMOH).

#### 3.10.2 Broader contextual issues perceived to affect the care of small newborns

The broader contextual issues that indirectly affect the care of small newborns and the scale-up of new interventions are organised around six main themes: political space; economics, security, and political climate; political will and ownership; infrastructure; and the functioning of development partners.

##### 3.10.2.1 Political space

Two national participants referred to the diversity of the country and the decentralised administrative system: “Scale-up is still difficult especially in Nigeria where you have three countries in one country” (Nat DP), and “We cannot legislate for the state” (Nat FMOH).

Development partners also referred to their relationship with the federal and state governments: “We give feedbacks but we will not take decisions for the government” (SW DP). The geopolitical situation was seen as posing additional challenges for implementing interventions at grassroots level: “How does the intervention get [started] at the LGA and wards- It is a big country with big dreams and big money” (Nat DP).

### 3.10.2.2 Economics and security

Sufficient funding was seen as needed for introducing new interventions and for scaling up programmes: “financing to execute plans” (NW SMOH). The “de-privatisation of healthcare at national and state levels” was also considered a burden on the state coffers (Nat DP).

The current economic hardships were perceived to be accompanied by insecurity and a volatile political climate in some states:

- “Insecurity is a very big problem. It is affecting everything, including productivity ... [and] is creating hunger and poverty in the land and is worsening health outcomes,” (SS DP)
- “The political climate has really affected the work in NC state. We hope now that the political climate is settling down we will be able to do more.” (NC DP)

Economic conditions were also seen as affecting governments’ ability to provide free services for pregnant women and children under five: “I must confess, it is the plan and wish of government to provide 100 per cent of the services free, but you know what is happening, the dwindling economy, not only for the state but also for the federal government” (NW SMOH).

Sufficient funding was also seen in many hospitals as affecting staffing:

“The recession has hindered our ability to recruit and maintain the requisite number of people to work in our facilities. The federal allocation has dropped. The government now relies on IGR to make up its liabilities. We are now looking for volunteer nurses who work in the clinics nearest to them free of charge.” (SS SMOH)

### 3.10.2.3 Broader infrastructure

Broader infrastructure issues were mentioned by a majority of key informants as affecting the ability of facilities to properly provide care for small newborns. The issues raised were largely associated with roads, access to power and water, and seasonal challenges. One professional informant suggested, “Each neonatal unit should have a stand-by generator that is dedicated to it” (SE PA).

Poor access affects the health outcomes of pregnant women and newborns. A participant in one of the hard-hit states commented on what would be needed to have sufficient access and enable proper referrals when appropriate: “...every community should have a functional health facility. ... Access to good roads to encourage people to and from the health facilities. This will make referrals work.” (SE PA)

### 3.10.2.4 Political will and ownership

The willingness of governments at different levels to take ownership of the need to assure adequate newborn care is provided were cited as important factors. There were both positive and negative perspectives on the role of government. Some key informants noted that government commitment to supporting the care of newborns enabled the implementation of “good government policies ... on a continuous basis” (SS SMOH). “We have been able to engage the governor of our

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state on a new ... sponsored programme [with a policy] which states that the state government has to contribute a certain percentage of project funds to ensure sustainability. And the governor has pledged his support” (NC DP).

There were, however, also many comments on the lack of political will or the inability of state governments to take the initiative in strengthening the health system in general and newborn care specifically, prompting one development partner to comment: “Like any other thing in the country, the health system is a disaster” (Nat DP). Although “government’s role is important” (NE SMOH), participants mentioned the challenges of “resources and commitments from government and support from partners” (Nat DP), “poor management as a whole” (Nat DP), and “poor healthcare administration” (Nat DP).

Participants commented that national ownership was needed to obtain sufficient information on the bigger picture for planning. But state and local level governments were also seen as important for budget allocations: “Ownership at the state” level (Nat DP) entails “government commitment” (SW DP), which is visible in budget priorities and policy implementation. A development partner was of the view that “the state government can say, this is good for my state and therefore put a budget to it” (Nat DP).

Some SMOH informants referred to supportive political will (NE SMOH) and a committed government, “but if you do not have the resources, what do you do?” (NW SMOH). Development partners were more critical of the government’s role in financing projects and fulfilling its agreements: “Because once there is no political will, everything collapses ... The state is therefore donor driven. And we want the state to drive their programmes” (SS DP).

Two SMOH informants (SS, SW) referred to other achievements in implementing government policies that could affect the care of small newborns, such as focussed antenatal care (ANC), mobile clinics, free ANC and delivery services, and compulsory health insurance. There were also some negative perceptions of state governments:

- “Government must have a change of attitude because when workers are not paid salary, how do they perform? There also a need for government to improve its services at home and stop medical tourism.” (SS DP).
- “Government should listen to stakeholders [health workers] and follow their recommendation. They are the foot soldiers.” (SW PA).

Ownership at national or state level could also be interpreted in terms of policies and strategies prioritising maternal and newborn care and national and state governments being “loud champions for newborn health” (Nat FMOH). This includes “government to supply lifesaving commodities, especially newborn commodities” (Nat DP); “what they need to work with, they should be provided” (SW PA); and “local and state governments should be more committed to ensure that every pregnant woman and baby should have access to primary healthcare or facility delivery rather than TBAs” (SW DP).

One development partner made the following recommendation:

I think the state has to take up the challenge with respect to the newborn to see it as a burning issue, to see it as something that needs to be addressed. And you know, when you say maternal death no one wants his mother or wife to die, so the newborn should also be seen in the same light. The newborn shouldn’t die. If there can be a change of orientation concerning this ... then they will be able to support all the newborn services in the state. And even after we [development partner] have left the state, newborn services will be on the front burner. (NC DP)

There were also perceptions that paediatrics was not a priority for policymakers at various levels and that a change of attitude was needed:

- “Anything paediatrics, you don’t get until you push for it ... Our policymakers, whether doctors or non-doctors, if it is child health, you, the advocate, really have to be at the forefront for them to do something for you. They should realise that there is a problem with newborn care. They should therefore channel resources to newborn care.” (NC PA)
- “The majority of deaths occur at home, especially in the northern part, and Nigeria has refused to accept that reality. There are not enough paediatricians and paediatric nurses to cover the 42 tertiary institutions that we have, not to talk of general hospitals, 20,000 PHCs, or 65 per cent of women delivering at home.” (Nat DP)

There were a few references to ownership at hospital level — the “political will of managers” (SW PA). This includes the judicious use of the small budget allocations received and putting certain measures in place at facility level, such as “coming to work early” to render service (SW PA). With regard to small newborn care (and KMC):

“All that is needed is the commitment to do it. If it becomes a hospital policy, it will be better. The policymaker should be made to understand that it is a win-win situation for him, as early discharge increases turnover while reducing cost of care for the family.” (SS PA)

An important recommendation was to get governments on board through advocacy by individual government officials, implementing partners and professional associations:

- “We need to do more on the trumpet.” (SW SMOH)
- “All our efforts should be directed at the government to provide the human resource and equipments needed for the baby to survive.” (SS DP)
- “We need to advocate that newborns in Nigeria are dying in big numbers.” (Nat PA).
- “The nurses association should go beyond members’ welfare and advocate for the newborn.” (Nat PA)

A perceived requirement for health professionals was to be visible in their advocacy and oversight roles and to also contribute to policymaking and the development of guidelines and protocols (NC PA).

### 3.10.2.5 Functioning of development partners

The two main challenges mentioned by key informants with regard to the role of development partners revolved around duplication of projects and the sustainability of donor-driven interventions or new programmes.

The problem of development projects “stepping on each other’s toes” leads to confusion and inefficiencies. The lack of a “coordinated response” (SW PA) to challenges of newborn care in general, including the care of small newborns, was highlighted by informants at the national level and across states: “IMNCH is doing this, HIV is doing this, Save the Children is doing this, Jhpiego is doing this ...” (NC PA). The poor distribution and mapping of projects and partners in Nigeria was mentioned as a challenge, with some states having an “excess of partners” all doing the same thing and other states lacking partners (Nat PA).

Informants recommended continued engagement of national and state governments with development partners to reduce fragmentation (SE SMOH) and avoid duplication of newborn care programmes (Nat PA, NC PA) and to provide better synergy and convergence.

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“I think all these opportunities can be harnessed ... but we need to integrate and coordinate the programmes and implementing partners and bring everything together. If we key into all these existing programmes, we can improve knowledge and newborn care services in a holistic manner.” (NC PA)

Reducing donor dependency is a second major challenge mentioned. One development partner summarised the main challenges around the involvement of development partners as “...sustainability, poor government involvement, and failure to replicate the models used by NGOs.” (NW DP). Another said, “Donor dependence does not help issues” (Nat DP).

The lack of political will, as mentioned above, was perceived as one of the reasons for the poor sustainability of newborn care programmes. Training tended to be donor driven without sufficient support from governments (NW DP):

- “Partners make sure that training is going on because we are all very much involved and from time to time, we have monthly meetings where identified gaps are discussed.” (SS DP)
- “Key stakeholders are not involved in the decision-making in matters concerning newborn care; everyone involved in care of the newborn should be recognised.” (Nat PA)

A further challenge was to get to solutions that go beyond pilot studies. As one informant said: “In this country, pilot studies hardly ever scale-up, which is a problem” (Nat DP). This informant suggested that “we should have a scale mentality as opposed to pilot mentality in programme implementation.” It was recommended that government sustain and expand programmes initially supported by development partners:

“The program for maternal and newborn health is restricted to 10 local governments only and the program is rounding off this year. We are hoping that the state government will be able to sustain the gains that have been made so far and let it serve as a model for expansion to other local governments ... So after the NGOs have finished their programme, the government can take over and ensure sustainability and replicate of the model used by the NGOs and [the] provision of integrated supportive technical supervision.” (NW DP)

Participants, furthermore, recommended the nurturing of partnerships, improved collaboration, and documenting burning issues and proposals. “Partnerships are vital; government cannot do it alone” (NE SMOH). “Support from development partners” (SE SMOH) is important, and “the professional associations are ready to make things work” (NC DP). However, “let the government always respect agreements [with partners]; you can advise, but you cannot enforce” (SS DP).

“There is a need for improvement in team work between government, communities and individuals” (SS DP). Better networking was one recommendation: “We really need to network with people both within and outside the country to invest into the health system. Some people are ready to donate equipment and other services for the care of newborns but nobody is reaching out to them” (SE PA).

A professional partner encouraged engagement with government: “We continue to complain to them.” He urged people to put issues to government in writing to have a record of communications: “Do not only talk: document” (SW PA). Professional associations were also urged to not “wait for government to do everything for us,” but “we need to be writing proposals to some organisations like TETFund [Tertiary Education Trust Fund] to seek their support.” (SE PA)

### 3.10.3 Other health system factors perceived to affect the care of small newborns

Achievements and challenges in the health system are situational and “it depends on where you are practising because this transcends ... levels” (Nat PA). One development partner, however, observed, that “we have not gotten actual service delivery right” (Nat DP). Many challenges and their solutions do not only pertain to the care of small newborns and KMC, but to newborn care in general.

Table 50 provides a heat-chart overview of the themes and subthemes and how many participants from the various stakeholder groups touched upon at least one aspect of a specific subtheme as a challenge. The lighter the colour, the fewer informants referred to a particular subtheme (orange) or informants from fewer states highlighted the issue (green). Subthemes highlighted most often by individual informants and across zones were the organisation of primary and secondary healthcare, space for newborn care and KMC, challenges with equipment and devices, and human resources needs.

**TABLE 50: OVERVIEW OF HEALTH SYSTEM CHALLENGES BY TYPE OF RESPONDENT**

THEME	SUB-THEME	INDIVIDUAL	ZONE	NATIONAL	SMOH	PROFESSIONAL ASSOCIATION	DEVELOPMENT PARTNER
<b>ORGANISATION OF HEALTH SERVICES</b>	Secondary and primary healthcare	7	5	1	2	3	2
	Referral	4	2	2	0	1	3
	Traditional birth attendants	1	1	0	0	0	1
<b>INFRASTRUCTURE</b>	Space for newborn care and KMC	7	4	2	2	2	2
	Culture of maintenance	3	3	0	0	2	1
<b>FINANCES</b>	Health insurance	2	0	2	0	1	1
	Funding for newborn care	6	4	0	2	1	2
	Resource allocation	2	1	1	0	1	1
<b>EQUIPMENT, DRUGS, COMMODITIES AND MATERIALS</b>	Equipment and devices	9	4	2	3	3	2
	Drugs and commodities	4	2	1	1	2	1
	Materials and kits	5	2	2	2	1	2

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**TABLE 50: OVERVIEW OF HEALTH SYSTEM CHALLENGES BY TYPE OF RESPONDENT**

THEME	SUB-THEME	INDIVIDUAL	ZONE	NATIONAL	SMOH	PROFESSIONAL ASSOCIATION	DEVELOPMENT PARTNER
<b>HUMAN RESOURCES</b>	Staffing needs	10	5	2	4	3	3
	Working environment affects quality of care	2	2	0	0	0	2
	Staff attitudes	5	3	0	2	2	1
	Staff morale	3	3	0	1	0	2
	Staff skills and knowledge	6	3	2	3	2	1
<b>CAPACITY-BUILDING AND TRAINING</b>	Need for capacity-building, training, re-training, and post-training supervision	5	4	0	3	1	1
	Quality of training	3	2	1	1	0	2
	Participants sent for training	3	2	0	1	1	1
	Training models	2	1	1	1	1	1
	Pre- and in-service training	2	0	2	0	1	1
<b>CLINICAL CARE</b>	Policies and guidelines	5	3	2	1	3	1
	Accountability for quality care	5	4	1	1	1	3

### *3.10.4 Client and community factors affecting the care of small newborns*

Although the views of community members and parents were not solicited as part of this study, people who work in healthcare face challenges from the community and with parents that can make their jobs difficult. The most common themes from key informants regarding around clients and communities were poor health-seeking behaviours of communities and the importance of community engagement. The overall recommendations relate to advocacy and awareness-raising and the development of appropriate community involvement strategies.

#### **3.10.4.1 Health-seeking behaviours**

Participants offered many factors for the poor health-seeking behaviour and awareness of communities, including religion, sociocultural beliefs, location, poor reputation of facilities, high cost of private sector care, and poverty. “The problem is ... the [poor] health-seeking attitudes of our people and the firmly held traditional beliefs by elders in the community” (SS DP). Informants also referred to poor adherence, which can affect the health outcomes of newborns. A key problem requiring reorientation of parents was babies taken from health facilities against medical advice (LAMA). Similar reorientation was noted as needed in order for KMC practices to continue following discharge from the hospital.

#### **3.10.4.2 The importance of engaging the community**

Informants agreed that getting the cooperation of communities is important, but was “at times very difficult” (SW SMOH). “Do not assume people know about it” (SW SMOH). There were, however, also reports of improvements in health-seeking attitudes as a result of community engagement: “It is a slow process but there is progress” (SS DP).

##### *3.10.4.2.1 Community advocacy, sensitisation, and awareness-raising*

Advocacy, sensitisation, and awareness were mentioned quite often, mostly as a general recommendation. Some participants considered it an achievement of newborn projects in some states (Nat DP, SS PA, NE SMOH). Others recommended “Increased sensitisation and advocacy to the public” (NC SMOH). One informant emphasised the value of awareness-raising to counter sociocultural beliefs: “There could be cultural issues, but [when] results are seen it will dissuade doubts” (Nat PA).

Informants suggested targeting important groups with “advocacy visits to religious leaders and traditional rulers so that they will be the link between the healthcare provider and the community” (Nat PA). In one state there was a strong recommendation not only for advocacy, but also involvement of community and religious leaders. Strong involvement of health workers in communities was also recommended (NE SMOH). Referring to parents, there was a call for “for all stakeholders to contribute” to prepare parents to be willing to stay in hospital if their baby is premature or sick, especially because the father has to give consent: “We need to enlighten the women on health-seeking behaviour when their child is sick” (SW PA).

##### *3.10.4.2.2 Targeted community engagement strategies*

Participants offered a number of suggestions for “coming up with a strategy that target[s] community intervention” (Nat DP). These strategies aim to change health-seeking attitudes and behaviour. Three important strategies mentioned were creating linkages between the health system and the community to ensure appropriate care and follow-up for small newborns, learning from strategies used in other programmes and initiatives, and harnessing existing initiatives to spread specific messages related to the care of small newborns and KMC. All these strategies imply the inclusion of some form of training, which was discussed above.

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Linkages between the health system and the community should “ensure preterm babies get to hospital and to ensure babies discharged from hospitals are okay in the community” (SS PA). One informant believed that preterm babies should be cared for in hospital and not discharged back to PHCs that are not equipped to fulfil that function: “I will not embark on training of PHC staff on KMC as the tool they need, the preterm baby, is not there” (SS PA). In addition to getting communities to use hospital services, further options were suggested:

- Identifying LBW babies born in the community (for referral to hospital):  
“We discharge babies back to the PHC or we do it the other way by sending out CHEWS to homes in the community to fish out the babies that are LBW. I believe the LBW babies we see in the hospital are not the only ones out there.” (SS PA)
- Discharging babies to PHC, combined with supervision and on-the-job training:  
“Kangaroo care is still in the pipeline ... we need to develop a strategy for its training and practice. The programme is for small babies and we need the small baby for practice. We may ask centres to discharge small babies on kangaroo care back to their PHCs and communities. We then carry out supervisory visits and follow-up to the PHCs and communities. We then have an opportunity to carry out on-the-job training of healthcare workers in the facility on KMC and create awareness in the community.” (SS PA)

Outreach from tertiary hospitals to secondary hospitals and from secondary hospitals to PHCs is another avenue to investigate, not only for spreading appropriate health messages, but also for helping with health workers’ skills development. One participant suggested the use of retired personnel, volunteers, and resources from implementing partners to establish this as a routine activity (SW PA). A member of a professional association viewed its members’ role as “[being] seen on the field, sharing our knowledge, stepping it down, monitoring, mentoring, supervising, and providing support” (NC PA).

Awareness can be advanced through lessons learned from other programmes. Examples cited included ANC at the community level where awareness of husbands and mothers-in-law was important for “not stopping pregnant women from attending ANC” (SS DP). Lessons could also be learned from awareness messaging in immunisation campaigns (SS DP). Another participant cited the respectful maternity care movement: “They train the workers on how to relate with clients in order not to scare them away” (NC SMOH). The Midwives Service Scheme (MSS), which was credited with reducing maternal mortality in some states, was also cited as a source of lessons learned (Nat FMOH).

Existing initiatives can be used to highlight the plight of small newborns and to promote KMC. Examples mentioned included the MNCH week twice per year (SS DP) and the Save One Million Lives programme (SE SMOH). The latter programme includes an advocacy plan to use jingles and radio call-in programmes and to involve “traditional rulers, religious leaders, and community development committee members; even the Mutual Health Association will be run by the community development committees” (NC SMOH).

### *3.10.5 What would be needed to increase coverage and scale-up of KMC*

Informants perceived the scale-up of KMC to be long overdue, “something we should [have] done long since” (Nat PA). Some informants, however, felt that “kangaroo care is coming on slowly” (SS PA). Many points pertained to implementing the practice of KMC, but additional issues (discussed below) encompass informants’ understanding of the status of KMC, challenges for implementation and scale-up, and recommendations for KMC scale-up. Similar to the findings of the

hospital visits, coverage of KMC appeared to be low and sustainability of services remains a challenge. Two informants offered the following perspectives:

- “The coverage could be very low because ... the [partner], after the training, intends to set up the [KMC] corners in about four hospitals in the state ... They are yet to be established. They are still planning.” (NC SMOH)
- “When I was working with the state specialist hospital, I taught them, they started, but I don’t know if they are still doing it ... Because the matron that was one of the champions of KMC there is retired. But I am not aware of any other place where they do KMC ...” (NC PA).

More detailed information on KMC scale-up from the key informant interviews is given below.

### 3.10.5.1 Informants’ perceptions and understanding of the status of KMC

All informants were supportive of KMC and the scale-up of services in the country, although a few whose experience had not included much exposure to the care of small newborns did not have a clear understanding of what the practice entailed:

“Now this KMC you are talking about. I am old school, what is it? ... You know most of the problems of the health facilities. No incubators, no light, broken down equipment. How can they practice it [KMC]? Who will provide it? (SS DP)

Professional informants were of the view that “KMC has come to stay” (Nat PA), because of its evidence base (Nat PA) – “we know that it is scientifically proven” (SW SMOH) as a cost-efficient “standard of care for every small baby” (Nat PA). The benefit of KMC for the prevention of hypothermia – one complication of prematurity – was highlighted, particularly given “poor power supply and economic meltdown” (Nat PA) and the scarcity of “functional incubators ... both in public and private facilities” (SW PA). Also:

“But for the preterm baby, especially when there is no power supply, that is when we the caregivers are taught this kangaroo thing, so that the baby will not have problem of warmth. They are taught to carry the baby on their chest so that the mother provides them with warmth rather than being left in the incubator to get cold.” (SS SMOH)

KMC was seen as having other beneficial outcomes related to feeding and preventing infection as well as alleviating some health system challenges:

- “We believe it is a cost-effective way of helping survive and thrive at both hospital and home.” (Nat PA)
- “Challenges with small babies include warmth, feeding, and infection ... and KMC [addresses] almost all of these problems.” (Nat PA)
- “We want a situation where the country can accept KMC, especially looking at the problems ... of poor electricity and human resources, equipment, and financing. KMC will reduce all these concerns.” (Nat PA)
- “KMC is a very important method of caring for our newborn babies keeping in mind our resources or lack of it and shortage of power and availability of premature babies.” (NC PA)

Informants conceded some progress in educating health workers about the benefits of KMC. The neonatology associations reported that more members were exposed to KMC at meetings and conferences and that they were involved in training:

- “If it is knowledge of members, I will say ... a range of 98 per cent to 100 per cent, because in almost all our meetings, KMC features. It is discussed, not in details, but it is usually mentioned.” (NC PA)

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- “We have our conference every year and KMC is part of the essential newborn care course and we make sure that our members are trained. We encourage our members to practice KMC at every level of care of the newborn. We also trained resident doctors for newborn care and so KMC is a must.” (SE PA)
- “KMC is a very stable method of caring for our newborn babies and therefore we do everything to promote it and encourage as many people that can do it to do it and even go the extra mile to train if need be on the use of it.” (NC PA)

Yet awareness of KMC and the professional will of their members were rated uneven: “It has always been a divided opinion” (SE PA). “Awareness is there, it is the support that I cannot guarantee” (SW PA).

- “For those I have interacted with on a personal level, and even among our leaders, the attitude is positive. But you know everyone cannot have the same attitude, so I will not be surprised if we have one or two that are not 100 per cent positive.” (NC PA)
- “I do not think that all members of [organisation] have imbibed the concept ... They still think it is a far-fetched idea ... We therefore still have a lot of work to do because it is not just a hospital-based thing. It is something that must be seeded in the community. If we have a few passionate champions, it will be better and I think there are.” (SS PA)
- “I will rate the awareness at 60 per cent. Our experienced and skilled nurses are not allowed to practice because the hospital insists that approval must come from the management.” (Nat PA)
- “I wouldn’t know [what the support of members is]. I can only say what I know of the University of Benin Teaching Hospital and here. I know the support is there. My matron here is very supportive. Even though we have challenges with some resources ... we are pulling through.” (NC PA)

Informants reported that awareness among healthcare workers in general is less common:

- “In a training two months ago a doctor that takes about 50 deliveries in a month said it was the first time he was hearing about KMC.” (Nat PA)
- “There are some doctors that do not even know what it is. I remember someone called me from [a private hospital] who wanted to refer a preterm baby to us. And I told him the baby should be transported in the kangaroo position. He said, ‘Okay, you mean head down position or what?’” (NC PA)

One informant had a limited understanding of the weight criteria of KMC: “For a baby weighing 1.5kg to 1.7kg and with no sign of distress or jaundice, KMC will help to keep the baby [warm] and help to save the baby’s life” (SW PA). Another potential misunderstanding was the perception that a mother needed a special kit and wrapper like the ones provided during the PRRINN initiative to practice KMC: “No KMC kit; people too poor to afford wrapper” (NW SMOH).

An SMOH official in one state estimated that there were still “more than 60 per cent of health workers that do not know about KMC” (SW). Two other informants estimated 60 per cent of health workers either not knowing about KMC or unwilling to embrace it (Nat PA, SE PA). It would, therefore, take a lot of effort to get all health workers and stakeholders to support KMC implementation and scale-up, especially with regard to sensitising the public and orientating or training health workers.

“A major challenge is the knowledge gap. It [KMC] is a new innovation. Most of the health workers are not even aware of it. Only few have had the training. And we are trying to do task shifting to the CHEWs [but] ... it was not even part of their curriculum. It takes time for them to learn and intensive trainings to enable them to come on board. So the major challenge is knowledge deficit”. (NC SMOH)

Because of the lack of advanced paediatric training or professional will, even facilities with KMC-trained staff did not always provide services. Informants pointed out, for example, that the heads of paediatric units were often not paediatric-trained nurses, and that these heads tended to resist change. They would cite poor patient-nurse ratios as a reason for not implementing KMC (Nat PA). Another reason for resistance to KMC was a preference for “the incubator, especially in the private sector” (SW SMOH). Paediatricians and other medical staff at tertiary level seemed to be particularly unmotivated to practice KMC or considered it a practice for resource-limited settings.

- “Some will say, ‘Why not get incubators and stand-by generators and give incubator care to preterms in tertiary institutions?’” (SE PA)
- “KMC can be found useful in resource-limited settings. All we need to do is to educate them [doctors] ... in case they found themselves in a setting where there is no incubator and the baby is eating well and stable. Especially those in the rural areas where the facility is not available, there is nothing they really need except to remind themselves and propagate KMC.” (SW PA)

Having functioning incubators at the tertiary level was seen as an achievement. There was little appreciation for integrating KMC into newborn care reported at that level. KMC was seen as a back-up when the power supply was erratic and incubators were not functioning, or when parents had financial constraints (SE PA). KMC was a last resort, “[in] ... tertiary-level facilities” (NW DP). One informant also referred to “cheap cost-effective devices to help the less privileged, e.g., wearable incubators” (Nat DP), a function that skin-to-skin care should fulfil.

### 3.10.5.2 Challenges for the implementation and scale-up of KMC

Some of the contextual challenges for the care of small newborns were mentioned specifically in relation to KMC, especially political will and ownership and the functioning of development partners.

Informants from different states had different opinions on the political will of their governments for implementing KMC, ranging from “the government has the will and readiness” (SW SMOH) to “the political will is not there” (NW SMOH). Or, “KMC is a good thing ... it will improve newborn health. That is why the state ministry of health is in full support of it” (SE SMOH).

There appeared to be a few individual facilities that managed to practise KMC without having specific directives from their state or supervised by a development partner: “And even before the advent of ... [partner], in this centre we have been practicing KMC” (NC PA).

In some states there was no engagement of governments in KMC until the arrival of other implementing partners from the development community and professional associations.

- “Kangaroo mother care is something that is coming new to us. It is actually the ... programme that is piloting it for now. It is captured in our plan.” (SE SMOH)
- “There was no engagement at all until ... [partner] brought it up. They have trained some of our staff and they also intend to establish KMC corners at the selected facilities. The state government is proposing to cascade the training to other facilities.” (NC SMOH)

NiSONM, for example, has zonal coordinators working with central executives to plan, implement, and create structures to coordinate KMC scale-up (Nat PA). NiSOMN members were also involved drafting a SOP for KMC.

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It is clear that governments need the cooperation of donors and implementing partners to scale-up KMC. Even where partners were involved, it was mostly only in specific healthcare facilities: “These things that are donated are not to all health facilities” (SE SMOH). In other states there appeared to be less coordination between the different stakeholders for implementing KMC: “We don’t know the level of information transfer, because if there is a free flow of information, I think the partners will be ready to assist and partner in the implementation of KMC.” (SS DP)

### 3.10.5.3 Recommendations for KMC scale-up — “We should have a human face to it”

Scaling up KMC is not an easy process. One of the problems is a lack of sufficient understanding of what is needed.<sup>12,40</sup> It is often assumed that if health workers have been trained they will implement KMC, but training alone is not sufficient. Implementers “should also understand the clientele (mother) and what should be expected of her” (SS PA).

An informant from another state suggested using the National Immunization Programme (NIP) as analogy:

“If we let KMC [stay] at the level of the tertiary hospital, we will not attain high coverage. If we don’t reach the unreached, we will not attain high coverage. We should borrow a leaf from what we did to achieve high coverage with... NIP. We need fixed posts, campaigns, and outreach to attain high coverage. Let the tertiary hospitals and large secondary facilities serve as centres of excellence analogous to the fixed immunization posts, while the CHEWs act as mobile posts reaching out to communities for community-based newborn care, including KMC. Campaigns will then serve as the third arm of the strategy. We will similarly not achieve high coverage by training alone. On-the-job training and mentoring, whether on-site or off-site will be better. For wide coverage, we should have a minimum of one fixed post [focal person] per senatorial zone per state. This will help in snowballing KMC.” (SS PA)

There were also informants who were of the view that “KMC is one of things not necessarily waiting for policy” (SW SMOH) and that “we should not wait for appropriate binders; start with the mother’s wrapper” (Nat PA). One informant was very vocal: “Do not make excuses for not doing KMC; we try to work with what we have” (SE PA).

Other informants mentioned further prerequisites for KMC scale-up. Table 51 provides a heat chart overview of the themes and subthemes and how many participants from the various stakeholder groups provided suggestions about strategies. The lighter the colour the fewer informants referred to a particular point (orange) or informants from fewer states highlighted the issue (green). Strategies related to advocacy and awareness, training of staff and the provision of materials were mentioned most. They were followed by the following: enlisting commitment from government and partners; a budget line for KMC; campaigns and outreaches; using existing projects and programmes to promote KMC; counselling mothers to improve acceptance of the practice; having a well-motivated and informed community; and drafting or activating policies and guidelines for clinical care. (See Table 52 for details of strategies recommended by key informants.)

**TABLE 51: OVERVIEW OF KEY INFORMANTS' PERSPECTIVES ON PREREQUISITES FOR KMC SCALE-UP**

THEME	SUB-THEME	INDIVIDUAL	ZONE	NATIONAL	SMOH	PROFESSIONAL ASSOCIATION	DEVELOPMENT PARTNER
<b>COMMITMENT</b>	Government and partners	3	2	1	2	1	0
	Champions	2	0	2	0	1	1
<b>HEALTH SYSTEMS</b>	Coverage across all levels of the health system	2	2	0	1	1	0
	Good facilities	2	2	0	1	1	0
	Good governance	1	1	0	1	0	0
<b>PROPER FUNDING</b>	Budget line for KMC	3	2	1	2	0	1
	Funding for training	1	1	0	1	0	0
<b>STAFFING</b>	Well-trained staff	6	4	1	3	2	1
	Fixed posts	1	1	0	1	0	0
	Task shifting	1	1	0	1	0	0
	Team work	1	0	1	0	1	0
<b>ADVOCACY AND AWARENESS</b>	General	8	5	1	4	4	0
	Advocacy to FMOH and SMOHs	1	1	0	0	0	1
	Local name for KMC	2	1	0	1	0	1
	Campaigns and outreaches	3	2	1	0	3	0
	Use of media	2	1	1	0	2	0
	Sharing success stories	2	2	0	1	1	0
	Using prominent community leaders	1	0	1	0	1	0
	Demonstrations	1	1	0	1	0	0

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**TABLE 51: OVERVIEW OF KEY INFORMANTS’ PERSPECTIVES ON PREREQUISITES FOR KMC SCALE-UP**

THEME	SUB-THEME	INDIVIDUAL	ZONE	NATIONAL	SMOH	PROFESSIONAL ASSOCIATION	DEVELOPMENT PARTNER
<b>EXISTING PLATFORMS</b>	Regular events	2	1	1	0	1	1
	Projects and programmes	4	3	1	2	2	0
<b>MATERIALS</b>	General	6	4	0	4	1	1
	KMC kits	2	2	0	1	0	0
	Posters	2	1	1	1	1	0
<b>MOTHERS</b>	Counselling	3	2	1	0	3	0
	Enabling environment	2	1	1	1	0	1
<b>COMMUNITY</b>	Well-motivated and informed community	3	2	1	2	1	0
<b>CLINICAL CARE</b>	Policy	4	4	0	3	1	0
	Guidelines	3	2	1	1	2	0
	Collection and use of KMC data	2	2	0	1	1	0

TABLE 52: PREREQUISITES AND SUGGESTED STRATEGIES FOR KMC SCALE-UP

THEME	SUB-THEME	PREREQUISITES AND STRATEGIES
“COMMITMENT”	Government and partners	<ul style="list-style-type: none"> <li>• “Policymakers should be involved.”</li> <li>• “Involvement of partners”</li> <li>• “Government has will and readiness.”</li> </ul>
	Champions	<ul style="list-style-type: none"> <li>• “Incentives should be given for KMC champions in form of awards/certificates (not monetary). We should engage healthcare workers at tertiary levels ...”</li> <li>• “We are champions of KMC. For us KMC is number 1 on our list. The care of preterm babies is paramount to us.”</li> <li>• “We need people who are advocates and champions and passionate on what they are doing ... we need to be persistent.”</li> <li>• “In Ibadan and UCH they had a T-shirt that has KMC. Dr X is passionate about it and is promoting KMC.”</li> </ul>
HEALTH SYSTEMS	Coverage across all levels of the health system	<ul style="list-style-type: none"> <li>• “From there, now that the National Primary Health Care Development Agency is talking about having primary health centres under one roof, [our] state has keyed into it. Our bill has been passed, we have screened our health workers, the primary health centres, executive secretaries and Board fully established.”</li> <li>• “Good facilities”</li> <li>• “Let the tertiary hospitals and large secondary facilities serve as centres of excellence ...”</li> <li>• “Good governance”</li> </ul>
“PROPER FUNDING”	“Budget line for KMC”	<ul style="list-style-type: none"> <li>• “No specific budget allocation for KMC. ENCC has KMC as part of it and has also been budgeted for.”</li> <li>• “We have to convince the government that this is good for newborns and child health budget line be used to support KMC.”</li> </ul>
	Funding for training	<ul style="list-style-type: none"> <li>• “Provision of funds for training and re-training.”</li> </ul>

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**TABLE 52: PREREQUISITES AND SUGGESTED STRATEGIES FOR KMC SCALE-UP**

THEME	SUB-THEME	PREREQUISITES AND STRATEGIES
STAFFING	Increase “Well-trained staff”	<ul style="list-style-type: none"> <li>• “Most midwives in PHC are trained ...At both primary and secondary level nurses are aware of KMC.”</li> <li>• “There are still staff that need to be trained.”</li> <li>• “Those of us that are old midwives didn’t hear about it or go through it then. It is only when you have the opportunity to have training on it that you know that such thing happens.”</li> <li>• “We will ... not achieve high coverage by training alone. On-the-job-training and mentoring whether on-site or off-site will be better.”</li> <li>• “Step-down training to PHCs and communities”</li> <li>• Pre-service training: “As we are capturing the tutors, we give them mannequins, so that by the time they graduate as nurse or CHEW they all know about KMC and implementation will be easier.”</li> <li>• Practical training: “We also had [training] in SW in 2010 ... for 5 days. We had practical sessions; we used our ward for practicals; our matron was in attendance and since then our unit has been doing KMC.”</li> </ul>
	“Fixed posts”	<ul style="list-style-type: none"> <li>• “The CHEWs act as mobile posts reaching out to communities for community-based newborn care, including KMC ... For wide coverage, we should have a minimum of one [focal person] per senatorial zone per state. This will help in snowballing KMC.”</li> </ul>
	Task shifting	<ul style="list-style-type: none"> <li>• “We have a lot of CHEWs. They outnumber the nurses. So we need a task-shifting policy.”</li> </ul>
	Team work	<ul style="list-style-type: none"> <li>• “Team approach at KMC is very vital.”</li> </ul>

### 3.11 Study limitations

#### 3.11.1 Limitations of landscape survey

The landscape survey was based on self-report by state health officers and secondary and tertiary public hospitals. In self-reports, some KMC-related practices tend to be over-reported while others are under-reported (Table 53). Although the consultants checked all questionnaires for internal consistency and completion and conducted spot-checks of the data, the data were not verified.

**TABLE 53: POSSIBLE REASONS FOR OVER- OR UNDER-REPORTING KMC PROVISION**

POSSIBLE REASONS	RESPONSES SUPPORTING POSSIBLE OVER-REPORTING
<b>Conflation of having KMC-trained staff with providing KMC services</b>	<ul style="list-style-type: none"> <li>• “Someone was trained on KMC before the strike and [it] will be commenced as soon as the strike is called off.” (NC)</li> <li>• “The staff has been trained and facility ready to implement it but no preterm or low birth weight baby for now.” (SE).</li> </ul>
<b>Conflation of skin-to-skin care for all babies after birth with KMC</b>	<ul style="list-style-type: none"> <li>• “Skin-to-skin care is initiated to babies from caesarean section. It has not been adopted as a policy but the MD [medical director] practices skin-to-skin.” (NC)</li> </ul>
<b>Interpreting counselling on KMC as provision of KMC</b>	<ul style="list-style-type: none"> <li>• “We do teach the mother of the baby [of] less than 2kg [how to do] ... KMC.” (NW)</li> <li>• “They only give advice on kangaroo mother care.” (NW).</li> </ul>
	RESPONSES SUPPORTING POSSIBLE UNDER-REPORTING
<b>Few babies seem to qualify or are offered KMC</b>	<ul style="list-style-type: none"> <li>• “They do [KMC] but since [the informant] came he has not had a baby requiring it.” (NW)</li> <li>• “They just opened the SCBU in January but no patient yet [August].” (SW)</li> </ul>
<b>Facilities could accommodate more stable babies in KMC, but instead refer to higher level of care</b>	<ul style="list-style-type: none"> <li>• “Kangaroo mother care is provided when necessary but they always refer to higher centre.” (NW)</li> <li>• “Newborn provided only if parent cannot afford to go to FMC [name of institution].” (NW)</li> <li>• “They refer all babies less than 2kg to a nearby specialist hospital.” (NC)</li> </ul>

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Other limitations of this survey include the following:

- The survey did not enquire about the nature and procedures of certain practices related to KMC, for example, whether KMC was practised continuously or intermittently. This may contribute to the over-reporting or under-reporting of actual KMC provision.
- Respondents with different designations and length of employment at a particular facility participated the survey. Some, especially those who had recently joined a facility, were not familiar with the history of KMC services in their facilities and could not provide information on all aspects of newborn care. The survey therefore may have missed capturing information about a facility.
- The question on follow-up processes reported where the follow-up took place, but not the number of babies who were actually brought back to the facility for follow-up.
- Twenty-nine hospitals reported starting KMC services in 2016 and may have had no or very few babies in KMC by the time of the survey, limiting information on actual service provision.
- In addition, the functionality of equipment such as incubators or radiant warmers was not probed. Thus, the availability of equipment may over-estimate actual use of the equipment.
- The nomenclature used for secondary facilities (e.g., general, rural, central, zonal, and cottage hospitals) was not uniform, limiting our ability to summarize data by facility level. Only cottage hospitals formed a substantial group that were reported as a distinct type of facility.

### *3.11.2 Limitations of hospital assessment and key informant interviews*

As with the first phase, the second phase of the assessment is subject to several limitations, including that it was not meant to be a comprehensive survey of all experiences. The focus was rather on states known to have had some kind of newborn intervention previously or that were currently involved in an initiative. Other states with known prior experience could have been included; however, time and resource constraints required the investigators to use the sampling strategy described earlier. In any case, the intention was not to generalise the findings to all hospitals in Nigeria, but to identify aspects of small newborn care and KMC that may need more attention in future planning and implementation activities.

- Care practices vary from day to day: this report only gives a picture of what was observed on the day of each hospital visit.
- The assessment teams visited all the hospitals in the sample, but because of time constraints or the unavailability of informants, not all components of the assessment tool were covered in each hospital.
- There were also gaps in documentation for specific tool components for hospitals in some states, which accounts for missing data in many of the tables.
- Some of the responses depended on the self-report of the informants, and the teams were not able to verify all the practices described.
- The assessment gathered data through interviews of healthcare providers and hospital visits but did not solicit the views and perceptions of healthcare users or the community.
- In a number of instances, required information could not be collected, for example, because of industrial action (strikes), political unrest, and the unavailability of staff or records.

- In two states a large number of items were only completed for the federal medical centre, with no information available for the remaining 10 secondary hospitals, mostly because the facilities were low-functioning or there were no informants who could provide the necessary information.
- In some states communicating with the right officials in the SMOH to set up the visits posed a challenge.
- There were also logistical challenges such as long distances to and between selected hospitals.

## 4. CONCLUSION

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THIS ASSESSMENT PROVIDED a sense of the important issues of small newborn care and KMC that may need strengthening in Nigeria. It produced a snapshot of care practices for small newborns, including the practice of KMC, in public secondary and tertiary hospitals and elicited the views and recommendations of a variety of stakeholders on the state of the care of small newborns in Nigeria.

The findings from the in-depth assessment correspond with the results of the bottleneck analysis on newborn care reported in the NiENAP.<sup>14</sup> The analysis indicated that newborn care was inadequate. For KMC, the bottleneck analysis identified health workforce, medical products, and information systems as needing major improvements, with some improvement needed in leadership and governance, health financing, health service delivery, and com

The current study found evidence of the inadequate coverage and quality of small newborn care and KMC. There was poor provision for the care of small and sick newborns outside of the tertiary hospitals, even if some secondary hospitals had the necessary equipment. There was also tremendous variation in the level and quality of newborn care provided in secondary hospitals.

The findings suggest that very little KMC is practised in Nigeria and that where services are available, the practice is erratic and the uptake of facility-based care in the public sector is low. Health workers have very limited knowledge of KMC, although there are concerted efforts to expand KMC awareness and skills. Most hospitals only introduced KMC after 2012. Virtually no continuous KMC takes place even in facilities that have sufficient space or that could adapt available space. Furthermore, there are few guidelines for proper practice and record-keeping is poor. Lip service without proper implementation is not conducive to achieve the anticipated health outcome effect of KMC in terms of preterm morbidity and mortality. It is hypothesised that that the same shortfalls will be found in the private sector.

## 5. RECOMMENDATIONS

THE HOSPITAL SURVEY, site visits, and in-depth informant interviews revealed that many features and practices of public hospitals could be modified to improve the care of small newborns and promote KMC. Specific recommendations are enumerated in Table 54 below. However, the essence of the recommendations from this assessment was also captured in the NiENAP document:

“In addition to elements of essential care for every baby, support for temperature maintenance, ideally through KMC, is necessary. Extra support for feeding is required, especially the use of expressed breastmilk administered through cup/modified cup or gavage feeding. Besides care in the maternity (postnatal) wards for the larger preterm babies, special care units in secondary hospitals should provide care for the smaller and more immature babies. Intensive care is required in the larger tertiary hospitals.”<sup>14</sup>

To identify opportunities and gaps in KMC implementation within the context of an integrated scale-up of newborn care in Nigeria, the premise is that KMC is not a stand-alone intervention but rather an integral part of the care of small and sick newborns. Most of the recommendations for the practice of KMC and the provision of KMC services could also be applied to the care of small and sick newborns.

The foundation of all the recommendations is to give small and sick newborn care “a human face.” This study was about the status of care for small newborns in the public healthcare sector. It is imperative to also consider current systems and practice in the private sector and how to create partnerships that will ensure that referrals are timely and that the “human face” takes precedence over financial matters and profit.

### 5.1 Operationalizing the Nigeria Every Newborn Action Plan

Many of the key recommendations relate to health systems strengthening and entail operationalizing the principles of the NiENAP, with specific reference to the care of small and sick newborns. The rest of this section should also be read in conjunction with the 10 key areas of the Nigerian health system,<sup>14</sup> based on the National Health Policy, 2016-2021.<sup>19</sup> The challenge is to ensure other forms of health systems strengthening that should accompany capacity-building of human resources for health. An overarching principle would be to avoid implementing any of the recommendations in a vertical fashion, but at the same time ensure that the needs of the small newborn and the need for providing KMC are sufficiently highlighted so that they do not move to the back burner in integration efforts. A “pedestal approach”<sup>14</sup> could be considered, elevating the priority of small newborns and KMC for a few years of special attention (including budgetary allocations), while gradually ensuring that all practices are integrated into the general essential newborn care programme and beyond on the reproductive, maternal, newborn, child, and adolescent health and nutrition (RMNCAH+N) continuum.

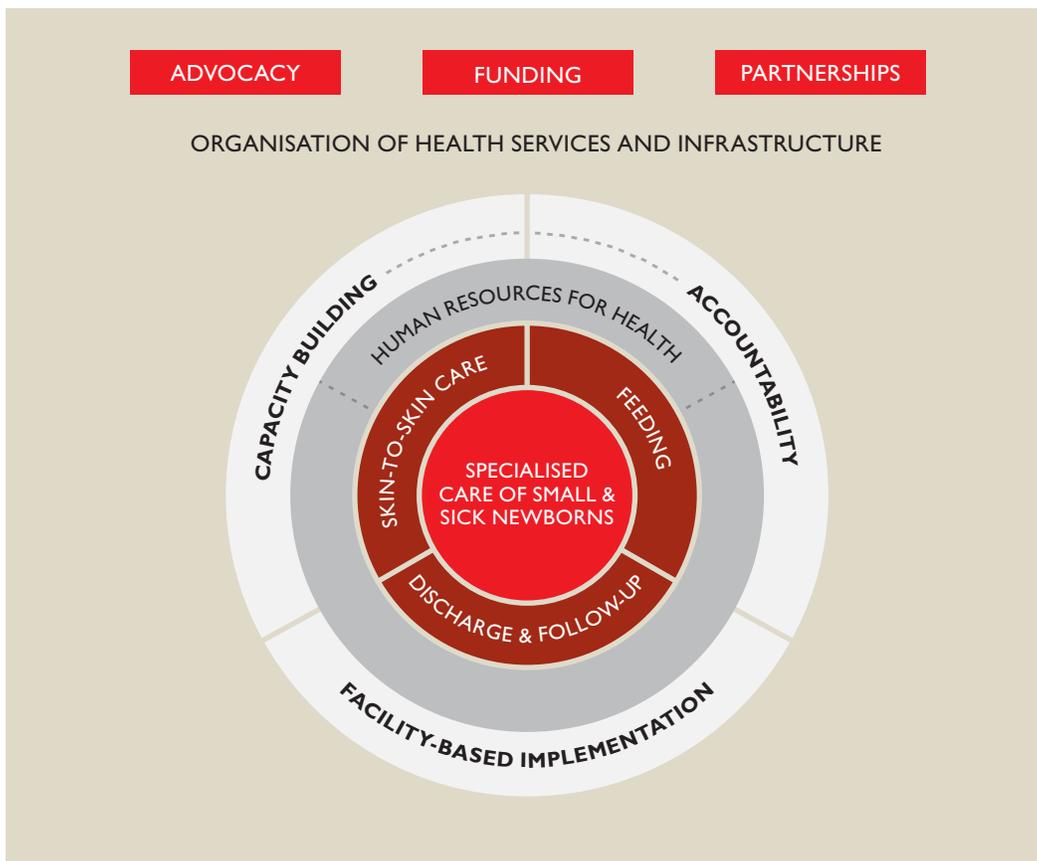
Other guiding principles<sup>14</sup> also feature in the study findings. Leadership at different levels was captured by phrases such as “political will” and “champions.” Accountability was touched upon in relation to political will, funding, donor dependency, human resources, clinical care, and the monitoring of small newborn morbidity and mortality. Equity was mentioned specifically in relation to infrastructure and access to health facilities, as well as incentives for staff deployed to rural areas. Every newborn’s “right to life and survival and the highest quality of survival and development”<sup>14</sup> was captured well by one informant who said, “The majority of deaths occur at home ... and Nigeria has refused to accept that reality.” Many of the recommendations by study participants would require innovation and research. KMC is, for example, an

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evidence-based innovation that study participants estimated that 40 per cent to 60 per cent of health workers were still not familiar with, did not believe in its benefits, or resisted implementing it. Professional organisations also play a role in promoting the cause of the small newborn and KMC, informants said, inter alia by applying for research funds.

Figure 27 provides a conceptualisation of the areas on which the suggested recommendations focus. The main focuses and areas covered by the recommendations are summarised in Table 54.

**FIGURE 27: CONCEPTUALISATION OF THE AREAS OF RECOMMENDATIONS**



**TABLE 54: KEY RECOMMENDATIONS FOR CONSIDERATION**

<b>Giving the care of small and sick newborns “a human face”</b> <b>People-centred passion, persistence, and perseverance for progress</b>	
FOCUS	RECOMMENDATION
<b>NURTURING PARTNERSHIPS</b>	<p><b>Sustainability</b></p> <ul style="list-style-type: none"> <li>• Nurture collaboration by:               <ul style="list-style-type: none"> <li>› Honouring agreements between partners and government</li> <li>› Documenting burning issues and proposals</li> </ul> </li> <li>• Ensure comprehensive engagement of policymakers and implementing partners</li> <li>• SMOHs are encouraged to:               <ul style="list-style-type: none"> <li>› Become less donor dependent</li> <li>› Demonstrate more commitment to the care of small and sick newborns</li> <li>› Continue with and expand effective programmes introduced by partners</li> </ul> </li> </ul>
	<p><b>Convergence of energies of development partners</b></p> <ul style="list-style-type: none"> <li>• Improve communication between development partners and FMOH/SMOH</li> <li>• Create or use existing federal and/or state structures to:               <ul style="list-style-type: none"> <li>› Improve coherence between different partner activities</li> <li>› Avoid duplication and fragmentation</li> </ul> </li> <li>• Ensure a more equitable distribution of donor and development inputs across states</li> </ul>
<b>AWARENESS AND ADVOCACY</b>	<p><b>Think big, wide and “out of the box”</b></p> <ul style="list-style-type: none"> <li>• Plan wide for awareness and advocacy — “reach everywhere in Nigeria.”</li> <li>• Engage with implementing partners to spread the message</li> <li>• Develop awareness campaigns for the management of small and sick newborn care at both tertiary and secondary hospitals to increase care-seeking.</li> <li>• Learn from other projects and campaigns on how to achieve better coverage of small and sick newborn care and KMC.</li> </ul>
<b>FUNDING</b>	<p><b>Raising and mobilising funds</b></p> <ul style="list-style-type: none"> <li>• Advocate with key national and state-level stakeholders for including sufficient funds in national, state, and health facility budgets.</li> <li>• Use the National Health Act to create a budget line for newborn care in the country from the 1% compulsory contribution for primary healthcare. This budget line should include care for small and sick newborns and KMC.</li> <li>• Mobilise or allocate state funds to support newborn care, including care for small and sick newborns.</li> <li>• Find ways to enable the maintenance and replacement of equipment at state, LGA, and facility level.</li> </ul>

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## 5. RECOMMENDATIONS

**TABLE 54: KEY RECOMMENDATIONS FOR CONSIDERATION**

<b>Giving the care of small and sick newborns “a human face”</b> <b>People-centred passion, persistence, and perseverance for progress</b>	
FOCUS	RECOMMENDATION
<b>ORGANISATION OF HEALTH SERVICES AND INFRASTRUCTURE</b>	<p><b>Tertiary health facilities</b></p> <ul style="list-style-type: none"> <li>• Ensure that all tertiary health facilities provide quality services for small and sick newborns and include KMC services.</li> </ul>
	<p><b>Secondary and primary health facilities</b></p> <ul style="list-style-type: none"> <li>• Define the minimum requirements (norms and standards) with regard to small and sick newborn care for each type of secondary facility.</li> <li>• Upgrade and strengthen the capacity of secondary hospitals to admit and provide care for preterm and LBW newborns, e.g., by establishing SCBUs at selected secondary facilities:               <ul style="list-style-type: none"> <li>› <i>Ensure equitable geographic spread (e.g., start out with one secondary facility per senatorial zone)</i></li> <li>› <i>Ensure stable financial and other support needed to establish and maintain the necessary infrastructure of these units</i></li> <li>› <i>Create newborn areas/cubicles in maternity units where there are no buildings that can be converted into newborn units</i></li> </ul> </li> <li>• Review current evidence to establish whether there is still a need to separate inborns and outborns and consider reorganising newborn services to be more efficient</li> </ul>
	<p><b>Centres of excellence</b></p> <ul style="list-style-type: none"> <li>• Invest in well-performing facilities and establish them as centres of excellence in neonatology and KMC to serve as benchmarks for other facilities and to provide training in the care of small and sick newborns and KMC.</li> <li>• Target tertiary- and secondary-level hospitals as COEs to ensure benchmarking at the appropriate level.</li> <li>• In the roll out of the COE programme, give careful consideration to the following:               <ul style="list-style-type: none"> <li>› <i>Geographic distribution of these centres to be as equitable as possible (e.g., start with one tertiary and one secondary facility per geopolitical zone)</i></li> <li>› <i>Necessary financial support needed to maintain high-quality services</i></li> </ul> </li> </ul>

**TABLE 54: KEY RECOMMENDATIONS FOR CONSIDERATION**

<b>Giving the care of small and sick newborns “a human face”</b> <b>People-centred passion, persistence, and perseverance for progress</b>	
FOCUS	RECOMMENDATION
<b>HUMAN RESOURCES FOR HEALTH</b>	<p><b>Investment in human resources</b></p> <ul style="list-style-type: none"> <li>• Consider nominating focal persons at federal, state, LGA, and facility level to accelerate the establishment of a comprehensive agenda for small and sick newborns and KMC and to move it forward.</li> <li>• Find long-term solutions for the acute human resource shortages and the equitable distribution of available staff.</li> <li>• Identify staff concerns and motivators in advance of implementation to ensure staff commitment and sustainability.</li> <li>• Investigate models of minimising staff rotations.</li> </ul>
	<p><b>Champions and health-worker motivation</b></p> <ul style="list-style-type: none"> <li>• Identify potential champions and acknowledge their contributions.</li> <li>• Acknowledge motivated health workers at facility and community level for their work with the care of small and sick newborns and KMC.</li> <li>• Ensure that the health system delivers on the basic needs of health workers and devise additional strategies to support and motivate health workers.</li> </ul>
	<p><b>Task-shifting</b></p> <ul style="list-style-type: none"> <li>• Empower mothers, relatives and other non-clinical staff to take up more responsibility for the care of small babies to partially address human resources challenges and staff feeling “overwhelmed.”</li> <li>• Harmonise task-shifting policies and include quality training (e.g., CHEWs to perform certain delivery and newborn care functions); take other measures simultaneously to address the issue of shortages of appropriately trained, higher-level staff cadres.</li> </ul>

## 5. RECOMMENDATIONS

**TABLE 54: KEY RECOMMENDATIONS FOR CONSIDERATION**

<b>Giving the care of small and sick newborns “a human face”</b> <b>People-centred passion, persistence, and perseverance for progress</b>	
FOCUS	RECOMMENDATION
<b>CAPACITY BUILDING</b>	<p><b>Training modalities and scale-up</b></p> <ul style="list-style-type: none"> <li>• Revisit different orientation and training modalities and combinations in the planning of strengthening and scaling up the care of small and sick newborns and KMC, especially at secondary level, e.g.:               <ul style="list-style-type: none"> <li>› <i>On-site, low-dose, high-frequency trainings</i></li> <li>› <i>Other forms of on-the-job and step-down training</i></li> <li>› <i>More intensive mentoring and supportive supervision</i></li> </ul> </li> <li>• Ensure on-going education of nurses and doctors through peer-to-peer mentorship and other on-the-job capacity building in care for small and sick newborns to ensure continuity when formally trained staff move on from the hospitals.</li> <li>• Start implementation concurrently with step-down training to harness the impetus created by the initial training.</li> <li>• Map training needs of staff at facility level and plan for gaps in skills of individuals, i.e., integrated ENCC but also stand-alone modules for specific needs, e.g., KMC or HBB.</li> <li>• Scale-up KMC trainings, refresher trainings, and post-training mentorship to improve skills and confidence of providers.</li> <li>• Emphasise the role of continuous KMC in the care of the small baby at all training occasions.</li> </ul>
	<p><b>Training participants</b></p> <ul style="list-style-type: none"> <li>• Ensure the right people are sent for off-site training.</li> <li>• Develop a method of ensuring that trained participants carry out their next steps with step-down training and implementation.</li> </ul>
	<p><b>Outreach and supportive supervision</b></p> <ul style="list-style-type: none"> <li>• Develop a comprehensive outreach and mentorship system in each state to supervise and build health staff skills in the care of small newborns and KMC, with tertiary hospitals doing compulsory, structured outreach to secondary hospitals and secondary hospitals doing compulsory, structured outreach to PHCs where small newborns are followed up.</li> <li>• Explore various strategies for building the confidence of secondary hospital staff in handling selected small and sick newborns, including mentorship by paediatricians/neonatologist/paediatric registrars and short-term, off-site attachments at tertiary or secondary hospitals with well managed SCBUs.</li> </ul>

**TABLE 54: KEY RECOMMENDATIONS FOR CONSIDERATION**

<b>Giving the care of small and sick newborns “a human face”</b> <b>People-centred passion, persistence, and perseverance for progress</b>	
FOCUS	RECOMMENDATION
	<p><b>Pre-service and advanced education</b></p> <ul style="list-style-type: none"> <li>• Review and strengthen care for small and sick newborns in the curricula of all schools and colleges of medicine, nursing, midwifery, and health technology.</li> <li>• Advocate for and enable the training of more paediatric/neonatal nurses.</li> <li>• Ensure sufficient coverage of the care of small and sick newborns and KMC in the training of paediatricians and paediatric nurses.</li> </ul>
	<p><b>Training materials</b></p> <ul style="list-style-type: none"> <li>• Identify, revise, and use existing materials to avoid “reinventing the wheel.”</li> </ul>
<b>ACCOUNTABILITY</b>	<p><b>Records and record-keeping</b></p> <ul style="list-style-type: none"> <li>• Revisit and revise national certified registers to ensure that all the elements needed for adequate reporting on sick and small newborns are included, especially at the secondary level.</li> <li>• Improve the recording of gestational age and birth weights and link this to the identification of small babies needing extra care.</li> <li>• Improve data collection and documentation through orientation of staff on the importance of accurate record-keeping and how to use their own data for improving quality.</li> <li>• Include the measurement of providers’ performance in the provision of adequate care for small and sick newborns in the revised Health Management Information System (HMIS) and the quality improvement system (QI) currently under development by the FMOH.</li> <li>• For hospitals without qualified HMIS staff, re-think capacity-building of current staff (e.g., designated nurses) to be trained on data collection, management, and storage to collect and summarise relevant information on deliveries and newborn babies as part of their job description.</li> </ul>
	<p><b>Death reviews</b></p> <ul style="list-style-type: none"> <li>• Strengthen the MPDSR.</li> <li>• Strengthen the linkage between death reviews and the improvement of care of small and sick newborns.</li> <li>• Act on recommendations emanating from death review meetings and develop mechanisms to monitor the actions.</li> </ul>

## 5. RECOMMENDATIONS

**TABLE 54: KEY RECOMMENDATIONS FOR CONSIDERATION**

<b>Giving the care of small and sick newborns “a human face”</b> <b>People-centred passion, persistence, and perseverance for progress</b>	
FOCUS	RECOMMENDATION
<b>REFERRALS</b>	<p><b>Referral pathways</b></p> <ul style="list-style-type: none"> <li>• Strengthen existing referral systems and develop new ones where they are inadequate:               <ul style="list-style-type: none"> <li>› <i>Develop protocols on when to refer, who should transfer, and how to contact the referral centre before referral.</i></li> <li>› <i>Map out facilities based on location and identify focal persons in referral centres.</i></li> <li>› <i>Draw referral pathways by identifying all facilities and grading them into levels 1-3.</i></li> </ul> </li> </ul>
	<p><b>Training and capacity building</b></p> <ul style="list-style-type: none"> <li>• Orientate and train health workers in referral criteria and referral pathways.</li> <li>• Include TBAs and other community cadres in referral systems.</li> </ul>
<b>KANGAROO MOTHER CARE</b>	<p><b>Guidelines for all levels of the health system</b></p> <p>Develop national KMC guidelines that include guidance on KMC implementation, eligibility and referral criteria, guidance on discharge and follow-up procedures (facility level and community-based), and monitoring and evaluation.</p> <p>Meet with key stakeholders at state, LGA, and facility level regarding planning for the operationalization of KMC guidelines.</p>
	<p><b>Facility-level implementation</b></p> <ul style="list-style-type: none"> <li>• Develop clear guidance for KMC implementation at the facility level, including the organisation of space and written SOPs (clearly stating eligibility criteria for admission, care during admission, discharge and follow-up; also for outpatient care for eligible newborns).</li> <li>• Include KMC in as many facility-level QI programmes as possible.</li> <li>• Address missed opportunities immediately:</li> <li>• Keep babies in the skin-to-skin position during feeding (e.g., while doing gavage feeding).               <ul style="list-style-type: none"> <li>› <i>Do not wait for infrastructure improvements before starting with KMC; start with intermittent KMC immediately.</i></li> <li>› <i>Start with continuous KMC where space is available.</i></li> <li>› <i>Transport babies referred to a higher level of care in the KMC position.</i></li> </ul> </li> </ul>

**TABLE 54: KEY RECOMMENDATIONS FOR CONSIDERATION**

<b>Giving the care of small and sick newborns “a human face”</b> <b>People-centred passion, persistence, and perseverance for progress</b>	
FOCUS	RECOMMENDATION
	<p><b>Space</b></p> <ul style="list-style-type: none"> <li>• Change providers’ attitudes to KMC-specific space requirements.</li> <li>• Use existing space more effectively for practising continuous KMC, especially at secondary-level facilities (e.g., a corner in the postnatal ward or a special cubicle in a SCBU where it exists or is planned).</li> <li>• Where beds are available for mothers, start with continuous KMC, e.g., convert mothers’ rooms for KMC, but ensure adequate nursing supervision.</li> </ul>
	<p><b>Attractive environment for mothers to want to stay</b></p> <ul style="list-style-type: none"> <li>• Upgrade ablution facilities where needed.</li> <li>• Provide meals for mother during their hospital stay.</li> <li>• Ensure that beds are comfortable.</li> <li>• Provide leisure activities, e.g., by getting the community involved in projects.</li> </ul>
	<p><b>Information, education, and communication strategies</b></p> <ul style="list-style-type: none"> <li>• Identify, adapt/adopt, and distribute all relevant KMC job aids, including counselling materials, feeding charts, recording sheets, etc.</li> <li>• Implement community mobilisation and behaviour-change communication activities to promote sustainable KMC implementation.</li> </ul>
<b>INFANT FEEDING</b>	<p><b>Improvement of current feeding practices</b></p> <ul style="list-style-type: none"> <li>• Intensify the promotion of exclusive breastfeeding.</li> <li>• Explore the establishment of breastmilk banks.</li> <li>• Develop guidance on the use of breastmilk substitutes.</li> </ul>
	<p><b>Baby-Friendly Hospital Initiative</b></p> <ul style="list-style-type: none"> <li>• Include KMC as a compulsory component in any programmes related to the Baby-Friendly Hospital Initiative.</li> </ul>

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**TABLE 54: KEY RECOMMENDATIONS FOR CONSIDERATION**

<b>Giving the care of small and sick newborns “a human face”</b> <b>People-centred passion, persistence, and perseverance for progress</b>	
FOCUS	RECOMMENDATION
<b>DISCHARGE AND FOLLOW-UP</b>	<p><b>“Seamless” follow-up for all small and sick newborns</b></p> <ul style="list-style-type: none"> <li>• Develop seamless follow-up systems between different levels of healthcare and ensure avenues for cross-referrals where needed.</li> <li>• Develop appropriate community involvement strategies to ensure small and sick babies leaving against medical advice are carefully monitored:               <ul style="list-style-type: none"> <li>› <i>Incorporate home visits to improve support for the small and sick newborns.</i></li> <li>› <i>Create registers at hospitals to track babies not returning for follow-up.</i></li> </ul> </li> <li>• Devise strategies for identifying small babies born at home who need specialised care to be quickly referred to an appropriate health facility (in the KMC position).</li> </ul>

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