

PUBLIC HOSPITAL-BASED CARE OF SMALL NEWBORNS IN NIGERIA

Background

Although Nigeria has made significant progress in reducing under-5 mortality, it was unable to meet its Millennium Development Goal 4 target. Every year in Nigeria, 240,000 newborns, 7 percent of the global neonatal mortality burden, die within the first month of life.¹ Complications of prematurity, during birth, and infections remain the leading causes of these deaths. At the 2014 meeting of the Kangaroo Mother Care Acceleration Partnership, the Nigerian delegation drafted a country plan that called for an operational guide to facilitate effective introduction and scale-up of facility-based kangaroo mother care (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.

Methodology

The study was conducted in two phases. The first phase was a telephone-administered survey across public tertiary and secondary hospitals in Nigeria on the provision of care services for small newborns, including facility-based KMC.

The results of this phase, which was previously released, guided the selection of states and facilities to be included in the second phase, an in-depth assessment of the implementation of services for small and sick newborns, including KMC.

The second phase, reported here, comprised two parallel data collection activities. The first was an in-depth assessment of 36 hospitals, six hospitals per state in each of the six geopolitical zones. These included 6 federal medical centres and teaching hospitals, 3 state specialist hospitals and 27 secondary-level hospitals, of which the vast majority were general hospitals. The second activity comprised semi-structured individual interviews with 22 key informants operating at other levels of and in different capacities in the health system. They included 10 officials affiliated with either the Federal Ministry of Health (FMOH) or a state ministry of health, six development partner representatives and six members of professional associations. Three teams of three data collectors comprising a leader (a paediatrician or medical doctor), a paediatrician and a neonatal nurse were trained in the use of the in-depth assessment tools. The study was reviewed and approved by the National Health Research Ethics Committee as well as Save the Children's Ethical Review Committee.



Key findings and recommendations

Phase 1: Landscape survey

A total of 757 public secondary and tertiary facilities, approximately 80 percent of public hospitals in the country, responded to the survey. Table 1 summarizes key findings from the first phase of the assessment.

Table 1. Key Findings from the Landscape Survey

General newborn care services	About four-fifths of facilities offered sepsis treatment and intravenous fluid therapy for newborns, and almost half provided oxygen therapy. Forty-five facilities provided continuous positive airway pressure (CPAP) support, some using improvised devices. Chlorhexidine usage by participating facilities varied: of the 34 states from which contact lists were received, 6 had a usage rate of 79–94 percent of responding facilities, 17 had a usage rate of 18–78 percent, 10 had a usage rate lower than 17 percent, and 1 state had no facility reporting no usage.
Provision of KMC services	Of the 160 facilities where the respondents could recall a year, 80 percent started provision of KMC services since 2012. Three-fifths were general hospitals, with tertiary and specialist hospitals comprising one-fifth. However, proportionally more tertiary and specialist hospitals were providing KMC services – they comprised 11 percent of the sample but 22 percent of facilities providing KMC services.
KMC spaces	Of the 202 KMC facilities, most indicated it was integrated in the postnatal/lying-in ward (59 percent). Other places included a separate KMC ward, next to the incubator, and in the nursery. Six percent of facilities allowed KMC practice in the breastfeeding room.
Quality of care	More than half of facilities implementing KMC reported that some staff had received training. Only 41 facilities reported having a written KMC protocol or SOP. Of those, 21 had a separate KMC protocol – but not integrated with other newborn care documentation. Just over half of facilities could provide figures on the number of babies cared for in KMC in the previous three months.
Follow-up care	Hospitals providing KMC had different patterns of providing follow-up services than other hospitals. Informants from twice as many KMC hospitals indicated that they provided follow-up at their own outpatient department. But this could be because more hospitals without KMC services refer small newborns to a higher level of care, where the babies would receive appointments for follow-up visits.

Tables 2 and 3 summarise the key findings and recommendations from the assessment. The findings of the in-depth assessment corroborate the results of the bottleneck analysis on newborn care reported in the Nigeria Every Newborn Action Plan (NiENAP). That analysis indicated that for preterm management, all seven health systems building blocks were considered 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 community ownership. Prioritising KMC without proper implementation is not likely to lead to the achievement of the anticipated health outcome in terms of preterm morbidity and mortality.

Table 2: Key Findings and Recommendations from the Hospital Assessments

GENERAL NEWBORN CARE SERVICES	
Findings	Recommendations
<p>Deliveries and newborn bed capacity</p> <p>Hospitals have insufficiently allocated space to newborns, with only just over half having an official number of beds allocated to newborns (numbers ranged from zero in four secondary hospitals to 64 in one tertiary hospital). Four hospitals had special KMC spaces or rooms; two were unused. Because some hospitals had space for continuous KMC, often in a corner of the postnatal ward, it is unclear to what extent lack of space or staff shortages are legitimate reasons for not providing KMC services.</p>	<p>Make more effective use of existing space and improve provider understanding of and attitudes toward the space requirements for KMC.</p> <p>Facilities should begin intermittent KMC immediately, even without infrastructure improvements, and continuous KMC where space and adequate nursing supervision is available.</p>
<p>Recordkeeping</p> <p>Hospital recordkeeping on LBW or preterm births or admissions is inadequate. One-third could not provide records or registers from which the number of LBW or preterm babies delivered or admitted could be calculated, in some cases because birthweight or gestational age were not recorded. Another 10 hospitals delivered or admitted 15 or fewer LBW babies in the previous three months, which suggests underreporting. In 20 hospitals, weight-monitoring records were not observed, and in at least five hospitals with weight records, recordings were irregular or erratic.</p>	<p>Ensure that all elements needed for adequate reporting on sick and small newborns are included in national certified registers, especially at the secondary level.</p> <p>At the health facility level, improve data collection and documentation by orienting staff on the importance of accurate recordkeeping and use of their own data for improving quality.</p> <p>For hospitals lacking qualified HMIS staff, train staff in data collection, management, and storage; consider adding ability to summarize information on deliveries/newborns to job descriptions.</p> <p>Improve recording of gestational age and birthweight and link to identification of small babies needing extra care. Where weighing scales are not available, consider use of anthropometric correlates to identify LBW babies needing extra care.</p> <p>Include measurement of providers' performance in provision of adequate care for small and sick newborns in the revised HMIS and QI system the FMOH is developing.</p>
<p>Separation of inborn and outborn services</p> <p>One-third of hospitals had separate inborn and outborn units for small and sick babies. Only three had separate nursing staff and nine shared staff between the two areas. The rest cared for inborn and outborn together, except for three hospitals that cared for either inborn or outborn. In all hospitals, the same medical staff cared for both.</p>	<p>Review the current evidence to establish whether there is still a need to separate inborn and outborn units. Consider reorganization of newborn services to be more efficient.</p>
<p>Human resource capacity</p> <p>The vast majority of respondents mentioned staff shortages as a challenge to the provision of care.</p> <p>In the 31 hospitals with information on staff rotation policy, 12 (mostly tertiary hospitals) did not rotate nursing or medical staff outside the paediatrics department. In the others, nurses rotated annually or biannually. Medical officers rotated according to different schedules for different categories, ranging from monthly to twice annually.</p> <p>Only 23 hospitals could provide information on the number of staff trained in KMC or essential newborn care (ENC) and 10 hospitals had no staff trained in KMC.</p>	<p>Consider responsible task-shifting to mothers, relatives, or non-clinical staff, e.g., community extension health workers, accompanied by training and simultaneous measures to address the shortage of trained, higher level staff cadres.</p> <p>Offer ongoing education of nurses and doctors through peer-to-peer mentorship and on-the-job capacity building to ensure continuity when formally trained staff move on.</p> <p>Investigate models to minimize staff rotations.</p>

CARE FOR SMALL NEWBORNS

Findings	Recommendations
<p>Facility preparedness</p> <p>Few secondary hospitals said they were prepared to admit and provide care for small newborns. Most referred babies under 2000g to a higher level of care, except when parents refused the transfer. There were therefore many missed opportunities to provide KMC to small newborns and reduce the number of referrals.</p>	<p>For each type of secondary facility, define minimum requirements with regard to small and sick newborns and the care needed.</p> <p>Upgrade capacity of secondary hospitals to provide care for preterm and LBW babies.</p> <p>Map out, strengthen, and develop referral pathways; identify facility locations and focal persons in referral centres. Develop protocols on when to refer, who should transfer, and how to contact the referral centre before referral.</p> <p>Provide capacity building on referral criteria and referral pathways. Include TBAs and other community cadres in referral systems.</p> <p>Build the confidence of secondary hospital staff in handling small and sick newborns through, for example, mentorship by paediatricians or neonatologists and short-term attachments at tertiary or secondary hospitals with well-managed SCBUs.</p> <p>Provide outreach and supportive supervision through a comprehensive outreach and mentorship system in each state to supervise and build health staff skills, with tertiary hospitals doing compulsory, structured outreach to secondary hospitals, and secondary hospitals doing compulsory, structured outreach to PHCs where small newborns go for follow-up.</p>

QUALITY OF CARE

Findings	Recommendations
<p>Guidelines and protocols</p> <p>Few written documents pertaining to newborn care or care of LBW and premature babies were observed; in some instances, documents were said to exist but could not be located.</p> <p>Documents pertaining to care of LBW babies included admission criteria in two hospitals, a protocol for their care (not including KMC) in one hospital, and a follow-up protocol for premature and LBW babies in one. Five hospitals produced an infection control policy, four a feeding policy, and two a newborn care policy.</p>	<p>Develop national KMC guidelines for all levels of the health system. 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>Hold meetings with key stakeholders at state, local government, and facility levels to plan for operationalization of KMC guidelines.</p>
<p>Death reviews</p> <p>Half of hospitals reported conducting death review meetings. Two hospitals referred to the Maternal and Perinatal Death Surveillance Review (MPDSR). The frequency of meetings was weekly, monthly or quarterly.</p>	<p>Strengthen the linkage between MPDSR and the improvement of care by ensuring that recommendations from death review meetings are acted upon and mechanisms developed to monitor actions.</p>

KANGAROO MOTHER CARE SERVICES

Findings	Recommendations
<p>KMC services</p> <p>Twelve hospitals said they provide KMC services. Services were initiated in 2008 or later, with tertiary hospitals being first to take on KMC. Events that triggered KMC implementation were partner programs involving KMC or exposure to KMC at a teaching hospital or conference. After training, some hospitals provided step-down training to other hospital staff. Witnessing positive outcomes in babies eligible for KMC was a powerful motivator to continue.</p> <p>Four hospitals that stopped KMC gave the following reasons: incubator became dysfunctional; departure of KMC champion; destruction of hospital in political unrest; end of partner program; lack of finances, space, infrastructure or human resources; and lack of guidelines.</p>	<p>Develop national KMC guidelines for all levels of the health system. 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. Meet with key stakeholders to plan for the operationalization of KMC guidelines.</p> <p>Invest in centres of excellence in neonatology and KMC to serve as benchmarks and provide training in the care of small and sick newborns and KMC for other facilities. Distribute the centres equitably and provide financial requirements for maintaining them. Include tertiary- and secondary-level hospitals to ensure benchmarking and training occur at the appropriate level.</p>
<p>Threats to sustainability</p> <p>Even hospitals with trained staff and champions struggled to get KMC services institutionalized with a proper routine and systematic application. Hospitals that reported implementing KMC had low numbers of KMC babies because of the practice of referring all LBW babies to a higher level of care.</p>	<p>Nurture collaboration, honour referral agreements between facilities, and plan for less dependence on donors.</p> <p>Identify and support champions to communicate benefits of KMC to staff and caregivers, advocate for adequate infrastructure, and call for integration of KMC into newborn care.</p>
<p>Hospitals not implementing KMC</p> <p>Hospitals that had not started to implement KMC gave the following reasons: few or no LBW deliveries, staff and management ignorance due to lack of training and other factors, lack of lodging, and health workers' perceptions of parents.</p>	<p>Use national KMC guidelines to develop standard operating procedures that clearly state eligibility criteria for admission, care during admission, discharge and follow-up, and outpatient care for eligible newborns. Include clear guidance on organization of space.</p> <p>Identify and support champions to advocate for staff and caregivers to improve KMC practices and increase acceptance and commitment.</p> <p>Review preservice and advanced education curriculums in all schools and colleges of medicine, nursing, and midwifery to ensure that care for small and sick newborns is appropriately covered, especially for paediatricians and paediatric nurses.</p> <p>Invest in human resources by identifying small and sick newborn care focal persons. Identify staff concerns and motivators before implementation to ensure staff commitment and sustainability.</p>

KANGAROO MOTHER CARE PRACTICE

Findings	Recommendations
<p>KMC Position</p> <p>In six of the 12 hospitals implementing KMC, the doctor made the decision about a baby's eligibility, with some input from the nurses. Babies were observed in the KMC position in only two hospitals. KMC statistics could be extracted from records or registers in six hospitals, while one hospital could provide statistics on intermittent KMC up front. Hospitals practiced intermittent – not continuous – KMC, mostly one to six hours per day. Three hospitals had specific schedules for KMC (none written) and six had no schedule.</p>	<p>Develop guidance on organisation of space; sensitise providers to use available space effectively. Develop SOPs for admission, care, discharge/follow-up, outpatient care.</p> <p>Include KMC in facility-level QI programmes. Do not wait for infrastructure improvements to begin intermittent or continuous KMC.</p> <p>Keep babies in KMC position during feeding and during transport when referred to higher level of care.</p>
<p>Nutrition (breastfeeding)</p> <p>15 hospitals produced feeding records; 12 had fixed feeding schedules for LBW/premature babies; 11 calculated volumes for expressed breastmilk; 20 used formula/BMS. 19 hospitals had feeding cups, 13 had spoons, 14 had syringes, 12 had nasogastric tubes, and 6 had orogastric tubes.</p>	<p>Intensify promotion of exclusive breastfeeding, explore establishment of breastmilk banks in tertiary facilities, and develop guidance on use of breastmilk substitutes.</p>
<p>Follow-up</p> <p>Information on follow-up was scanty, and written protocols were not available. Follow-up schedules ranged from weekly to monthly for those with specific schedules. Discharge from special follow-up was according to age or weight (12 hospitals could not provide any figure). Reasons for not returning for follow-up included distance, funding, or healthy/deceased baby.</p>	<p>Develop seamless follow-up systems for all levels of care and ensure avenues exist for cross-referrals.</p> <p>Develop community involvement strategies to monitor small and sick babies that leave against medical advice.</p> <p>Devise strategies to identify and refer small babies born at home who need specialised care.</p>
<p>Mothers' lodging</p> <p>Most hospitals lodged mothers of small and sick newborns in the postnatal ward, together with their babies if there was no newborn unit, and without their babies if there was an SCBU. A few hospitals had special mothers' rooms; in one hospital mothers of outborn babies stayed with their babies in the paediatric ward.</p> <p>Twelve hospitals provided all or some meals for all or some mothers with babies. In two states, no hospitals provided food. For most mothers who did not get meals, families were the main source of food.</p>	<p>Create an attractive environment to encourage mothers to stay; upgrade ablution facilities, ensure that beds are comfortable, provide meals for mothers during the hospital stay, and organize leisure activities.</p>

CHALLENGES AND ENABLERS TO CARE FOR SMALL NEWBORNS

Findings	Recommendations
<p>Client and community factors</p> <p>Health workers said health-seeking behaviour of clients and poor health awareness of caregivers were the main challenges. The consequences include delayed presentation at hospital, refusal of the referral, and lack of cooperation with the health system. Hospital informants attributed the causes of these behaviours to the financial situation of clients, local beliefs and practices, and competing patronages where traditional birth attendants played a powerful role and where there was competition with private health facilities.</p>	<p>Plan mass community and health system enlightenment and communication through the print and electronic media and communication, information and education materials.</p> <p>Conduct community assessments to explore what might encourage mothers to stay.</p>

Table 3: Findings and Recommendations from Key Informant Interviews

Findings	Recommendations
<p>Political will and ownership</p> <p>Informants referred to the lack of political will or inability of state governments to take initiative to strengthen the health system, and newborn care specifically. Furthermore, child-health interventions aside, paediatrics was not perceived as a priority for policymakers. A requirement for health professionals was visibility in advocacy and oversight roles and to contribute to policymaking and the development of guidelines and protocols.</p>	<p>Meet with key stakeholders at state, local government area, and facility level to plan for the development and operationalization of KMC guidelines.</p>
<p>Coordination and collaboration among partners</p> <p>There is duplication of projects and poor sustainability of donor-driven interventions or new programs. There is also poor distribution and mapping of projects and partners, with some states having an excess of partners doing the same thing and others lacking partners. Donor-driven programs do not always have sufficient government support. Therefore, donor dependency may prevent effective pilot studies from being scaled up by governments.</p>	<p>Converge the energies of development partners through improved communication and utilization of existing or new structures to improve coherence, reduce duplication and fragmentation, and more equitably distribute inputs across states.</p>
<p>Increased coverage and scale-up of KMC</p> <p>Informants perceived coverage of KMC to be low, that sustainability of services remained a challenge, and that KMC scale-up was overdue. They said awareness of KMC and the professional support of association members were uneven. They acknowledged that many health workers were not familiar with KMC.</p> <p>They said that reasons facilities with KMC-trained staff were not providing services included resistance by nursing heads without advanced paediatric training and the medical preference for technology, e.g., incubators.</p>	<p>Enable sufficient training occasions (stand-alone and integrated into the ENCC), refresher trainings and post-training mentorships to improve skills and confidence of providers. All training should emphasize the role of continuous KMC in the care of the small baby.</p> <p>Invest in centres of excellence in neonatology and KMC to serve as benchmarks and provide training in the care of small and sick newborns and KMC for other facilities. Distribute centres equitably and provide financial requirements for maintaining them. Include tertiary- and secondary-level hospitals to ensure benchmarking and training occur at the appropriate level.</p>

Conclusion

The aim of the in-depth assessment was to get a sense of the important issues related to small newborn care and KMC that may need strengthening. The two-component assessment aimed at getting a snapshot of care practices for small newborns, including the practice of KMC, in public secondary and tertiary hospitals and to elicit the views of a variety of stakeholders on the state of the care of small newborns in Nigeria. The findings correspond with the results of the bottleneck analysis on newborn care reported in the NiENAP. The analysis for preterm management indicated that for all seven health systems building blocks, care was considered inadequate. For KMC, the bottleneck analysis identified health workforce, medical products, and information systems as needing major improvements, with some improvement needed in the areas of leadership and governance, health financing, health service delivery, and community ownership.

In the current study there was evidence of inadequate coverage and quality of small newborn care and KMC. There was poor provision for the care of small and sick newborns beyond the tertiary hospitals, even if some secondary hospitals had some of the necessary equipment. There was furthermore tremendous variation in the level and quality of newborn care provided in secondary hospitals. The findings with regard to the provision of KMC indicate that – while a proportion of facilities said they provide KMC – 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 a space. Furthermore, there are few guidelines for proper practice and recordkeeping is poor. Without stronger implementation, KMC practice in Nigeria will not help the country achieve its goal to reduce preterm morbidity and mortality.

REFERENCES

1. UN Interagency Group for Child Mortality Estimation (IGME) in 2015 www.childmortality.org
2. Federal Ministry of Health (FMOH). Nigeria Every Newborn Action Plan: A Plan To End Preventable Newborn Death in Nigeria. Abuja: FMOH, 2016.
3. Suleiman BM, Bergh A-M, Vaz L, Williams A, Oyinbo M, Omale L, et al. Assessment of facility-based care of small newborns in Nigeria. Phase 1: Landscape survey. Abuja: Save the Children, 2017.
4. Suleiman BM, Bergh A-M, Vaz L, Williams A, Oyinbo M, Omale L, et al. Public hospital-based care of small newborn in Nigeria. Phase 2: In-depth assessment. Abuja: Save the Children, 2017.

Access the KMC full report at bit.ly/2xeeUHV

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