

Strengthening Newborn Care Kogi and Ebonyi states, Nigeria

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Background and Objectives

In Nigeria newborn deaths currently account for approximately 32 percent of all deaths of children under-five years of age. Reduction in neonatal mortality is a major prerequisite for the country to achieve a significant reduction in the under-five mortality rate. The three major causes of newborn mortality in Nigeria are preterm birth complications (31%), intrapartum related events including birth asphyxia (31%) and infection including pneumonia and sepsis (26%).¹ Together these three causes contribute to 88% of all neonatal deaths in the country.

The Maternal and Child Survival Program (MCSP) in Nigeria aims to improve maternal, newborn and child health (MNCH) outcomes in Nigeria by increasing access to quality life-saving interventions. The program collaborated with state and local governments as well as select professional associations, namely PAN/NISONM (Pediatric Association of Nigeria/Nigeria Society of Neonatal Medicine), SOGON (Society of Obstetrics and Gynecology of Nigeria), and NANNM (National Association of Nigerian Nurses and Midwives) to achieve these key program objectives. MCSP worked towards reducing newborn mortality due to prematurity, asphyxia, and sepsis through implementation of key newborn health interventions. These interventions included provision of essential newborn care (ENC) services for every baby including resuscitation for those who cannot breathe at birth, Kangaroo Mother Care (KMC) for managing preterm births, and identification and treatment of sick newborn infants including those with infection.



Twin newborns at the King Fahed IBN Abdul-Azezz Women and Children Hospital in Gusau, Nigeria. One was breeched and delivered by a newly trained midwife and the other was delivered via C-section.

Photo Credit: Karen Kasmauski/MCSP

Program Approaches and Strategies

- **Adaptation and development of newborn training materials and operational guidelines:** The American Academy of Pediatrics (AAP), under the auspices of USAID's global Survive and Thrive global development alliance, worked closely with PAN and NISONM to adapt AAP's global Essential Care for Every Newborn and Essential Care for Small Babies training programs. The adapted program was integrated into the national Nigerian newborn training program and came to be known as the Essential

¹ Healthy Newborn Network. Newborn Numbers Database. Washington, DC: Save the Children; 2018 [Available from: <https://www.healthynetwork.org/hnn-content/uploads/Newborn-Numbers-excel-30-Jan-2018-FINAL.xlsx> accessed August 15, 2018.

Newborn Care Course which aims to build service provider capacity in neonatal resuscitation, ENC, KMC and management of infection. MCSP in collaboration with the Federal Ministry of Health (FMOH) supported the development of an updated ENCC package that incorporated guidance on Possible Serious Bacterial Infection (PSBI) where referral is not possible, following the adoption by FMOH of the World Health Organization's (WHO) recommendation on outpatient treatment of PSBI when referral is not possible.

The project identified a key gap in KMC services, which was the lack of national guidelines detailing which KMC services should be provided at each level of the health system (primary, secondary, and tertiary). To address this gap, MCSP supported the FMOH in developing national KMC guidelines that will ensure that low birth weight (LBW) babies receive the care they need in a health facility and are referred to a higher-level health facility when required.

- Capacity Building of Providers:** MCSP trained a national pool of 88 master trainers and course directors drawn from members of professional associations, supervisors from FMOH and pediatricians, and tutors from pre-service educational Institutions of Health (PSEs) across the two states. In addition, MCSP provided the master trainers with a set of training kits (e.g. Neonatalie, resuscitation equipment, bag and mask, etc.). MCSP collaborated with PAN/NISONM to roll-out cascade trainings in Kogi and Ebonyi states. A total of 119 providers (62 doctors, 51 nurses/midwives, and 6 Senior CHEWs) were trained as ENCC trainers for the two states. MCSP further cascaded the trainings to service providers reaching a total of 1,115 providers across both states — 487 trained on full ENCC and 628 on modified ENCC. The creation of a state level pool of trainers was part of the sustainability strategy of MCSP to give the states the capacity to continue with ENCC capacity building beyond the life of the project.



Nurse demonstrating KMC.

Photo Credit: Karen Kasmauskil/ MCSP

Furthermore, MCSP supported the creation of 31 skills laboratories (skills labs) in pre-service educational institutions, tertiary hospitals and secondary hospitals across Kogi and Ebonyi to improve ENC skills among staff and providers across these institutions. The skills labs enable pre-service students and current service providers to acquire or maintain their ENC/neonatal resuscitation knowledge and skills. For the PSEs, the program supported the development, distribution, and orientation of tutors on the use and maintenance of skills lab logbooks that track ENC and other Maternal Newborn Health/ Family planning (MNH/FP) related skill practices that students and service providers undertake. E-learning stations with digital learning tools on various MNH/FP topics were also established within the skills labs. Some of tools provided include Mama Natalies, Neonatalies, hand-held IUD insertion trainer model, vaginal exam pocket guide, etc.

- Facility Readiness:** The MCSP baseline health facility assessment showed that health facilities did not have basic newborn resuscitation equipment such as bag and mask, and mucus sucker. Specifically, at secondary level hospitals newborn resuscitation with bag and mask was performed in 24% and 22.4 % facilities in Ebonyi and Kogi, respectively. These numbers were significantly lower in primary health care facilities. To ensure that facilities were able to provide quality essential newborn care and neonatal resuscitation, MCSP supported the states to establish newborn resuscitation corners within the delivery room of the 240 health facilities. The established newborn resuscitation corners has the essential ENC and resuscitation items such as resuscitation bags, masks, flat surface tables, suction equipment, syringes, etc.

Additionally, MCSP in collaboration with State Ministry of Health (SMoH) identified tertiary and secondary hospitals to be supported with introducing and improving their KMC services. A total of 41 hospitals were selected — 21 in Ebonyi and 20 in Kogi. All of the selected hospitals identified a separate room to serve as a KMC unit. In order to ensure the identified space was ready to receive KMC patients,

MCSP provided items such as KMC registers, feeding cups, nasogastric tubes, etc. for each hospital per their need.

- **Supportive supervision and quality improvement (QI):** MCSP led a three-pronged approach to supportive supervision, **described below.**
 - **Post-training supportive supervision (PTSS):** MCSP used the standard ENCC checklists extracted from the training guideline to assess post-training skills retention. MCSP team walked through the checklists with the health workers in order to ascertain the level of knowledge and acquired skill. For instance, during these walkthroughs, health workers demonstrated their KMC related skills using a live baby or mannequin. After assessing the skills, the newborn advisor/service improvement coordinators (SICs) assist the providers to practice skill areas where they were deficient. Furthermore, a WhatsApp group was formed creating a platform for the health workers to share their experiences, serving as a motivation for those health workers, and to problem-solve challenges they are encountering.
 - **Routine supportive supervision:** On a monthly and quarterly basis MCSP, in collaboration with the SMoH, used the FMoH-endorsed integrated supportive supervision (ISS) checklist in the COMM CARE app to collect information on adaption of skills following trainings provided in the facilities. The app had an advantage over manually collected data since it allowed supervisors to store performance data for each facility and access them off-line.
 - **QI supportive supervision:** The program assisted facilities with decision-making through use of the MCSP QI data collection and supportive supervisory tool and dashboards. The QI supervisory visits also provided the MCSP team an opportunity to review the KMC services registers to ensure correct and complete input of relevant data. The newborn indicators included in the QI tool are outlined in Box 1.
- **Sustainability support to states for health planning:** In order to ensure sustainability of its activities, MCSP built on existing platforms and opportunities in the two States. Specifically, MCSP supported both states to develop their State Strategic Health Development Plans, SSHDP (2017 – 2021). Resources required for service providers' capacity building, equipment and related essential commodities were included in their costed plans. Additionally, the program held advocacy meetings with State Governors and Health Commissioners to mobilize resources for MNH. MCSP also facilitated the engagement of PAN/NISONM members at State level to provide mentorship to service providers, particularly those at the secondary health facilities. PAN/NISONM members adopted specific facilities that they will mentor and pledged to continue this activity beyond the life of the project

Box 1: Newborn Indicators included in the QI tools

- Percentage of newborn babies put in skin-to-skin contact with mother
- Percentage of newborn babies put to mother's breast within 30 minutes of birth
- Percentage of babies for whom Chlorhexidine was applied to the umbilical cord at birth
- Number of newborn with birth asphyxia
- Percentage of newborns with asphyxia who were successfully resuscitated

Key Results and Findings

- Out of a total of 1,615 asphyxiated babies in both states (1,123 in Ebonyi and 492 in Kogi), 1, 522 were successfully resuscitated (1,071 babies in Ebonyi and 451 babies in Kogi) from program inception to June, 2018. This represented an overall rate of about **94% successful neonatal resuscitation rates** in both states (see Figure 2).
- Uptake of chlorhexidine (CHX) for routine cord care was rapid despite the project not providing the product. In Kogi state, the governor provided state CHX gel. While in Ebonyi State, individual hospitals made their own institutional arrangements with retailers and manufacturers. **Use of CHX increased from 0% at baseline to about 92% in program year 4.**

- There was a steady **increase in the number of babies admitted to the KMC units**, starting from about **200 in 2016** to approximately **900 in 2018**. Kogi reported slightly more KMC admissions than Ebonyi throughout the period of implementation.
- The project tracked the uptake of ENC defined as provision of skin-to-skin contact after birth, clean cord care with or without CHX, and early initiation of breastfeeding -within 30 minutes of birth. **ENC increased from about 26% to 92%** in the course of the project.

Figure 1: Number of babies receiving KMC services in Kogi and Ebonyi States in MCSP supported facilities per program year

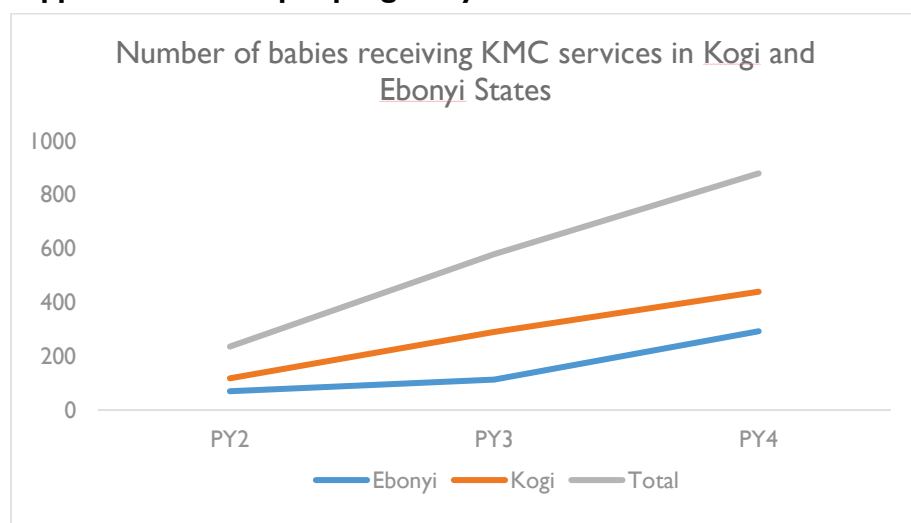
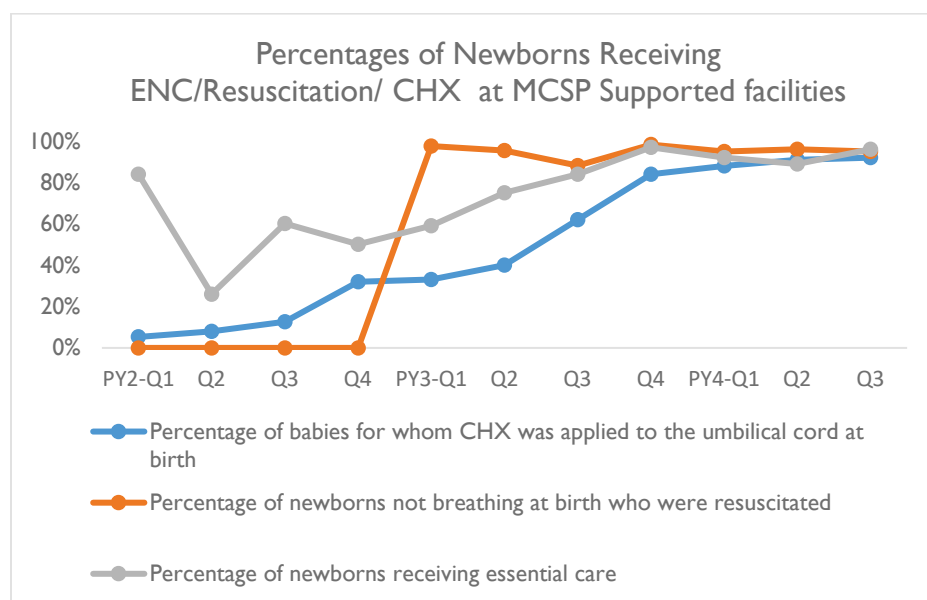


Figure 2: Percent of newborns receiving ENC, CHX gel and successfully resuscitated in MCSP supported health facilities



Recommendations and Conclusion

- Through joint planning and evidence-based advocacy, states are willing and able to incorporate life-saving newborn health interventions into their strategic plans as demonstrated by the two MCSP states. Incorporation of interventions into SSHDPs is a key step on the pathway to sustaining these

interventions beyond the life of the project. Integration of project activities into existing State-led projects such as SOML or routine MNH services paves the way for sustainability.

- Both states should use their resources and that of other implementing partners operating in their state to continue to build the capacity of their staff in order to ensure effective coverage with implementation of life-saving newborn health interventions. SMoH will have to make concerted effort to maintain and expand the digital supportive supervision mechanisms the project supported them to put in place.
- States should put effort towards retention of staff in order to allow knowledge and skills set transfer. Kogi state, particularly, will need to find lasting solutions to the human resource problem – both the lack of payment of staff salaries and the inadequate number of staff.
- States and professional associations should continue to engage and expand on the mentorship activities introduced under the project. Ongoing mentorship by PAN/NISONM members to secondary hospitals, including internal peer mentorship mechanisms at the hospitals, to make certain existing staff maintain their skills and new staff acquire knowledge and skills on KMC
- The QI activities should also be expanded to all health facilities and appropriate support provided to maintain staff capacity to use quality performance outcome and impact data to identify shortcomings in their achievement.
- States should continue to track the key newborn indicators, ensure data quality, and use data for decision-making during State Core Technical Group meetings.
- Expand the demand creation component of services, particularly KMC services, to create more awareness on this life-saving intervention, including use of social and mass media, and existing community structures like Ward Development Committees, religious leaders, and women groups.

In conclusion, MCSP's newborn health strategies have promoted the scale up of high impact interventions that address the three major causes of newborn morbidity and mortality in Nigeria. To promote sustainability, the program engaged and collaborated with local governments and relevant partners early in the program with the overall vision that state governments and stakeholders of Nigeria will carry this important work forward.

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