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Improving the Quality of Preservice Education for Health Service Providers in Nigeria

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Key Messages

- A standards based approach is effective at improving the quality of training and reproductive, maternal, newborn and child health (RMNCH) curricula contents in pre-service education (PSE) for health service providers.
- Sustainability of quality improvement approaches in PSE for health service providers in Nigeria is dependent on functional education development committees (EDCs).
- Non-monetary incentives are more effective in implementing the concept of preceptorship in RMNCH curricular content in PSE for health service providers.

Background

In Nigeria, an acute shortage of competent skilled birth attendants is a major contributing factor to Nigeria's high maternal mortality ratio (MMR: 576/100,000 live births) and neonatal mortality rate (NNMR: 38/1000 live births)¹. The USAID Maternal and Child Survival Program (MCSP) collaborated with the State Ministries of Health (SMoH) in Kogi and Ebonyi States to improve the quality of reproductive, maternal, newborn, and child health (RMNCH) pre-service education (PSE) for all cadres of healthcare providers so that the graduates from the training institutions would have the pre-requisite competency required of them (at the time of graduation) to save lives of mothers, neonates and children under the age of five years and ultimately contribute to improving the MMR and NNMR in Nigeria.



Fig 1: Student nurses watch as a clinical instructor demonstrates insertion of contraceptive method. Photo by Karen Kasmauski/MCSP

The Program worked with and implemented interventions in 14 accredited PSE institutions, which included four nursing schools, four midwifery schools, an undergraduate nursing training program, an undergraduate medical training program and the community health departments of four health technology colleges/schools where community health extension workers (CHEWs) are trained. For each PSE institution and its practicum site(s), MCSP strengthened the capacity of the lecturers, tutors, clinical instructors and preceptors to teach and create effective learning experiences for educators and students.

¹ Nigeria National Demographic Health Survey, 2013

Program Approaches and Interventions

Establish Education Development Committees (EDCs) and Set Quality Improvement Performance Standards

MCSP supported the institutions to set up EDCs at the State level. Each EDC was chaired by either the Director Nursing Services or the Director Clinical Services at the State Ministry of Health (SMOH) and included the head and the deputy of each institution (Table 1).

Table 1: PSE institutions supported by MCSP in Ebonyi and Kogi states

Type of Institution	Ebonyi State	Kogi State
College/School of Nursing (CON/SON)	- SON, Federal Teaching Hospital, Abakaliki (FETHA) - SON, Mater Hospital, Afikpo	- CON, Obangede - SON, Evangelical Church Winning All (ECWA) Hospital, Egbe
School of Midwifery	- FETHA, Abakaliki - Mater Hospital, Afikpo	- Evangelical Church Winning All (ECWA) Hospital, Egbe - Grimard's Catholic Hospital, Anyingba
College/School of Technology (CHT/SHT)	- CHT, Ezzangbo - SHT, Ngbo - SHT, Sudan Missions Hospital, Izzi	CHT, Idah
Department of Nursing	Ebonyi State University, Abakaliki	
Medical School	Ebonyi State University, Abakaliki	

The EDC at the State level held meetings on a quarterly basis to deliberate on issues relating to quality improvement in the training institutions that may require intervention at the State level. The head of each institution was in turn provided with necessary guidance and support to form EDC at the institutional level. At the institutional level, the head of institution or head of department chaired the EDC. Other members of the EDC were selected by the head of institution/head of department and they included the vice/deputy head of institution and five to seven others, which included tutors/lecturers, clinical instructors and preceptors.

The newly formed EDCs held monthly meetings to discuss issues relating to quality improvement in the training of health workers at the school level. MCSP supported the state EDCs to define a total of 69 RMNCH education, quality improvement performance standards, which were deemed attainable with available resources in the context of the two states. The performance standards were defined using guidelines from regulatory bodies such as International Confederations of Nursing and Midwifery, Nursing and Midwifery of Council of Nigeria, Community Health Practitioners Registration Board of Nigeria, Medical and Dental Council of Nigeria and through a review of literatures of similar experiences from other countries^{2,3,4}.

Conduct Baseline Assessment

A baseline assessment of each institution was conducted in November 2016 by MCSP in conjunction with members of the State level EDC using the 69 RMNCH performance standards across four thematic areas (1-4). The purpose of the baseline assessment was to assess the extent of compliance of the institutions to the performance standards as a benchmark against which

Box 1: Thematic Areas

- Area 1: Classroom and Practical Instructions.
- Area 2: Clinical Instruction and Practice
- Area 3: School Infrastructure and Training Materials.
- Area 4: School Management.

² Jhpiego Global Performance Standards, 2016

³ Midwifery Education Rapid Assessment Tool: User's Guide and Handbook. March, 2015.

⁴ SBM-R in Pre-Service Education: A Supplement to Standards-Based Management and Recognition – A field guide.

improvement or otherwise could be measured during subsequent assessments following relevant interventions.

Findings from the Baseline Assessment

The table 2 below highlights the highest and lowest scores in adherence to performance standards by the institutions in the four thematic areas during the baseline assessment:

Table 2: Baseline Scores by Thematic Areas

Baseline Scores by Thematic Area								
	Area 1	Score	Area 2	Score	Area 3	Score	Area 4	Score
Institution with Highest Score	SON FETHA	46.7	ECWA SOM	57.1	SON FETHA	40	COM EBSU	52
Institution with Lowest score	CHT Ezzangbo	14	CHT Ezzangbo	15.8	COM EBSU, SOM FETHA, SOM Mater Hospital, CHT Idah and ECWA SOM	14.3	CON Obangede	0
Mean score for all 14 institutions		24		34.8		23.3		32.5

The assessment also showed that, of the 69 performance standards, 15 (21.7%) were not met by any of the 14 training institutions. This data showed lack of adherence to quality improvement performance standards by the institutions and revealed a large gap in the quality of training in the institutions and their practicum sites in both states. Some of the reasons for the identified gaps include the following:

- Poor classroom and clinical simulation training skills of the tutors, lecturers and clinical instructors.
- Lack of or poorly equipped clinical simulation laboratories in most of the training institutions.
- Lack of a library or insufficient quantities of appropriate reference training materials where the library existed.
- Lack of computer laboratories or insufficient quantities of functional computers where they existed.
- Lack of functional management committees or infrequent meetings of the committees where they already existed.

The data from this assessment was used as a guide to develop a roadmap to improve the quality of training in these institutions through a standards-based approach. Each of the identified gaps was addressed by developing an appropriate intervention.

Interventions and Follow-Up Supportive Supervision

MCSP worked directly with the individual PSE institution to implement the following interventions to bridge the identified gaps over a period of 14 months:

- **Capacity building for faculty members:** MCSP conducted a training of trainers' workshop for faculty members in the following areas - effective teaching skills, competency-based clinical skills training, simulation training, training on gender-based violence and respectful maternity care. Others include training on the concept of preceptorship and school management. MCSP subsequently supported the EDCs at the institutional level to conduct stepdown training to other members of staff.
- **Setting up clinical skills simulation laboratories:** These were setup in each institution with installation of anatomical models and simulators, installation of medical equipment for teaching and learning basic reproductive, family planning, maternal, neonatal and child health.

- **Installation of audio-visual teaching aids:** Audiovisual teaching aids were installed in classrooms and clinical skills simulation laboratories in each institution with inverters and solar panels as backup power supply.
- **Quarterly supportive supervision:** MCSP in conjunction with members of the EDCs conducted quarterly assessments of the classroom teaching skills and simulation laboratory facilitation skills of lecturers, tutors, preceptors and clinical instructors. Schools' management, infrastructures and clinical practicum sites were also assessed during each visit.

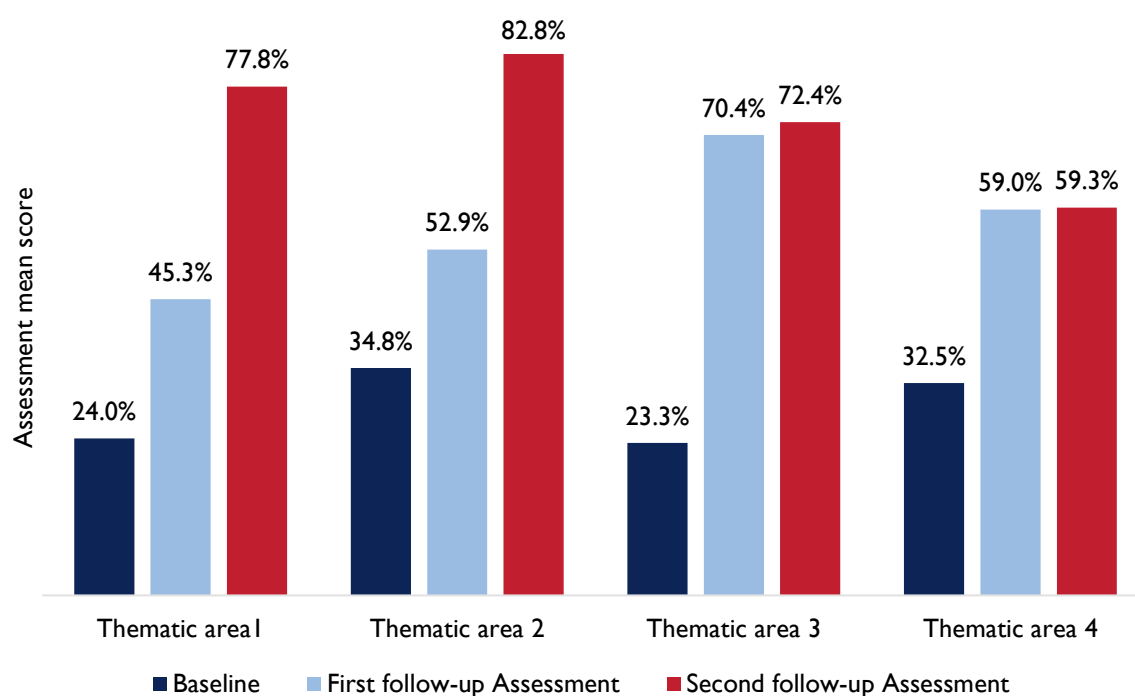
MCSP in conjunction with selected members of State EDC conducted follow-up supportive supervisory visits to the institutions on a quarterly basis.

Results: Endline Assessment (Post-intervention)

Two follow-up assessments (five months apart) were conducted, using quantitative data collection tools to assess adherence to PSE training quality improvement performance standards. Twelve (12) of the fourteen (14) training institutions, which were assessed at baseline, were consistently accessible for the follow-up assessments. The two institutions that were not accessible during the two follow-up assessments were SHT, Ngbo and SHT, Sudan Missions Hospital, Izzi due to a school break at the time of the assessments. The endline assessment was completed in August 2018.

Post-intervention, the mean scores at first follow-up assessment for thematic areas 1 – 4 were as follows: 45.3%, 52.9%, 70.4%, and 59.0% respectively. At second follow-up assessment, the mean scores for the four thematic areas (1-4) were 77.8%, 82.8%, 72.4% and 59.3%, respectively. See Figure 2.

Figure 2: Comparison of baseline with Post-Intervention Results



Analysis of the quantitative data using paired double-tailed student t-tests showed highly statistically significant differences ($p < 0.05$) between the baseline scores and the second follow-up measurements for all the four thematic areas (see in table 3 below).

Table 3: Comparison of Baseline Findings to Follow Up Assessments

Thematic Area	Mean score %						
	Baseline	Standard Deviation	1 st follow up assessment	Standard Deviation	2 nd follow up assessment	Standard Deviation	p value
1	24.0	10.3	45.3	20.9	77.8	21.5	< 0.001
2	34.8	13.0	52.9	18.1	82.8	12.8	< 0.001
3	23.3	9.2	70.4	17.0	72.4	18.1	< 0.001
4	32.5	18.4	59.0	15.9	59.3	15.8	<0.005

There were marked improvements in all thematic areas between the baseline assessment and the two follow up assessments. In addition, there were also marked improvements in thematic areas one and two, between the first follow up assessment and second follow up assessment. These two thematic areas covered classroom practical instructions and clinical instructions and practice. Thematic areas three and four covering school infrastructure and training materials and school management did not show much improvement between the first and second follow up assessment despite improvements between baseline assessment and first follow up assessment.

Challenges

The challenges encountered at the start of the PSE initiative with the 14 institutions were the very low baseline scores across the four thematic areas, which included classroom practical instruction, clinical instruction and practice, lack of training materials and school management. The quality of training provided to the students needed to be improved and the Education Development Committee needed to make functional. Another major challenge encountered during implementation of these interventions was a discrepancy in teaching allowances paid to preceptors at the various institutions. An introduction of the concept of preceptorship in RMNCH content of the curricular in PSE in the two States had some institutions paying their preceptors teaching allowances, while other clinical staff in the same institution were not paid the same allowance despite the fact they also contribute to the training of the students from time to time. This discrepancy was observed to have negatively affected some of the clinical staff who were not paid teaching allowances, and thus lessened their commitment to training the students.

Lessons Learned and Recommendations

- A standards based approach is effective at improving the quality of training and RMNCH curricula contents in PSE training institutions. Between the baseline and second follow-up assessments, institutions showed significant improvements in complying with the 69 quality improvement performance standards. The correlation between the improvement in adherence to quality-improvement performance standards and improvement in the functionality of the institutions' EDC indicates that a functional EDC is key to institutionalization of the quality-improvement performance standards.
- There is, however, a need to institutionalize and strengthen quality improvement structures like EDCs as part of school management structures for sustainable quality improvement in the training of health workers in PSE institutions. The use of monetary incentives to motivate preceptors should be done with caution; non-monetary incentives such as recognitions of staff performance could be considered.

Sustainability

Sustainability plans are anchored around the EDCs at the institutional and State levels, which are still functional until date and are responsible for promoting, implementing and monitoring education-related quality improvement activities at both the institution and state levels. The EDCs ensure that all newly employed faculty members are oriented to the 69 performance standards. They also conduct regular monitoring and mentoring activities in order to ensure adherence to the performance standards across all four thematic areas. The EDC is responsible for proper use of the skills laboratories in the institutions.

It is also the responsibility of the EDC to make recommendations to the school management. If there is a need for procurement of additional anatomical models or simulators that would enhance teaching and learning in the skills laboratories. In the absence of MCSP, the Director Nursing Services and the Director Clinical Services at the SMoH in each State are now coordinating the activities of the State level EDCs while the heads of institutions are coordinating the EDCs at the institution level.

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