

TAMANI: Tabora Maternal Newborn Health Initiative: Improving Reproductive, Maternal & Newborn Health in Tabora, Tanzania

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Introduction

The Tabora Maternal Newborn Health Initiative (TAMANI) project aims to improve the quality of reproductive, maternal, and newborn health services and address the existing barriers women face in accessing care. It is expected to *directly* support:

- 56 health planners
- 270 health care workers
- 1000 community health workers
- 298,900 women and girls of reproductive age
- 660,500 men and boys
- 68,600 newborns.

Purpose

The project will improve the skills of health care workers to effectively manage labour and provide quality emergency obstetric and newborn care while promoting respectful maternity care.

Methods

- Emergency obstetrical training (EmONC) is divided into Basic Emergency Obstetrical and Newborn Care (BEmONC) and Comprehensive Emergency Obstetrical and Newborn Care (CEmONC), which includes C/S and blood transfusion.
- Data collection tools were used to determine the level of knowledge acquisition and retention. These included: pre, post and mid (CEmONC only) tests; post-training Objective Structured Clinical Evaluations (OSCEs); and repeat OSCEs at 6 and 12 months post-training. The 4 OSCE stations include: PPH, Neonatal Resuscitation, Vacuum and Hypertension.
- A stepwise progression was chosen to allow for comparison of outcomes between HCPs who have received training and those waiting to be trained.
- Descriptive statistics were used to analyse the outcomes from the first training.

Partner Associations

- The partner associations included:
- CARE Canada (GAC grant holder)
 - CARE Tanzania
 - The Society of Obstetricians and Gynaecologists of Canada (SOGC)
 - Association of Gynecologists and Obstetricians of Tanzania Association (AGOTA)
 - Canadian Society for International Health (CSIH)
 - McGill University
 - Ifikara Health Institute

Characteristics of Participants

Designation	n	%
Medical Doctor (MD)	4	6
Clinical Officer (CO)	5	7
Assistant Clinical Officer (ACO)	1	1
Assistant Nursing Officer (ANO)	3	4
Registered Nurse (RN)	12	17
Enrolled Nurse (EN)	45	65

	Jan/Feb 2018	Jun/Jul 2018	Jan/Feb 2019	Jun/Jul 2019	Jan/Feb 2020	Jun/Jul 2020
Training #1 (2 Districts)	Training	OSCE	OSCE			
Training #2 (2 Districts)		Training	OSCE	OSCE		
Training #3 (2 Districts)			Training	OSCE	OSCE	
Training #4 (2 Districts)				Training	OSCE	OSCE

Results

Figure 1: CEmONC Evaluation by Provider Type

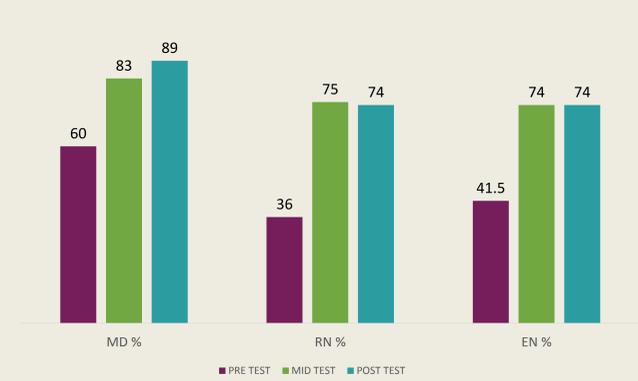


Figure 2: BEmONC Evaluation by Provider Type

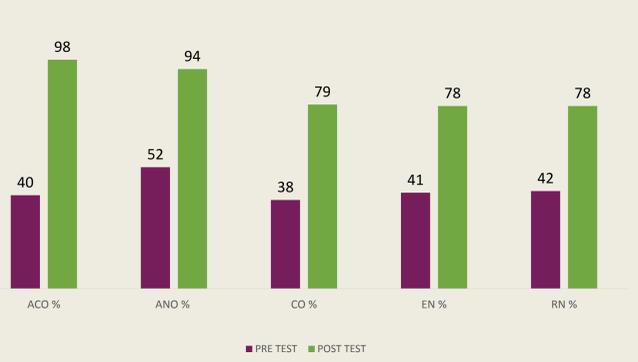


Figure 3: CEmONC OSCE Results by Provider Type

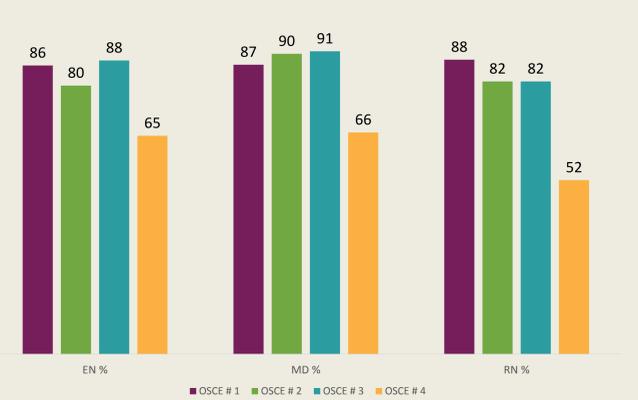


Figure 4: BEmONC OSCE Results by Provider Type

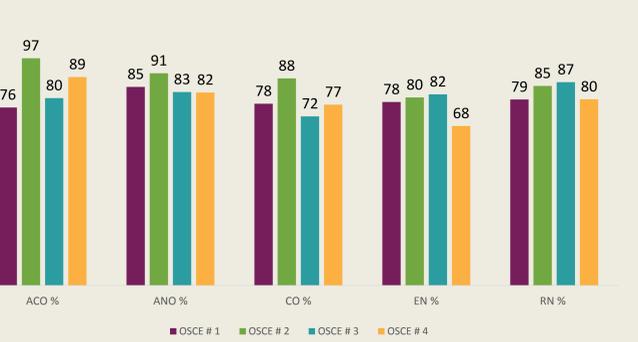
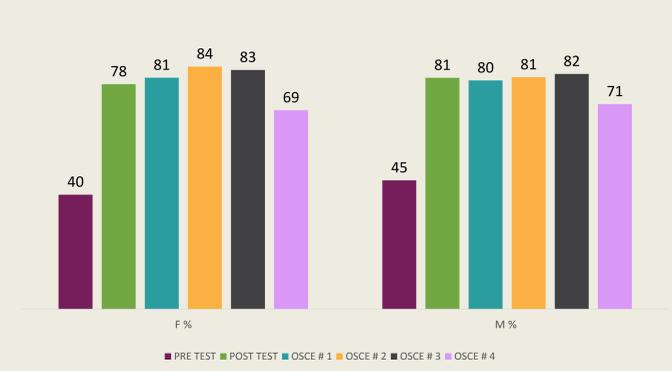


Figure 5: Evaluation Results by Gender



Discussion

- The majority of participants enrolled in the first EmONC trainings were enrolled nurses (EN) with a nursing diploma. The duration of training is 2 years.
- The 4 physicians attending the CEmONC course demonstrated the highest knowledge levels on all tests. This is expected as they would have the highest levels of education.
- All cadres of providers showed improvements in knowledge from the pre to post-tests. Test scores increased by 32% among CEmONC trainees and ranged from 24% to 47% among trainees in the BEmONC program. The overall average increase in test scores was 34%. This far exceeds our target of 20%.
- OSCEs are performed post-training to measure hands-on clinical skills. We expect good results as instruction, practice and evaluation has just occurred. We will be looking for retention of skills by repeating the same OSCEs at 6 and 12 months post-training.
- The SOGC considers a grade of 65% on an OSCE to indicate competence in that skill. With the exception of RNs undergoing CEmONC training, all providers achieved this benchmark for all 4 OSCE stations. The CEmONC RNs achieved an average of 52% on the Hypertension OSCE.
- Participants performed least well on the Hypertensive Diseases of Pregnancy OSCE. This is a complicated issue that requires practice to consolidate knowledge and skills. Competence is vital as hypertension is one of the top 3 contributors to maternal mortality.
- The participants were 51% female and 49% male. Males and females performed equally well on all evaluations.

Conclusions

- The provision of training in Emergency Obstetrical and Newborn Care is able to demonstrate an increase in knowledge among trainees.
- The simulation-based hands-on training resulted in demonstrated competency in all areas examined, among all providers.
- Further analysis following OSCE repeats at 6 and 12 months, in the providers home facilities, will determine retention of these life-saving skills. This will be combined with coaching sessions to consolidate skills and model knowledge sharing and skill development for other providers within the same facilities.

