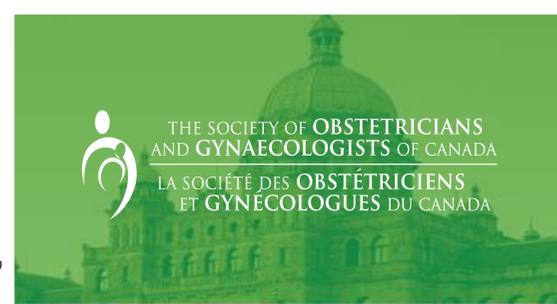


Preliminary Results From the Healthy Mothers and Children Project (DRC): Improving Knowledge and Skills in Emergency Obstetrical and Newborn Care

Suzanne Roberge¹, Victor Muela Difunda², Anifa Luyinga Kalay³, Liette Perron³, Donna Cherniak⁴, Annie Piché³

¹Centre Hospitalier Regional de Baie-Comeau ²Société Congolaise de Gynécologie et d'Obstétrique, ³Society of Obstetricians and Gynaecologists of Canada, ⁴Département de médecine familiale, Université de Sherbrooke



Introduction

In the Democratic Republic of Congo (DRC), too many mothers and newborns continue to die due to the inability to access quality maternal and newborn care. These numbers are even higher in isolated and conflict-affected regions in the eastern part of the country.

Upgrading the knowledge and skills of health providers in delivering quality Emergency Obstetrical and Newborn Care (EmONC) is an internationally-recognized strategy for saving mothers and newborns. SOGC's ALARM International Program (AIP) was retained as the training program of choice to improve EmONC delivery in a project currently being implemented in DRC.

DEMOGRAPHICS

Total population (000)	77,267	(2015)
Total under-five population (000)	13,876	(2015)
Births (000)	3,217	(2015)
Birth registration (%)	28	(2010)
Total under-five deaths (000)	305	(2015)
Neonatal deaths (% of under-five deaths)	31	(2015)
Neonatal mortality rate (per 1000 live births)	30	(2015)
Infant mortality rate (per 1000 live births)	75	(2015)
Stillbirth rate (per 1000 total births)	29	(2009)
Total maternal deaths	21,000	(2013)
Lifetime risk of maternal death (1 in N)	23	(2015)
Total fertility rate (per woman)	5.9	(2015)
Adolescent birth rate (per 1000 girls)	135	(2011)

INDICATORS

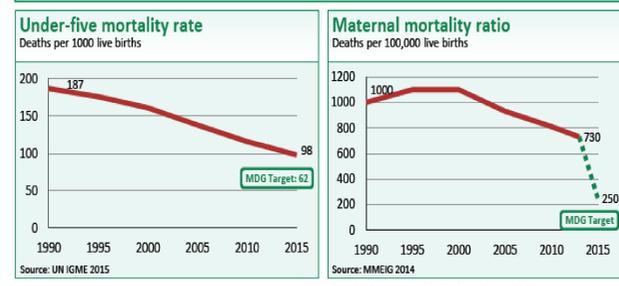


Figure 1. Demographics of DRC. Figure 2. Maternal, newborn, and child health indicators in DRC. Source for both figures: Countdown 2015: Maternal, Newborn and Child Survival. <http://countdown2030.org/country-profiles/congo-democratic-republic-of-the>

Project Description

The "Healthy Mothers and Children" project is a 4-year intervention implemented in two isolated provinces in DRC (Tshopo and Ituri) by Oxfam Québec, with the support of Global Affairs Canada. The project aims to reduce maternal and child mortality by improving access to, and delivery of, adapted health services for women and children. SOGC's technical support is provided to upgrade the knowledge and skills of health workers.

Purpose

The purpose of this study is to evaluate change in knowledge and skills of health workers trained in EmONC further to the delivery of a modified AIP training.

By the numbers

- 2 Provinces of intervention
- 15 Health zones targeted
- 215 Health centers involved
- 10 EmONC trainings delivered
- 257 Health providers trained
- 223 Trainees' evaluation scores reviewed

Methods

- The 5-day AIP training program was modified in light of the results of a health providers training needs assessments.
- SOGC trained a team of 13 local trainers (8 M, 5 F) to the modified AIP training program.
- Changes in knowledge and skill were assessed with pre and post tests and Objective Structured Clinical Examinations (OSCEs).
- Descriptive statistics were applied to describe differences between cadres of trainees.
- Knowledge and skills acquired will be consolidated by post-training support supervision activities.



Figure 3. Trainers and participants completing the Operative delivery OSCE.

Results

- 223 health providers (141 M; 82 F) completed modified AIP training and pre/post tests (Table 1).
- Pre-test scores were consistent across professional groups, but post-test scores ranged from 31% for A3 nurses to 76% for physicians (Figure 3).
- OSCEs were conducted during 6 of the training sessions, but were implemented variably.

	Ituri	Tshopo	Total
All health workers	166	57	223
Doctors	16	5	21
Nurses - A0	3	3	6
Nurses - A1	40	11	51
Nurses - A2	83	31	114
Nurses - A3	24	7	31

Table 1. Number of health providers trained by province and by professional group. See "Nursing in DRC" for details regarding nurse categories.

Nurse A3: Equivalent of nurse's aid; graduate of 2-year post primary education program. Category currently being phased out in DRC.

Nurse A2: Graduate of 4-year training program in nursing after 2 years of secondary school.

Nurse A1: Graduate of 3-year training program in nursing or midwifery from institute of higher learning or university.

Nurse A0: Same as above, plus 2 additional years in nursing or midwifery.

Nursing in DRC

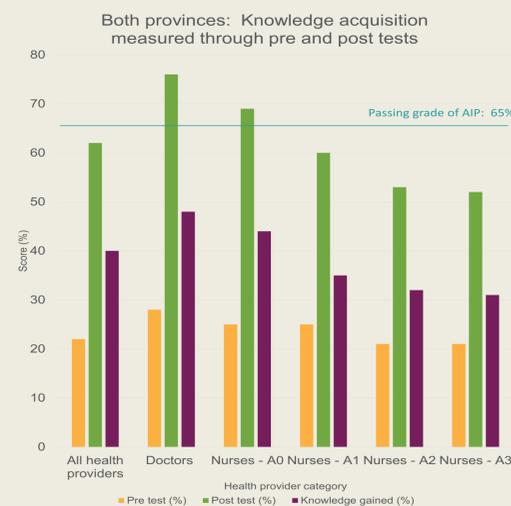


Figure 4. Average pre-and post test scores (%) and percentage knowledge gained by professional group.

Results (continued)

- 73% of participants completed at least one OSCE, and of these, 52% scored an AIP passing grade of 65%. Percentage of participants attaining 65% or more increased with level of training (Figure 5).
- 69% of providers who completed the OSCE related to newborn care and resuscitation showed competency, compared to 54% for shoulder dystocia, 44% for vacuum delivery, and 33% for post partum hemorrhage (Figure 6).

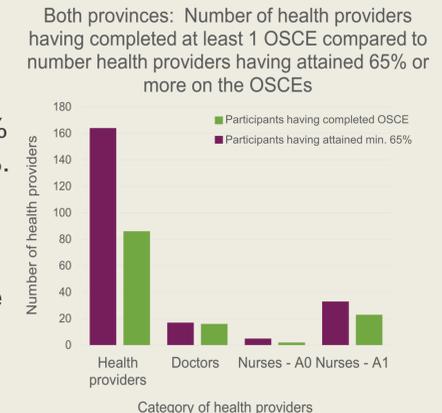


Figure 5. Number of OSCE completions vs. number of passing scores for a selection of health worker categories.

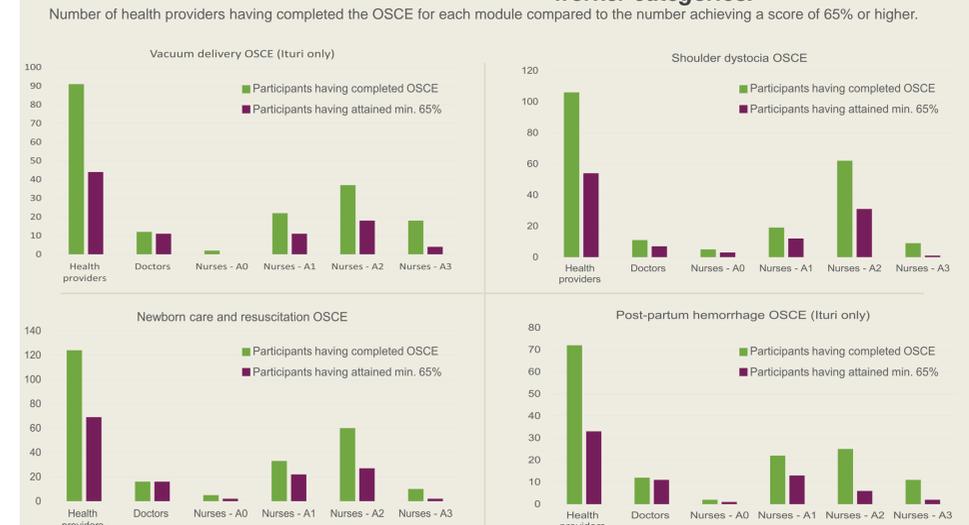


Figure 6. Number of OSCE completions vs. passing scores by health worker category.

Conclusion

- EmONC training improved knowledge of all trainees and competencies of some, especially doctors and higher cadre of nurses.
- Training was highly regarded by the majority of trainees, many of whom had not received medical education activities since graduating. Lack of CME may have contributed to low pre-test scores.
- Conflict in DRC directly impacts efforts to strengthen its health system. Challenges included: ensuring recommended trainer-trainee ratio; lack of experience of some training teams; lack of available/functional training equipment; and the need to utilize different training approaches in each province, impacting data analysis.