Emergencies in Clinical Obstetrics (ECO) Course and Competency-Based Assessment Used to Prepare Wake Forest Baptist Medical Center Nurses for New Labor and Delivery Service

Wake Forest® Baptist Health

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Background & Methods

- WFBH/CEAL partnered with The American College of Obstetricians and Gynecologists (ACOG) in adopting the Emergencies in Clinical Obstetrics (ECO) curriculum to train nurses in management of obstetrical emergencies in preparation for the opening of our new Birth Center.
- The ECO training included pre-learn video modules, lectures, and simulation exercises to reinforce skills on shoulder dystocia, breech birth, umbilical cord prolapse, and postpartum hemorrhage, with teamwork and communication strategies emphasized.
- Pre/post competency-based assessments and post course evaluations were administered to evaluate understanding of material/simulations and gauge proficiencies in dealing with emergencies presented during and after childbirth.

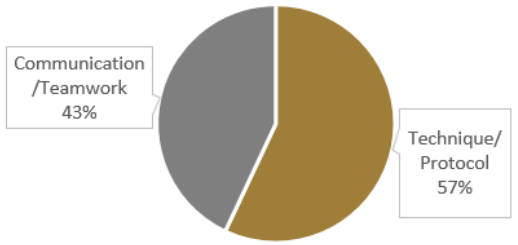
Results

- Pre-post competency results showed a statistically significant ($p < 0.05$) **improvement in competence following the simulation training** (pre-test = 77.3 $\pm$ 1.5; post-test = 89.0 $\pm$ 0.8; n=58).
- Post course survey results demonstrated that on a scale of 1 (not at all confident) to 4 (very confident), **the mean self-ranked score among nurses was 2.3 before the intervention and 3.5 afterward.**
- When asked to evaluate the class in terms of course material, simulation experience, and facilitator's ability to effectively teach, participants rated the **class 3.9 on a scale of 1 (strongly disagree) to 4 (strongly agree).**

Evaluation of Knowledge & Anticipated Action – Before/After ECO Course

	Before	After
Ability to maintain closed loop communication	1.9 ± 0.61	3.4 ± 0.63
Initial Actions - Postpartum Hemorrhage	2.0 ± 0.71	3.4 ± 0.61
Identification of Risk Factors - Postpartum Hemorrhage	2.5 ± 0.89	3.6 ± 0.61
Knowledge of how to initiate treatment - Postpartum Hemorrhage	2.1 ± 0.67	3.5 ± 0.50
Knowledge of impact of hemorrhage on maternal morbidity or mortality	2.3 ± 0.69	3.5 ± 0.58
Identification of Risk Factors - Cord Prolapse	2.4 ± 0.72	3.6 ± 0.49
Identification of Risk Factors - Breech Birth	2.2 ± 0.67	3.5 ± 0.50
Demonstration of communication - common obstetric emergencies	2.3 ± 0.63	3.6 ± 0.58
Correct Technique - common obstetric emergencies	2.5 ± 0.78	3.6 ± 0.57
Knowledge of basic protocols - common obstetric emergencies	2.7 ± 0.82	3.7 ± 0.45

Name ONE new thing you learned today that you will apply in the clinical setting and/or plan to share with a colleague



Simulation Course Evaluation

The facilitator set and maintained an engaging context for learning	3.8 ± 0.48
Through demonstration and debriefing, the facilitator helped me see how to improve or sustain superior performance	3.9 ± 0.47
The simulation experience helped me to better understand the work of other clinical professionals/team members	3.8 ± 0.49
The facilities and equipment were appropriate to the event and its purpose	4.0 ± 0.21
This learning event was relevant to the role I perform/my responsibilities	4.0 ± 0.21
I took responsibility for engaging in the simulation exercises and subsequent debriefing	4.0 ± 0.21

Scale 1=Strongly disagree, 2=Disagree, 3=Agree, 4=Strongly Agree

Conclusion

- Nurses reached competency-based assessment thresholds (>80%) and improved post-test scores following simulation training and didactic learning.
- Quality improvements have been implemented as the result of feedback. Example - normal delivery has been added to the course.
- Monthly simulation training established and now occurs in the Birth Center to regularly reinforce best practices during obstetric emergencies.

ACOG
The American College of Obstetricians and Gynecologists