A Cross-Sectional Survey Study of Nurses' Self-Assessed Competencies in Obstetric and Surgical Postanesthesia Care Units

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Purpose: *The purpose of this study was to identify priorities to guide development of an obstetric PACU continuing education curriculum.*
Design: *A cross-sectional, survey design was used.*
Methods: *A total of 54 obstetric nurses and 68 perianesthesia Phase I nurses at an academic, tertiary care center completed online surveys for self-assessment of recent education, competency, and encounters with 14 topics related to postanesthesia nursing (eg, basic life support [BLS], advanced cardiac life support [ACLS], neonatal resuscitation, and the American Society of Perianesthesia Nurses' standards).*
Findings: *Obstetric nurses reported low encounters, competency, and recent training in all study topics except oxygen administration, phlebotomy, BLS, and neonatal resuscitation. Perianesthesia Phase I nurses indicated high encounters, competency, and recent training for all topics except for ACLS and malignant hyperthermia. All nurses indicated the need for arranging debriefing sessions after life-threatening situations.*
Conclusion: *Results suggest that obstetric-postanesthesia care unit (PACU) nursing should focus on continuing education curriculum development, whereas main surgical-PACU emphasis should be on skills assessment. Future research should be directed to knowledge- (didactics) and skills- (simulation) educational programs, including maintenance and assessment of skills unique to obstetric-PACU care.*

Keywords: *self-assessed nursing competencies, postanesthesia care unit, obstetric nursing, cross-sectional research.*
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POSTANESTHESIA CARE HAS become a central component of perinatal and neonatal nursing. The current cesarean birth rate in the United States represents almost a third (32.9%) of all births,[1] and translates to 1.36 million women who require postanesthesia care each year. Although many of these women are healthy, more than 27% of pregnant women enter pregnancy with a co-existing medical disease (such as hypertension, chronic obstructive pulmonary disease, and heart disease).[2] Furthermore, delayed childbearing and the increasing prevalence of obesity contribute to increasing rates of obstetric complications such as gestational diabetes, preeclampsia, and cesarean delivery.[3]

Given the many responsibilities and expectations of labor and delivery (L&D) nurses, the purpose of this study was to gather data to direct improvements in our center's current continuing education curriculum specific to postanesthesia care. We conducted a cross-sectional survey to determine practicing registered nurses' self-assessed education, frequency of encounters, and degree of competencies specific to selected postanesthesia care topics. Because many professional organizations have promoted the importance of comparable postanesthesia care of patients regardless of the location where such care is given,[4-6] we compared self-assessments among nurses providing Phase I postanesthesia care in the setting of the L&D unit with those of Phase I perianesthesia nurses working in surgical postanesthesia care units (PACUs) within the same tertiary academic center.

Methods

This survey study was approved by the University of Michigan Institutional Review Board (IRB) and implemented at the University of Michigan Health System (UMHS), which is a tertiary care academic center. All registered nurses at UMHS who worked in either the Obstetric Unit or in any of the three surgical PACUs in the cardiovascular center, main university hospital, or ambulatory surgery center were invited to participate in a brief self-administered electronic questionnaire. Elements of informed consent were included at the beginning of each survey, and completion of the survey indicated informed consent.

At the time of study implementation, our hospital had an annual adult inpatient and outpatient surgical volume of 34,000 surgeries among the three PACUs, which were staffed by 110 registered nurses. A total of 133 registered nurses staffed the Obstetric Unit, which had approximately 3,800 annual deliveries; cesarean deliveries accounted for 30% of the births, and high-risk patients accounted for 30% to 40% of all deliveries. All registered nurses at UMHS completed basic life support (BLS) and cardiac arrest competency.

Obstetric nurses at our center provide care for the patient during labor, birth, recovery, and postpartum, and provide postanesthesia care for patients having cesarean deliveries. The current orientation curriculum covers fetal monitoring, labor support, obstetric emergencies, breastfeeding, newborn assessment, postpartum care, high-risk conditions, and operating room/PACU care and processes. Continuing education requirements include BLS certification, cardiac arrest competency, and neonatal resuscitation program (NRP) certification every 2 years, with various obstetric-specific topic reviews based on quality improvement data and staff assessment provided annually.

In addition, obstetric nurses responsible for Phase I PACU level of care are required to complete BLS and NRP certification. Advanced cardiac life support (ACLS) and pediatric advanced life support provider status are required only for nurses working in main surgical PACUs. Orientation in the adult PACU setting includes airway management, hemodynamic monitoring, and assessment over an 8- to 12-week time period. Education in other important skills (eg, neurologic assessment, hemodynamic monitoring, and interpretation) may have occurred during orientation in both the Obstetric Unit and the surgical PACU setting, but ongoing continuing certifications or competency measurements are not required. Knowledge of some skills often is assumed to be possessed by all nurses, regardless of work area.

The survey (Appendix) was created and implemented using SurveyMonkeyPro (Palo Alto, CA). The questions and topics were chosen by study investigators for relevance to Phase I postanesthesia care of obstetric patients undergoing cesarean delivery. Most survey topics were drawn directly from the list of recommended competencies for