

Department of Obstetrics and Gynecology

Evaluation of Ob/Gyn Resident Experience in Management of Postpartum Hemorrhage

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Background: Postpartum hemorrhage (PPH) is an obstetrical emergency traditionally defined as the loss of >500 ml of blood following vaginal delivery (VD) or >1000 ml of blood following cesarean delivery (CD). PPH affects approximately 5% of all deliveries in the U.S. and is a leading cause of maternal morbidity and mortality worldwide. There have been no studies quantifying the exact amount of experience that training physicians receive nor suggesting how much is required to achieve competence in the management of PPH.

Objectives: To evaluate the experience obtained by residents in managing PPH. We hypothesize that the exposure to PPH and experience managing this complication of childbirth is inadequate and requires curriculum supplementation.

Methods: A retrospective chart review was conducted of women who delivered at UMass Memorial Hospital between the dates of 7/31/07 and 6/30/08. Subjects were identified and included if they met one or more of the following inclusion criteria: CD with >1000 ml blood loss, VD with >500ml blood loss, postpartum hematocrit <26, transfusion, PPH documented in delivery summary. Charts were reviewed for age, ethnicity, obstetric history, history of PPH, etiology of current PPH, intervening resident postgraduate status, and interventions attempted for PPH treatment/management.

Results: During the study period there were 273 women identified with PPH out of the approximately 4500 deliveries per year, accounting for ~6% of deliveries at this institution. PGY-1 residents managed 72 women with uterotonics, 11 women with vaginal approach, 0 women with uterine sparing approaches, 0 women with peripartum hysterectomy, 6 women with transfusion, and 1 woman with interventional radiology as the primary caretaker. PGY-2 residents managed 129 women with uterotonics, 13 women with vaginal approach, 2 women with uterine sparing approaches, 0 women with peripartum hysterectomy, 11 women with transfusion, and 1 woman with interventional radiology as the primary caretaker. PGY-3 residents managed 83 women with uterotonics, 13 women with vaginal approach, 3 women with uterine sparing approaches, 2 women with peripartum hysterectomy, 9 women with transfusion, and 0 women with interventional radiology as the primary caretaker. PGY-4 residents managed 68 women with uterotonics, 3 women with vaginal approach, 3 women with uterine sparing approaches, 0 women with peripartum hysterectomy, 8 women with transfusion, and 0 women with interventional radiology as the primary caretaker.

Conclusions: The number of women with PPH at UMass Memorial is concordant with the accepted average in the US. Although there are no evidence-based guidelines, our results suggest that resident exposure to and management of PPH is insufficient. Residents across all postgraduate years receive substantial training in the use of uterotonics to treat PPH. However, the exposure to other treatment modalities, specifically surgical procedures, are not well distributed across the resident groups, nor are they sufficient to support the proficiency of any one particular resident class. We conclude that it is necessary to implement a supplemental curriculum using other means than actual clinical settings to support the clinical skills required of OB/Gyn physicians in training for the treatment of PPH.