**Table D-67. Evidence table for studies addressing management of PPH (Skupski 2006)**

| **Study**  **Description** | **Intervention** | **Inclusion/Exclusion**  **Criteria & Population** | **Outcomes** |
| --- | --- | --- | --- |
| Author:  Skupski et al., 200668  Country:US  Enrollment period:  Pre: 2000-2001  Intervention: late 2001  Post: 2002-2005  Birth setting:  Hospital  Facility characteristics:  Tertiary care academic hospital  Funding: NR  Design:  Pre-post | **Intervention:**  Safety/early intervention program that d 1)formation of obstetric rapid response team, modeled after the cardiac arrest team, including quarterly mock drills on all shifts for various emergency clinical scenarios. 2)development of clinical pathways, guidelines, and protocols designed to provde for early diagnosis of patients at risk for major obstetric hemorrhage and for streamline care in emergency situations. 3) separation of in-house obstetric and gynecologic responsibilities to allow the in-house obstetrician to focus on obstetric emergencies without fear of possibly neglecting gynecologic emergencies. 4) formally revised the duties of the in-house obstetrician to continuous and frequent monitoring of all patients on the Labor and Delivery unit, including those patients who had other private obstetricians. 5)Empowered care providers(including PAs, RNs, residents and the in-house attending physician) to immediately involve senior members of the Department whenever there was disagreement with the patient’s attending physician’s treatment plan (particularly in cases of hemorrhage and possible delay in recognition of the severity of hemorrhage). A senior member of the department then discussed the issue immediately with the attending physician to avoid delay and address problems earlier. 6) Through weekly didactic sessions, staff were educated to recognize the stages of hemorrhage described in the Advanced Trauma Life Support Manual and disseminated information regarding the new protocols for patient care.  7) Established the role of the Trauma Team that responds to assist in cases of severe obstetric hemorrhage.  Additionally, they 1) prepared for major hemorrhage in patients with known placenta previa. 2) Prepared for major hemorrhage in patients with suspected placenta accrete. 3) Obtained peripartum or intraoperative consultation with the Trauma Team as necessary. 4) Counseled patients with suspected placenta accrete about the likely decreased maternal mortality of planned cesarean hysterectomy. 5) Schedule cesarean delivery and cesarean hysterectomy in the main operating room under the direction of senior gynecologic surgeons.  **Groups:**  **G1:** 2000-2001, pre intervention  **G2:** 2002-2005, post intervention  N:  **G1:** 12  **G2:** 49  Duration of treatment: NR  Timing of treatment: NR  Order of treatment: NR  Length of follow-up: NR | **Operational definition of PPH:**  1 or more of the following: estimated blood loss of ≥ 1500 mL, need for blood transfusion, need for uterine packing, performance of uterine artery ligation, and performance of cesarean hysterectomy. => Called this “major obstetric hemorrhage” and differentiated it from regular PPH  **Definition of success of treatment**: Changes in patient care and outcomes (maternal mortality, lowest pH, and lowest temperature, occurrence of coagulopathy)  **Method of blood loss measurement:** NR  **Severity:** per definition, all d cases more severe than typical PPH  Inclusion criteria:   * Identified prospectively through an ongoing Quality Assurance program for the entire patient cohort (2000-2005), and meeting criteria of major obstetric hemorrhage   Exclusion criteria:   * all patients presenting with major obstetric hemorrhage during time period d   **Maternal age, yrs, mean ± SD:**  **G1:** 36.5 ± 6.0  **G2:** 34.2 ± 5.9  **Parity, n:**  **G1:** 1 (0-3)  **G2:** 1 (0-5)  **Weeks gestation:** NR  **Single pregnancy:** NR  **Multiple pregnancy:** NR  **Race/ethnicity:** NR  **BMI:** NR  **Baseline hemoglobin** NR  **SES:** NR  **Mode of birth:** NR  **Risk factors, n (%):**  Prior PPH: NR  Advanced maternal age: NR  Multiparity: NR  Race/ethnicity: NR  History of cesarean:  **G1:** 6 (50.0)  **G2:** 32 (65.3)  Labor induction/augmentation: NR  Fibroids: NR  Preeclampsia: NR  Eclampsia: NR  Pregnancy-induced hypertension: NR  Pre-existing hypertension: NR  Obesity: NR  Diabetes: NR  Placenta previa: NR  Multiple gestation: NR  Polyhydramnios: NR  Prolonged labor: NR  Chorioamnionitis: NR  Retained placenta: NR  Antepartum hemorrhage: NR  **Primary etiology of PPH, n (%):**  Atony: NR  Coagulopathy: NR  Trauma: NR  Placenta accrete  **G1:** 4 (33.3)  **G2:** 11 (22.4)  Placenta previa: NR  Placental abruption: NR  Retained placenta: NR  Uterine inversion: NR  Subinvolution: NR | **Blood loss (mL):**  **G1:** 2725 ± 1289  **G2:** 2429 ± 1214  p=0.46  **Transfusion (mL):**  **G1:** 1313 ± 1029  **G2:** 1194 ± 1547  p= 0.8  **ICU admission:** NR  **Anemia:** NR  **Length of stay:** NR  **Mortality:**  **G1:** 2 (16.7)  **G2:** 0 (0.0)  **Uterine preservation:** NR  **Future fertility:** NR  **Breastfeeding:** NR  **Psychological impact:** NR  **Harms of intervention:** NR  **Confounders:** NR  **Effect modifiers:** NR  **Harms:** NR |