Table D-31. Evidence table for studies addressing management of PPH (Markova 2012)

| **Study**  **Description** | **Intervention** | **Inclusion/Exclusion**  **Criteria & Population** | **Outcomes** |
| --- | --- | --- | --- |
| Author:  Markova et al.,  201236  Country:  Denmark  Enrollment period:  2003, 2005, and 2007  Birth setting: NR  Facility characteristics:  University hospital  Funding: None  Design:  Pre-post  (retrospective database audit) | **Intervention:**  Obstetric skills training for all staff including midwives, nurses, auxiliary nurses and doctors. Training d a variety of emergency obstetric situations associated with vaginal birth including PPH.  **Groups:**  **G1: “**Before” (2003) hardly anyone had training  **G2: “**During” (2005) almost all had recent training  **G3:** “After” (2007) the training was routine & had been repeated  N=number of deliveries  **G1T:** 3284  **G2T:** 3272  **G3T:** 3905  N=number of patients who had RBC transfusion for PPH  **G1:** 50  **G2:** 52  **G3:** 46  Duration of treatment: NR  Timing of treatment: Any transfusion within 7 days of birth  Order of treatment: NR  Length of follow-up: NR | **Operational definition of PPH:** NR  **Definition of success of treatment**: NR  **Method of blood loss measurement:** NR  **Severity:** NR  Inclusion criteria:   * Received RBC transfusion w/in 7 days of birth * Able to obtain medical record   Exclusion criteria:   * Unable to obtain medical record * Transfusion not associated with PPH * Bleeding due to medical conditions or anticoagulant treatment   **Maternal age, yrs, mean ± SD:** NR  **Parity:** NR  **Weeks gestation:** NR  **Single pregnancy:** NR  **Multiple pregnancy:** NR  **Race/ethnicity:** NR  **BMI:** NR  **Baseline hemoglobin:** NR  **SES:** NR  **Mode of birth, n:**  Vaginal,  **G1+ G2+G3:** 98  Cesarean  **G1+ G2+G3:** 50  **Risk factors:** NR  **Primary etiology of PPH vaginal birth, n (%):**  Atony  **G1:** 7 (14)  **G2:** 9 (17.3)  **G3:** 12 (26.1)  Trauma/laceration  **G1:** 4 (8)  **G2:** 9 (17.3)  **G3:** 12 (26.1)  Retained placenta  **G1:** 16 (23)  **G2:** 15 (28.8)  **G3:** 14 (30.4)  **Primary etiology of PPH cesarean birth, n (%):**  Atony  **G1:** 12 (24)  **G2:** 7 (13.5)  **G3:** 4 (8.7)  Operative complication incl uterine rupture  **G1:** 2 (4)  **G2:** 5 (9.6)  **G3:** 1 (2.2)  Placenta accreta  **G1:** 4 (8)  **G2:** 2 (3.8)  **G3:** 2 (4.3)  Placenta previa  **G1:** 2 (4)  **G2:** 3 (5.8)  **G3:** 1 (2.2)  Placental abruption  **G1:** 3 (6)  **G2:** 2 (3.8)  **G3:** 0 | **Blood loss:** NR  **Transfusion rates:**  **G1:** 1.5%  **G2:** 1.6  **G3:** 1.2  **Number of units, n (%):** 1 unit **G1:** 3 (6) **G2:** 2 (3.8) **G3:** 5 (10.9)  2 units **G1:** 32 (64) **G2:** 27 (51.9) **G3:** 26 (56.5)  3 units  **G1:** 3 (6)  **G2:** 7 (13.5)  **G3:** 8 (17.4)  4 units  **G1:** 4 (8)  **G2:** 9 (17.3)  **G3:** 5 (10.9)  5 + units  **G1:** 8 (16)  **G2:** 7 (13.5)  **G3:** 2 (4.3)  Total  **G1:** 162  **G2:** 172  **G3:** 135  **Immediate transfusions (within 24 hours), n:**  **G1:** 26  **G2:** 29  **G3:** 21  **Delayed transfusions (24 hours to 7 days), n:**  **G1:** 22  **G2:** 17  **G3:** 19  **Immediate/delayed-ratio**  **G1:** 1.2  **G2:** 1.7  **G3:** 1.1  **ICU admission:** NR  **Anemia:**  Pre-transfusion Hgb mmol/L mean,(median; range)  **G1:** 4.3 (4.4; 3.5-5.3)  **G2:** 4.4 (4.5; 3.7-5.0)  **G3:** 4.3 (4.3; 3.5-5.3)  Post-transfusion Hgb mean mmol/L  **G1:** 5.7  **G2:** 6.1  **G3:** 5.6  **Median time from delivery to manual removal of the placenta** (excluding cases where placental tissue was retained for more than 8 hours): min (n, range):  **G1:** 64 (11, 33-131)  **G2:** 70 (13, 23-497)  **G3:** 75 (13, 35-397)  **Need for anesthetic support, n**  **G1:** 18  **G2:** 28  **G3:** 24  **Time from decision to perform surgery to commencement of the intervention** (for manual removal, exploration of the uterus, & uterine massage or compression, minutes (n, range):  **G1:** 30 (15, 0-60)  **G2:** 30 (17, 0-80)  **G3:** 30 (14, 15-53.5)  **Delay for laceration or paravaginal hematomas**, min (n, range):  **G1:** 53.5 (2, 42-65)  **G2:** 60 (6, 15-185)  **G3:** 22.5 (6, 15-405)  **Length of stay:** NR  **Mortality:** NR  **Uterine preservation:** NR  **Future fertility:** NR  **Breastfeeding:** NR  **Psychological impact:** NR  **Harms of intervention:** NR  **Confounders:** NR  **Effect modifiers:** NR |