

Appendix C: Obstetric Hemorrhage Care Guidelines: Table Format Errata 7.18.22

	Assessments	Meds/Procedures	Blood Bank
Stage 0	All births		
<ul style="list-style-type: none"> Risk assessment Active management of 3rd stage 	<ul style="list-style-type: none"> Prepare for every patient according to hemorrhage risk factors Measure quantitative cumulative blood loss for every birth 	<ul style="list-style-type: none"> Active Management of 3rd Stage Oxytocin IV infusion or 10u IM 	<ul style="list-style-type: none"> Medium Risk: T&S High Risk: T&C 2 U Positive Antibody Screen (prenatal or current, exclude low level anti-D from RhoGam): T&C 2 U
Stage 1	Triggers: CBL ≥ 500mL vaginal / ≥ 1000 mL cesarean with <i>continued bleeding</i> or Signs of concealed hemorrhage: VS abnormal or trending (HR ≥ 110, BP ≤ 85/45, O2 sat < 95%, shock index 0.9) or Confusion		
<ul style="list-style-type: none"> Activate hemorrhage protocol Rule out hemorrhage causes besides atony 	<ul style="list-style-type: none"> Activate OB hemorrhage protocol and checklist Notify charge nurse, OB/CNM, anesthesiologist VS, O2 Sat q5 min Record quantitative cumulative blood loss q5-15 min Careful inspection <u>with good exposure</u> of vaginal walls, cervix, uterine cavity, placenta. If intra-op, inspect broad ligament, posterior uterus and placenta. 	<ul style="list-style-type: none"> IV Access: Minimum 18 gauge Increase IV fluid (LR) and oxytocin rate Fundal/bimanual massage MOVE ON to 2nd level uterotonic if no response (see Stage 2 meds below) Empty bladder: Straight cath or Foley with urometer 	<ul style="list-style-type: none"> Convert to High Risk and take appropriate precautions <p>Consider T&C 2 Units PRBCs <i>where clinically appropriate if not already done</i></p>
Stage 2	Triggers: <i>Continued bleeding</i> w/ CBL < 1500 mL or VS remain abnormal		
<ul style="list-style-type: none"> Sequentially advance through medications and procedures Mobilize team and blood bank support Keep ahead with volume and blood products Determine source of bleeding including concealed hemorrhage 	<ul style="list-style-type: none"> OB to bedside Mobilize team: 2nd OB, OB Rapid Response, assign roles Continue VS & record cumulative quantitative blood loss q5-15 min Complete evaluation of vaginal wall, cervix, placenta, uterine cavity Send additional labs including DIC panel If in Postpartum: Move to L&D/OR Evaluate for special cases: <ul style="list-style-type: none"> Uterine inversion Amniotic fluid embolism 	<ul style="list-style-type: none"> 2nd Level Uterotonic: <ul style="list-style-type: none"> Methylergonovine 0.2mg IM (<i>if no HTN</i>) or Carboprost 250 mcg IM (<i>if no asthma</i>) or <i>Only if hypertensive and asthmatic</i> Misoprostol 800 mcg SL 2nd IV access (minimum 18 gauge) Bimanual/uterine massage TXA 1 gram - may repeat in 30 min Vaginal: (typical order) <ul style="list-style-type: none"> Move to OR Repair any tears D&C: r/o retained placenta Place intrauterine balloon Intra-op Cesarean: (typical order) <ul style="list-style-type: none"> Inspect broad ligament, posterior uterus, and placenta Uterine sutures Place intrauterine balloon Uterine artery ligation 	<ul style="list-style-type: none"> Notify Blood Bank of OB hemorrhage Bring 2 Units PRBCs to bedside, consider use of Emergency Release products (un-crossmatched) and transfuse per clinical signs – <i>do not wait for lab values</i> Use blood warmer for transfusion Consider activating MTP if there is <u>continued bleeding</u>
Stage 3	Triggers: <i>Continued bleeding</i> with CBL > 1500mL or > 2 units PRBCs given or abnormal VS or Suspicion of DIC		
<ul style="list-style-type: none"> Initiate Massive Transfusion Protocol Invasive surgical approaches 	<ul style="list-style-type: none"> Expand team <ul style="list-style-type: none"> Advanced GYN surgeon 2nd anesthesia provider OR staff Adult intensivist Repeat coags & ABGs Central line Family support 	<ul style="list-style-type: none"> Selective embolization (IR) Laparotomy <ul style="list-style-type: none"> Uterine sutures Uterine artery ligation Hysterectomy Patient support <ul style="list-style-type: none"> Warmer for IV fluids Upper body warming device SCDs 	<ul style="list-style-type: none"> Activate Massive Transfusion Protocol Transfuse aggressively Near 1:1 PRBC: FFP 1 PLT apheresis pack per 4-6 units PRBCs

This table was adapted from the Improving Health Care Response to Obstetric Hemorrhage: A California Quality Improvement Toolkit, funded by the California Department of Public Health, 2015; supported by Title V funds.