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| VCH Color Logo | Coastal Simulation Program  Scenario Name:  Major Bleeding  Massive Transfusion Protocol |  |

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| **Learning Objectives:**  By the end of the debriefing the participants should be able to:  *Knowledge & Skills*:   * Rapidly recognize deterioration in Pt status * Recognize and initiate treatment options for major hemorrhage / hypovolemia * Initiate massive transfusion protocol (MT) * Correctly utilize a rapid infuser / IV fluid warmer * Anticipate and recognize risks associated with massive transfusions   *Attitudes and Judgement:*   * Demonstrate good role clarity and delegation of roles and responsibilities early in scenario * Demonstrate examples of effective communication during the scenario * Exhibit elements of good teamwork * Demonstrate effective resource utilization * Exhibit good situational awareness/ global awareness – recognizing limitations, avoiding fixation error | | | | | | |
| **Patient Description:**  **Name:**  Age: 75  Weight: 90kg  Hight: 175 cm    *Hx of current condition*:  C/o mid-abdominal pain radiating to the back. States this has been going on for weeks and last couple of days it has gotten really bad. Had CT abdomen and chest: positive for a large (6.5 -7 cm) infra-renal AAA. Sent up to PAR in anticipation of AAA repair by Dr. Hunter later today.  Orders: NPO, Hydralazine and Labetalol to keep SBP < 140.  ECG and arterial line monitoring.  Pt PMHx: Hypertension, PVD, Hypercholesterolemia, COPD, CAD with MI in 2006, gout.  Social Hx: Smoker 40-pack year,  Occasional drinker | | | **Skills required prior to simulation/learner assessment:**  Psychomotor: Stabilize VS, recognize and treat hypovolemia, establish sufficient IV access (2 large bore IVs), rapidly infuse bolus of a crystalloid (NS) In event of deteriorating status bring a rapid infuser and start MT protocol.  Cognitive: Assessment/Tx of patient with hypovolemia related to major bleeding, anticipation of initiating MT protocol, recognition of risks associated with the MT.  Teamwork: Start organizing effective team. Assume / assign roles and responsibilities (designate contact person for communication with blood-bank, designate a “runner” and a rapid infuser operator.  Who are my learners?  PAR / DCSS RNs, Anesthesiologist | | | |
| **Monitors:**  ECG, SpO2, BP cuff, arterial line. | | | | | | |
| **Physical Props/Equipment:**  ECG Monitor, medication tray, simulated PRBC and plasma, IV fluids,  large container for fluid collection, rapid infuser with tubing. | | | | **References, Resources, Protocols, Algorithms, or Evidence Informed Practice Guidelines:**   * **VCH Massive Transfusion (MT) flow chart.** | | |
| **Equipment available in room:**  IV Pump, Rapid Infuser. | | | | | | |
| **Room set up**:  PAR bay 22 | **Medications & Fluids:**  Normal Saline,  PRBC, Plasma, Platelets. | **Diagnostics:**  G&S, CBC, Coags, ABG plus, Fibrinogen, Extended Lytes. | | | **Documentation forms:**  Transfusion Record,  PAR flow-sheet | **Confederates** |
| **Mannequin:**  **ACE – High Fidelity Adult –** | | | | | | |
| **Personnel:**  RNs, physician, blood-bank staff. | | | | | | |

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| **Scenario Transitions / Patient Parameters** | **Effective Management** | | **Consequences of Ineffective Management** | **Notes** |
| **phase 1 Setting:** | | | | |
| **Initial VS:**  BP 95/45  HR 130 (sinus)  Temp: 36.6  RR 26/min  O2 sats: 97% on r/a  **GCS:** 15, anxious.  **Physical exam**:  Pale  Distended, tender abdomen.  Bedside ultrasound very difficult to obtain due to blood in abdomen. | Call anesthetist stat Establish IV access  Administer bolus of NS  Obtain blood samples (including G & S)  Continue monitoring VS  Anticipate MT  Bring rapid infuser to the bedside  Prime RI tubing. | | Pt deteriorates |  |
| **phase 2** | | | | |
| **VS:**  BP 70/40  HR 140 (sinus)  O2 Sat: 93 % r/a  RR 30/min shallow  **Neuro:**  Panicky, restless.  **Physical exam**:  Pale, diaphoretic, abdomen distended, rigid, tender.  C/o chest and abdominal pain. | Attach RI  Bolus 1L NS or PL or RL  100% O2 via mask, assist with resps.  Anesthetist calls MT protocol.  OR and Dr. Hunter notified.  Continue crystalloids until PRBC available.  Administer PRBC and Plasma once available. | | Pt deteriorates | This phase will continue until 8 units of and 4 units of plasma are given. |
| **phase 3** | | | | |
| **VS:**  BP 100/40  HR 100 (sinus)  O2 Sat: 100 % with O2 at 10l via mask  RR 26/min.  **Physical exam**:  Pale, diaphoretic, abdomen distended, rigid, tender.  No more chest pain. | Assess for complications  Continue monitoring vital signs  Prepare for OR  Repeat blood work  12 lead ECG  More blood products until OR / surgeon available. | |  |  |
| Possible debrief points:   * Role allocation, teamwork, closed loop communication. * Common signs of hypovolemia due to major bleeding. * MT protocol (discussion) * Complications of MT (discussion) * Use of the RI ( Q&A) | | Debrief notes | | |