



Managing Inventory during Blood Shortage

For Versiti to maintain a sustainable blood product inventory level – and meet the needs of all hospital partners—it is crucial that we work together. Please order conservatively to ensure all communities and patients have access to this precious resource.

Communication and Coordination with Hospital Leaders

- Identify your hospital's emergency disaster plan/COVID-19 Plan
- Identify which leaders and/or committees in your hospital should be notified
- Identify a liaison who will be in contact with leadership and blood supplier to address inventory issues
- Coordinate with Pharmacy to ensure sufficient inventory of alternative and adjuncts to transfusion
 - ✓ Appropriate levels of KCentra (4F-PCC), Tranexamic acid, DDAVP and vitamin K
 - ✓ Consider emergency approval of RiaSTAP (fibrinogen concentrate)
- Facilitate discussion and open communication with all physician groups on blood product needs for their patients
 - ✓ Ensures sufficient inventory to meet the patients' needs
 - ✓ Allows Transfusion Service staff to have early communication with blood center

Strategies for Transfusion Services During Times of Blood Product Shortage

- Train staff on plans/strategies to implement when notified of blood shortage
- Identify amount of blood bank supplies as required for situation (i.e. reagents, tubes, bags)
- Prospective review by transfusion service medical director of ALL transfusions prior to blood product release, particularly those components that are at critical level
 - Items to consider when reviewing transfusion orders:
 - ✓ Number of units requested
 - ✓ Indication for transfusion including patient symptoms
 - ✓ Is patient symptomatic, actively bleeding, or a high risk for acute coronary syndrome?
 - ✓ If no indication noted, contact provider for clarification
- Reconcile RBC inventory with surgery schedules in AM and then again in the PM with the next day's surgery schedule
- Implement and enforce best blood inventory management practices:
 - Do not hold or reserve RBCs for patients; utilize electronic crossmatch and allocate just prior to issue for transfusion
 - Consider not holding pre-set MTP packs and keep units with general inventory
 - Move any remote RBC units to main transfusion service site
- Reduce total inventory by minimum of 25% (based on community inventory level)
- Place blood orders based on hospital usage and patient need
- Avoid any blood wastage due to outdate; consider transferring products within your hospital system
- In an anticipated prolonged period of blood supply shortage:
 - Prepare for use of split units, particularly for platelet transfusions
 - ✓ Can your staff perform entire dividing/aliquoting process? (equipment, supplies, procedure, computer capability)
 - ✓ Can your staff perform dividing/aliquoting process if empty bag(s) attached by blood center?
 - ✓ Do you need blood center to provide a pre-made aliquot/divided product?
 - ✓ Can you accept aliquot/divided product into your inventory?



- Accept red blood cell units from donors that have preexisting red cell antibodies
- Accept low yield platelets (platelet count $<3.0 \times 10^{11}$) and platelets with short outdates
- Anticipate that blood supplier may be unable to supply whole blood for trauma, HLA matched platelets, and/or antigen-negative RBCs
- Strategies for massively bleeding patients:
 - ✓ Use A plasma instead of AB plasma for emergency transfusions
 - ✓ Consider decreasing units set aside for MTP (i.e. going from 6 to 4 in a pack)
 - ✓ Convert O Negative to O Positive in trauma/massive bleeding events
 - ✓ Facilitate efforts to obtain confirmatory ABO type for rapid transition to type-specific blood products

Communication Strategies with Clinicians to Conserve Blood During Times of Shortage

- Promote strict adherence to your transfusion guidelines
- Discuss with key physician leaders/department chairs decreasing hemoglobin and platelet transfusion threshold levels, and increase surgical INR threshold levels, if the change is not likely to place the patient at risk
 - ✓ Consider Hemoglobin threshold ≤ 6.5 g/dL (or lower) for asymptomatic, non-bleeding patients
 - ✓ Consider Platelet threshold of 10K without bleeding & dissuade two-unit transfusions (even for outpatients)
 - ✓ Consider INR 2.0 for FFP transfusions and strict adherence of use *only* when bleeding or impending surgical procedure
- Promote strict adherence to one-unit transfusions (RBC and platelets) for inpatients and outpatients unless actively bleeding
- Promote Patient Blood Management (PBM) practices with your clinicians
 - ✓ Recommend use of hemostatic agents to minimize bleeding when indicated in active bleeding or surgical procedures (e.g. antifibrinolytics, 4F-PCCs, DDAVP, vitamin K)
 - ✓ Do not use FFP to reverse hypercoagulability due to warfarin when patient is not bleeding. Use vitamin K (preferentially IV).
 - ✓ Consider use of oral and/or IV iron for asymptomatic patients with iron deficiency anemia; use of erythropoietin as indicated
- Develop practical, sustainable daily communication channels with Surgeons, Anesthesia, ER, Oncology and “hospital incident task force” in order to:
 - ✓ Relay adequacy of inventory and obtain information on their anticipated needs
 - ✓ Discuss means for availability of blood for patients requiring chronic transfusion
 - ✓ Discuss need to delay or cancel elective surgeries
- Communicate with your physicians to encourage blood donation by healthy family members

We would like to take this opportunity to thank you for your support and collaboration during this difficult period. By working together, it allows distribution of blood inventory where it is needed most to minimize impact on patient care.

Any questions please reach out to Jenny Curnes jcurnes@versiti.org or TXMDSupport@versiti.org