Adult Transfusions

Further Information Is Available By Contacting The Medical Director of the Transfusion Medicine Service: Zbigniew M. Szczepiorkowski, M.D. or the Blood Bank Medical Director, Nancy M. Dunbar M.D.

Refer to the Transfusion Committee Policy, Blood Component Administration, for complete procedural information.

The following recommendations are based on published evidence-based practice regarding appropriate transfusion indications. The transfusion committee monitors the compliance of transfusion therapy practice with the transfusion policy through prospective and retrospective review of blood component orders submitted by ordering providers using physician order entry. Refer to the Clinical Policy, Transfusion Audit Policy, for complete information.

Transfusion Policy for Patients with ACTIVE AND CLINICALLY SIGNIFICANT BLEEDING:

- Patients with evidence of hemorrhagic shock, or active bleeding leading to hemodynamic instability are transfused with blood components (i.e. red blood cells, platelets, plasma and cryoprecipitate) as needed to meet the clinical needs of the patient and optimize laboratory values.
- Laboratory testing (i.e. hemoglobin, PT/INR, platelet count, fibrinogen) shall be performed to assess the response to transfusion and the need for ongoing blood component support. The Massive Hemorrhage Panel (MHP) is the fastest way to obtain these data (results typically available within 30 minutes).
- Transfusion Medicine Service physicians are available on call at all times to assist with the appropriate transfusion support of patients requiring massive transfusion. Please contact the Blood Bank at 5-7207 to request Transfusion Medicine Service assistance.

Transfusion Policy for NON-BLEEDING PATIENTS:

Red Blood Cells (RBCs):

All RBC transfusions in non-bleeding inpatients shall be ordered as single units.

If RBC transfusion is indicated based on hemoglobin level, post-transfusion hemoglobin shall be obtained prior to ordering additional units of RBC.

The following patients shall be considered as candidates for RBC transfusion:

- All medical and surgical inpatients with a hemoglobin level less than or equal to 7 grams/dL
- Inpatients with Active Acute Coronary Syndromes (ACS) with a hemoglobin level less than or equal to 8 grams/dL

Platelets:

All platelet transfusions in non-bleeding patients shall be ordered as single units (i.e. Apheresis Platelets).

If platelet transfusion is indicated as prophylaxis based on platelet count, a post-transfusion platelet count drawn within 15-60 minutes post transfusion shall be obtained prior to ordering additional units of platelets.

The following patients shall be considered as candidates for platelet transfusion:

- Stable inpatients with platelet count less than 5,000/microliter
- Febrile inpatients or inpatients with recent hemorrhage and platelet count less than 10,000/microliter
- Outpatients, pediatric patients or patients on heparin and platelet count less than 20,000/microliter
- Patients with invasive procedure planned within 4 hours following platelet transfusion and platelet count less than 50,000/microliter
- Patients with CNS, eye or respiratory bleeding and platelet count less than 100,000/microliter
- Stable premature infants with platelet count less than 50,000/microliter
- Critically ill premature infants with platelet count less than 100,000/microliter
- Patients with platelet dysfunction due to cardiac bypass
- Patients with platelet dysfunction due to anti-platelet medications

Plasma:

Plasma transfusions shall be ordered using patient weight based dosing. Plasma may be ordered in mLs for patients weighing less than 25 kg.

- 1 unit for weight 25-36 kg
- 2 units for weight 37-56 kg
- 3 units for weight 57-76 kg
- 4 units for weight 77-96 kg
- 5 units for weight greater than 96 kg

Orders that are not consistent with weight based dosing will result in a page to the Transfusion Medicine Service physician to investigate the appropriateness of the dose requested.

If plasma transfusion is indicated to correct an elevated INR, a post-transfusion INR shall be obtained prior to ordering additional plasma.

The following patients shall be considered as candidates for plasma transfusion:

- INR greater than or equal to 2.0
- INR greater than or equal to 1.5 for neurosurgical patients

Cryoprecipitate:

All cryoprecipitate transfusions shall be ordered using patient weight based dosing:

- 1 unit for 0-5 kg (contains 1 single unit)
- 1 unit for 06-10 kg (contains 1 pool of 2 units)
- 1 unit for 11-15 kg (contains 1 pool of 3 units)
- 1 unit for 16-20 kg (contains 1 pool of 4 units)
- 1 unit for 21-40 kg (contains 1 pool of 5 or 6 units)

- 2 units for 41-60 kg (contains 2 pools of 5 and/or 6 units)
- 3 units for 61-90 kg (contains 3 pools of 5 and/or 6 units)
- 4 units for 91-120 kg (contains 4 pools of 5 and/or 6 units)
- 5 units for > 120 kg (contains 5 pools of 5 and/or 6 units)

Orders that are not consistent with weight based dosing will result in a page to the Transfusion Medicine Service physician to investigate the appropriateness of the dose requested.

If cryoprecipitate transfusion is indicated to correct a decreased fibrinogen, a post-transfusion fibrinogen shall be obtained prior to ordering additional cryoprecipitate.

The following patients shall be considered as candidates for cryoprecipitate transfusion:

- Fibrinogen less than or equal to 100 mg/dL
- Fibrinogen less than or equal to 120 mg/dL (with consumptive coagulopathy or hemorrhage)