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.

Transfusion 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 clinical recommendations.

Transfusion Policy for Patients with ACTIVE AND CLINICALLY SIGNIFICANT BLEEDING:

- Patients with evidence of hemorrhagic shock and/or hemodynamic instability or other active, life-threatening bleeding 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. In the setting of active bleeding, the Massive Hemorrhage Panel (MHP) is recommended to guide goal-directed resuscitation.
- 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 physician 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 Myocardial Infarction with a hemoglobin level less than or

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:

- Active bleeding, life threatening
- Inpatient, non-bleeding (</= 10k/uL)
- Outpatient, non-bleeding (</= 20k/uL)
- Invasive procedure w/in 4 hrs, low risk (e.g., lumbar puncture) (</= 20k/uL)
- Invasive procedure w/in 4 hrs, high risk (e.g., major surgery) (</= 50k/uL)
- Therapeutic anticoagulation (</= 50k/uL)
- ECMO (</= 80k/uL)
- Platelet dysfunction (e.g., medication, bypass, congenital disorder)
- Pre-term neonate, without major bleeding (</= 25k/uL)

In general, non-bleeding patients receiving prophylactic platelet transfusions are limited to ONE UNIT PER CALENDAR DAY. Due to limited inventory, support of bleeding patients not requiring massive transfusion is generally limited to TWO UNITS PER CALENDAR DAY. Consultation with the Transfusion Medicine Service is recommended in these situations for pre-approval of one-unit Q12 hours or consideration for a half-unit Q6 hours to approximate continuous platelet infusion.

When prophylactic platelet transfusions are given prior to planned procedures and the desired platelet count is not achieved; a second unit may be approved for transfusion during the procedure.

Consultation with the Transfusion Medicine Service is recommended when patients are requiring daily platelet transfusion and/or when platelet transfusion fails to achieve an expected response in platelet increment.

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:

- Active bleeding, life threatening
- Invasive procedure w/in 4 hrs, high risk (e.g., major surgery) (INR >/=2.0)

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 units)
- 2 units for ≥ 41 kg (contains 2 pools of 5 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:

- Active bleeding, life threatening
- Consumptive coagulopathy/low fibrinogen (</= 150 mg/dL generally, </= 300 mg/dL obstetric patients)