

Transfusion Medicine Elective Rotation for Emergency Medicine Residents

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Rotation Duration: One- and two-week rotations available (Single day teaching available if on other rotations)

Rotation Goals and Objectives

One-Week Rotation

1. Define the storage requirements and shelf life of the blood components
2. Differentiate the elements of pretransfusion testing
3. Describe and observe ABO/Rh typing
4. Describe and observe antibody screening
5. Define the principles of the DAT (direct antiglobulin, or Coombs test), and observe this testing
6. Define and observe crossmatching of red blood cells
7. Describe the implications of a red blood cell antibody on compatibility testing and turnaround times
8. Define the purpose of irradiation and leukoreduction of blood components
9. Discuss evidenced-based transfusion guidelines
10. Discuss common adverse transfusion reactions

Two-Week Rotation

1. Includes the One-Week Rotation objectives, plus the following:
2. Compare emergent (uncrossmatched) and non-emergent (crossmatched) blood product orders
3. Discuss principles and best practices of massive transfusion protocols
4. Describe the specifications and utility of low-titer group O whole blood
5. Describe the general principles of viscoelastic testing

Rotation Expectations

- Meet in the Blood Bank at 0900 on the first day of the rotation to establish the schedule of learning activities and assignments
- Attend daily transfusion medicine rounds with the attending and pathology resident, including rounding on teams around the hospital: ICUs, Hematology-Oncology, OBGYN, Pediatrics, ED, etc.
- Attend weekly hematopoietic cellular therapy and transplantation conferences (details will be provided)
- Attend other conferences or learning opportunities, when applicable (details will be provided)
- Complete all reading assignments, as prescribed by the attending
- Complete all practical exercises, as prescribed by the attending
- Deliver a 10- to 15-minute informal didactic presentation ("Blood Bank Chat") to the attending, resident, and Blood Bank technologists at the conclusion of the rotation (any topic related to transfusion medicine) with one page handout

Rotation Safety

- All individuals must follow institutional protocols to promote the safety of our team and our patients.
- A resident may not come to the Blood Bank if they have a fever or respiratory symptoms (dry cough, shortness of breath, unusually rapid breathing, or extreme fatigue).
- Please wash your hands frequently, cover your mouth if you cough/sneeze, disinfect surfaces that you use, and do not share food/eating utensils/writing utensils.
- Please wear personal protective equipment when working at the bench or handling patient specimens. Disposable lab coats and gloves are provided by the Blood Bank.

Rotation Dress Code

- The resident is expected to dress according to Banner – University Medical Center Tucson professional standards. Please consider bringing a sweater or extra layer of clothing, as the Blood Bank can be cold at times.
- A white coat must be worn when on inpatient units or in outpatient clinics. A hospital identification badge must be visible at all times.

Rotation Professionalism

- The resident will comply with all applicable regulations/standards and will treat colleagues at all levels with respect.
- Please note the Blood Bank is an inclusive environment that values diversity, appreciates openness, and promotes equality.

Rotation Educational Resources

- AABB Technical Manual, Current Edition. AABB Press: Bethesda, MD
- Shaz BH et al. Transfusion Medicine and Hemostasis: Clinical and Laboratory Aspects. Elsevier, 2019
- McPherson RA, Pincus MR, editors. Henry's Clinical Diagnosis and Management by Laboratory Methods. 22nd edition, 2011
- Popovsky MA. Transfusion Reactions, 5th edition. AABB Press, 2021
- Reid M, Lomas-Francis C, editors. The Blood Group Antigen FactsBook, 2nd edition. Academic Press, 2003
- Roseff SD, editor. Pediatric Transfusion: A Physician's Handbook, 3rd edition. AABB Press, 2009
- Waters JH, Shander A. Perioperative Blood Management: A Physician's Handbook, 2nd edition. AABB Press, 2009
- Blood Bank Guy: www.bbgy.org
- AABB (standards, accreditation, and quality implementation in transfusion medicine and cellular therapies): www.aabb.org