

University of Massachusetts Medical School

Anesthesiology Residency Program

Clinical Base Year Rotation in Transfusion Medicine

This rotation in Transfusion Medicine will be two weeks in length, during the last two weeks of the assigned block, and occur at the University Campus. As anesthesiologists, the responsibility for making many transfusion-related decisions is part of the necessary skills required for quality care. This rotation is therefore designed to provide the anesthesiology CBY resident with a solid fund of medical knowledge relating to transfusion therapy, particularly as it applies to patients during the perioperative period.

Principles of blood testing, the review of transfusion policies, the indications for transfusion therapy, and perioperative decision-making will be emphasized. There will be no designated call duties during this rotation and the resident work hours will comply with the ACGME requirements. The resident will not be allowed to take vacation during this rotation.

GOALS

- To provide the resident physician with a structured clinical experience in general clinical transfusion medicine.
- To help the resident develop a deeper level of understanding and appreciation of clinical transfusion medicine.
- To help the resident develop an appreciation for the blood supply and blood product utilization management.
- To aid the resident in developing an understanding of testing in the coagulopathic patient.
- To facilitate resident's evidence-based perioperative decision-making ability as it relates to:
 - a. Transfusion therapy
 - b. Appropriate clinical laboratory blood testing

OBJECTIVES

Following this rotation, anesthesiology residents will be able to:

Patient Care

- Knowledgeably describe the risks and benefits of blood component therapy to a patient when obtaining an informed anesthesia consent.
- Develop rational, evidence-based management strategies for transfusion therapy
- Institute peri-operative blood component therapy safely and knowledgeably
- Discuss the approach to transfusion related complications

Medical Knowledge

- Describe the readily available blood products and indications for use
- Have a basic knowledge of blood component preparation, storage, and processing

- Discuss the compatibility and relative frequencies of blood groups and their implication in blood availability
- Describe the metabolic and hemostatic complications of massive blood transfusion
- Have a basic understanding of blood grouping, Rh typing, antibody screening, direct and indirect antiglobulin testing
- Discuss the current infectious and non-infectious risks and potential adverse events related to transfusion therapy
- Explain the utility and risks of uncrossmatched group O and group specific blood
- Identify situations in which transfusions are of questionable benefit or contraindicated.
- Discuss the risks and benefits of emergency release of pre-labeled emergency supply blood.
- Discuss how results of coagulation testing guide appropriate blood product selection.

Interpersonal Skills and Communication

- Communicate effectively with physician colleagues and members of other health care professions to assure comprehensive patient care.
- Communicate clearly and effectively with blood bank personnel

Professionalism

- Learn to interact professionally toward all members of the health care team
- Understand the ethical and privacy issues affecting the clinical laboratory
- Demonstrate regular and punctual attendance and participation in rounds, conferences and rotation responsibilities

Practice-Based Learning and Improvement

- Identify and acknowledge gaps in personal knowledge and skills in the care of patients with acute hematologic disease.
- Develop a personal strategy to maintain and update knowledge necessary to treat peri-operative hematologic conditions appropriately and cost-effectively

Systems-Based Practice

- Discuss how transfusion service policies ensure patient safety.
- Understand the role of transfusion service laboratory in the health care system, and the importance of reliable, cost-effective and timely provision of, dosing and therapeutic monitoring of blood components
- Be able to explain blood wastage in terms of financial and social cost.

Evaluations

Evaluations will include:

- Direct observation of clinical performance
- Written evaluation