

How to Improve Knowledge in Transfusion Medicine-The Development of a Blood Bank Rotation for Anesthesiology Residents in the Clinical Base Year

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Learner Audience: Anesthesiology Faculty and Residents

Background: knowledge of blood products and utilization is expected from anesthesiologists. The perioperative use of blood products is necessary to manage blood loss and/or coagulopathy during surgery. Unnecessary use of blood products is expensive; and can pose significant risks patients. The American Board of Anesthesiology In-Training Exam (ABA-IT) results from 2005-2007 show anesthesia residents at an early training level answered < 60% of the Hematologic -Organ Based Clinical questions correctly. Advanced anesthesia residents (CA-3) still demonstrated significant knowledge gaps with only 70% correctly answered questions.

Needs Assessment: To improve the knowledge of anesthesia residents at our institution, we have developed a rotation in Transfusion Medicine in the Clinical Base Year in cooperation with the Department of Pathology.

Hypothesis: We hypothesize that training residents in the clinical base year in the practice of hematological medicine will significantly increase their knowledge and effective use of blood and blood products

Curriculum Design: Rotation: clinical base year one month

- a) perform important blood tests in the laboratory under guidance and supervision including PT/PTT/Thromboelastogram [TEG]/ABO-testing/Cross-match;
- b) follow blood from donation to end product by spending 1-2 days at the Central Kentucky Blood Donation Center;
- c) learn about blood storage procedures in the blood bank;
- d) obtain clinical experience concerning management hematological disorders and anticoagulation management by attending Hematology Clinics Cell and pathology lecture schedules
- e) Review current literature in transfusion medicine.

Outcome: To determine the knowledge level before the rotation, every resident undergoes a pre-test with 50 multiple choice questions about hematological topics. At the end of the rotation the resident will be tested with a written exam containing 50 multiple choice questions (post-test) and a mock oral board exam with a transfusion medicine related topic. In addition, each resident submits written descriptions of 2-4 transfusion related keywords. The sum of these components will be considered for the final resident evaluation.