Development of a Checklist for the Transfusion Medicine Laboratory Training of Rotating Medical Students and Fellows

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The transfusion medicine (TM) department of our urban academic medical center provides educational opportunities to a variety of students including students from the school of medicine as well as nephrology and hematology/oncology fellows. These rotations are short in duration and may be the only opportunity for exposure to the blood bank for the students and fellows. Therefore, we want to ensure this TM rotation provides the students and fellows a basic understanding of the testing principles as well as blood product collection, blood components, and transfusion. In order to standardize the laboratory experience for all students rotating through the laboratory, a training checklist was developed. The education coordinator and the medical director of TM worked together to outline the laboratory activities important to review with the rotating students/fellows. The checklist is required for the students/fellows to perform the following tasks: (1) Transfusion medicine laboratory tour covering laboratory organization, testing platforms, methods of blood donation, and a detailed description of blood components available. (2) Review the principles of ABO grouping and Rh typing. (3) Perform ABO grouping & Rh typing. (4) Review antibody screening methodologies. (5) Perform solid phase antibody screen and antibody identification. (6) Discuss antibody rule out procedures & selected cell panels. (7) Discuss the difference between indirect & direct antibody testing (IAT & DAT). (8) Perform DAT testing. (9) Perform crossmatching of units. (10) Allow students to perform ABO group/Rh type, antibody screen, and antigen typing on their own blood sample. The creation of this checklist allowed for a more standardized, organized, and directed experience for the rotating students. It provided the education coordinator the structure to ensure the students received an opportunity to experience the operation of the TM laboratory, perform basic blood bank testing, and overall expand their knowledge of TM testing and blood components.

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