

Abstract:

Background: The AABB (American Association of Blood Banks) and the College of American Pathologists (CAP) regulations call on blood banks to address the risk of misidentification of a patient's blood type, which can result in transfusion of a mismatched product. Transfusion of mismatched blood product is potentially fatal due to acute hemolytic transfusion reaction and is considered a preventable event. CAP regulations outline options to reduce risk of mistransfusion by either documenting the ABO group of the intended recipient on a second sample collected at a separate phlebotomy, or utilizing a mechanical barrier system or electronic identification verification system that ensures the patient from whom the pretransfusion specimen was collected is the same patient who is about to be transfused.

Study design and methods: An electronic or barrier system was not available for implementation at our institution, therefore we developed a protocol for a two-sample verification system. The first determination is performed on a current sample and the second by one of the following methods: (a) comparison with previous laboratory records, (b) testing a second sample collected at a time different from the first sample (i.e., laboratory specimen available with a different timestamp, or a new blood sample).

Results: We improved our transfusion process and implemented a policy to require a second sample to confirm a patient's blood type. We also implemented workflows to obtain blood type confirmation from history of a second blood type result from previous laboratory records, including a policy to accept previous blood type records from an outside laboratory.

Conclusions: We describe a practice change for two-sample verification for type and screen in a large-scale pediatric hospital. We outline specific workflows for pre-operative and emergency transfusion scenarios, and pediatric-specific challenges.

Reference:

Gálvez J, Hsu G, Dubow S, et al. How do I...Incorporate a two-sample blood type verification in a pediatric hospital? . *Transfusion*. 2020;10.1111/trf.15997. doi:10.1111/trf.15997