



Measure Abbreviation: TRAN 01

Measure Description: Percentage of cases with a blood transfusion that have a hemoglobin or hematocrit value documented prior to transfusion.

NQS Domain: Effective Clinical Care

Measure Type: Process

Measure Summary: Blood management protocols have been implemented to prevent unnecessary blood transfusions and therefore decrease the risk to patients and decrease resource utilization. This patient blood management measure evaluates the incidence of red blood cell transfusions that have a hemoglobin or hematocrit value documented prior to transfusion.

Inclusions: All surgical patients receiving anesthetics who receive a transfusion of red blood cells.

Exclusions:

- Massive Transfusion: Transfusion of 4 or more units of blood. Note for sites that document transfusions in ml instead of units: ASPIRE will default to 350ml/unit.
- EBL \geq 2000 ml
- Patients < 2 years of age
- Patients < 12 years old undergoing a cardiac procedure (CPT: 00560, 00561, 00562, 00563, 00567, 00580).
- Patients < 12 years old where either transfused PRBC or EBL was greater than 30cc/kg.
- Burn cases (CPT Codes 01951, 01952, 01953)
- ASA 5 & 6
- Obstetric Non-Operative Procedures (CPT: 01958, 01960, 01967)
- Obstetric Non-Operative Procedure Rooms (Rooms tagged as OB-GYN- Labor and Delivery)
- Obstetric Non-Operative Procedures with procedure text: "Labor Epidural"
- Exclude patients undergoing cesarean section (CPT: 01961, 01968, 01962, 01963, 01969) with an EBL > 1500cc.
- Exclude patients undergoing cesarean section (CPT: 01961, 01968, 01962, 01963, 01969) with a HR > 110, SBP < 85, DBP < 45, or O₂Sat < 95%.
- Exclude postpartum hemorrhage cases (ICD-10 code: O72.0, O72.1, O72.2, O72.3).

Success:

- Documentation of hemoglobin and/or hematocrit prior to blood transfusion
- Considerations:
 - For the first unit of transfusion, a hematocrit or hemoglobin of any value should be checked in a time period of 0 to 90 minutes before the transfusion, or the most recent documented hematocrit or hemoglobin of less than 24/8 should be within 36 hours of the transfusion.
 - If the last hemoglobin or hematocrit drawn before the first transfusion is \leq 5/16, a second unit could be administered without rechecking hematocrit/hemoglobin.

TRAN 01 Measure Specification (Page 2 of 2)

- If a subsequent transfusion is administered, there should be a hematocrit/hemoglobin measurement before the subsequent transfusion, anywhere from 0 to 90 minutes before subsequent transfusion, or between initial and subsequent transfusion if time between those is less than 90 minutes.
- **For pediatric cases (patients < 12 years old):** Pre-transfusion hemoglobin/hematocrit required before the first unit and an additional recheck after 15cc/kg of PRBCs have been administered.
- **For cardiopulmonary bypass cases,** all transfusions administered between cardiopulmonary bypass start and end will not be included for determining measure results for the case.
- Transfusion is defined as:
 - Packed Red Blood Cells-Autologous, Homologous, Unknown Type
 - Whole Blood-Homologous, Unknown Type
 - Categorized Note- Blood Products
- Hematocrit/hemoglobin are defined as:
 - POC- Blood gas-Hct measured, Hemoglobin
 - POC– Hematocrit spun
 - POC– Coulter counter– Hematocrit, Hemoglobin
 - Formal lab– Hematocrit, Hemoglobin
 - Formal lab - Blood gas - Hct measured, Hemoglobin

Threshold: 90%.

Responsible Provider: Provider(s) who administered blood product.

Risk Adjustment (for outcome measures):

Not applicable.

References:

1. Carson JL, Grossman BJ, Kleinman S, et al. Red blood cell transfusion: a clinical practice guideline from the AABB*. *Annals of internal medicine*. 2012;157(1):49-58.
2. Carson JL, Guyatt G, Heddle NM, et al. Clinical Practice Guidelines From the AABB: Red Blood Cell Transfusion Thresholds and Storage. *Jama*. 2016;316(19):2025-2035.
3. Glance LG, Dick AW, Mukamel DB, et al. Association between intraoperative blood transfusion and mortality and morbidity in patients undergoing noncardiac surgery. *Anesthesiology*. 2011;114(2):283-292.