Measure Abbreviation: TRAN 02

Data Collection Method: This measure is calculated based on data extracted from the electronic medical record combined with administrative data sources such as professional fee and discharge diagnoses data. This measure is explicitly not based on provider self-attestation.

Measure Description: Percentage of cases with a post transfusion hemoglobin or hematocrit value less than or equal to 10 g/dL or 30%.

NQS Domain: Efficiency and Cost Reduction

Measure Type: Outcome

Measure Summary: The recognition of transfusion-related complications, such as transfusion-related infections and immunosuppression, and evidence documenting lack of efficacy has spurred the development of blood management protocols. This measure identifies blood transfusion cases when the hematocrit was ≤30% or hemoglobin was ≤10 g/dL post-transfusion.

Inclusions: Any patient that receives a red blood cell transfusion. Transfusion is defined as packed red blood cells or whole blood. See MPOG Concept IDs below for complete list.

Exclusions:

- Patients < 2 years of age
- Patients <12 years old undergoing a cardiac procedure (CPT: 00560, 00561, 00562, 00563, 00567, 00580).
- Pediatric cases (<12 years old) where either the transfused PRBC or EBL was greater than 30cc/kg.
- ASA 5 & 6
- EBL ≥ 2000ml
- 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.
- 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:

- Hematocrit value documented as less than or equal to 30% and/or hemoglobin value documented as less than or equal 10 g/dL.
- Considerations:
    - All hemoglobin/hematocrit lab values drawn after the last transfusion and before anesthesia end will be evaluated. If the lowest of these values is ≤10g/dL or ≤30%, the case will pass.
    - If no hemoglobin or hematocrit is drawn after the last transfusion and before anesthesia end, then the **first** hemoglobin/hematocrit after anesthesia end will be evaluated. If this value is ≤10/30, the case will pass. This measure will only examine lab values up to 6 hours after anesthesia end to identify a hemoglobin or hematocrit value. Once the first hemoglobin or hematocrit value is identified after anesthesia end, additional values will not be considered.
- No hematocrit or hemoglobin checked within 6 hours of anesthesia end

Threshold: 90%

Responsible Provider: Individual who administered the transfusion.

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.
4. Napolitano LM, Kurek S, Luchette FA, et al. Clinical practice guideline: red blood cell transfusion in adult trauma and critical care. *The Journal of trauma.* 2009;67(6):1439-1442.
5. Practice guidelines for perioperative blood management: an updated report by the American Society of Anesthesiologists Task Force on Perioperative Blood Management*. *Anesthesiology.* 2015;122(2):241-275.