



**Measure Abbreviation:** FLUID 01-NC

**Description:** Percentage of non-cardiac cases in which colloids were not administered intraoperatively.

**NQS Domain:** Efficiency and Cost Reduction

**Measure Type:** Process

**Measure Summary:** The purpose of this measure is to identify the use of colloids for patients that likely do not need them in the **non-cardiac** surgery patient population. It is the expectation that providers will uphold the ASA's Choosing Wisely program by avoiding colloids and using crystalloid instead when appropriate.

**Rationale:** There is a lack of consistent evidence to suggest improved survival with the use of colloids as compared to crystalloids in the surgical population. Because colloids are more expensive than crystalloids, it is recommended that anesthesia providers avoid the use of colloids in most instances. Evidence to support the use of hydroxyethyl starch to prevent ovarian hyperstimulation syndrome for In Vitro Fertilization cases has been published and these cases will be excluded.

**Inclusions:**

- All patients undergoing general anesthetics, spinals, and epidurals.

**Exclusions:**

- ASA 5 and 6 cases
- $\geq 2$ L EBL
- $\geq 4$  units PRBC transfusion
- Patients that are in prone position for more than 4 hours
- Patients that are in Trendelenburg position for more than 4 hours
- Patients with ascites
- In Vitro Fertilization- Egg Retrieval cases (Surgical CPT: 58970, 58974, 58976)
- In Vitro Fertilization- Egg Retrieval Rooms (Rooms tagged as IVF-Only)
- Cardiac surgery without pump (CPT: 00560)
- Cardiac surgery with pump and  $< 1$  year old (CPT: 00561)
- Cardiac surgery with pump and  $> 1$  year old (CPT: 00562)
- Cardiac surgery with hypothermic arrest (CPT: 00563)
- CABG with pump (CPT: 00567)
- Heart Transplant (CPT: 00580)

**Exclusions (continued):**

- Any cardiac case with an intraoperative note mapped to one of the following MPOG Concepts:
  - 50399 Cardiopulmonary bypass -- aortic clamp on/off note
  - 50409 Cardiopulmonary bypass terminated
  - 50410 Cardiopulmonary bypass initiated (full)
  - 50416 Cardiopulmonary bypass -- crossclamp and circulatory arrest time totals
  - 50417 Cardiopulmonary bypass -- Access cannula removed note
  - 50714 Cardiopulmonary bypass - Bypass start / stop event
- Cases performed by cardiac surgical service: MPOG concept 80005.

**MPOG Concept IDs Required:**

Colloid MPOG Concepts		Patient Position MPOG Concepts		Patient Dx MPOG Concepts	
<b>10017</b>	Albumin 25%	<b>50136</b>	Positioning- Patient Position	<b>10500</b>	Ascites
<b>10018</b>	Albumin 5%	<b>50137</b>	Positioning- Patient positioned in left lateral decubitus position	<b>Estimated Blood Loss MPOG Concept</b>	
<b>10557</b>	Albumin 20%	<b>50818</b>	Patient positioned in right lateral decubitus position	<b>10499</b>	EBL
<b>10458</b>	Hetastarch	<b>Blood Administration MPOG Concepts</b>			
<b>10459</b>	Pentastarch	<b>10489</b>	Packed Red Blood Cells- Autologous		
<b>10601</b>	Hydroxyethyl Starch 130/0.4 6% in 0.9% Saline (Voluven)	<b>10490</b>	Packed Red Blood Cells- Homologous		
<b>10605</b>	Hydroxyethyl Starch 6% in Lactated Solution (Hextend)	<b>10616</b>	Packed Red Blood Cells- Unknown Type		

**Data Diagnostics Affected:**

- Percentage of Cases with any Fluid Recording
- Percentage of Fluids with a Meaningful Fluid Mapping
- Percentage of Cases with Colloids Administered

**Collations Used:**

- AnesthesiaEnd
- AnesthesiaStart
- AsaNotes
- Asa5or6
- ProneOrTrendelenburg
- SurgeryEnd
- Cardiac
- Fluid01

**Other Measure Build Details:** None.

**Success:** Colloids are not administered during the case.

**Threshold:** None.

**Responsible Provider:** The provider signed in at the time of the colloid administration.

**Method for determining Responsible Provider:**

Measure is evaluated on a per provider basis: multiple providers can be attributed per case. If multiple providers are signed in at the time of colloid administration, all providers signed in will be attributed.

**Risk Adjustment (for outcome measures):**

*Not applicable.*

**References:**

Nolan JP, Mythen MG. Hydroxyethyl starch: here today, gone tomorrow. *British Journal of Anaesthesia* 2013, 111(3): 321–4. doi:10.1093/bja/aet294.

Perel P, Roberts I, Ker K. Colloids versus crystalloids for fluid resuscitation in critically ill patients. *The Cochrane database of systematic reviews*. 2013(2):Cd000567.

Schick M, Isbary J, Stuber T, Brugger J, Stumpner J, Schkegel N, Roewer N, Eichelbronner O, Wunder C. Effects of crystalloids and colloids on liver and intestine microcirculation and function in cecal ligation and puncture induced septic rodents. *BMC Gastroenterology* 2012, 12:179.  
<http://www.biomedcentral.com/1471-230X/12/179>.

Youssef MA, Al-Inany HG, Evers JL, Aboulghar M. Intra-venous fluids for the prevention of severe ovarian hyperstimulation syndrome. *Cochran Database Systematic Reviews* 2011, 16(2): CD001302. Doi: 10.1002/14651858.CD001302.pub2.