Measure Abbreviation: TOC 01

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.

Description: Percentage of patients who undergo a procedure under anesthesia in which a permanent intraoperative anesthesia staff change occurred, who have a documented use of a checklist or protocol for the transfer of care from the responsible anesthesia practitioner to the next responsible anesthesia practitioner.

NQS Domain: Communication and Care Coordination

Measure Type: Process

Scope: Measured on a per case basis

Measure Summary: The intraoperative transfer of care measure (TOC 01) will identify the percentage of patients that undergo a procedure under anesthesia in which a permanent intraoperative anesthesia staff change occurred that have documentation of an intraoperative handoff completed in the electronic anesthesia record. The percentage of handoffs will be calculated as number of handoffs documented as completed in the electronic anesthesia record where the denominator equals the number of permanent intraoperative handoff events. Permanent transfer of care events are defined as any event where an incoming anesthesia provider relieves an outgoing anesthesia provider, and the outgoing anesthesia provider does not return within 40 minutes (i.e. not temporary relief).

The key handoff elements that must be included in the transfer of care protocol or checklist include:

1) Identification of patient
2) Age
3) Gender
4) Weight
5) Allergies
6) Discussion of pertinent/attainable medical history/Preop Medications
7) Discussion of surgical/procedure course (procedure, reason for surgery, procedure performed)
8) Intraoperative anesthetic management and issue/concerns to include things such as airway, hemodynamic narcotic, sedation level and paralytic management and intravenous fluids/blood products and urine output during the procedure
9) Expectations/Plans for the early post-procedure period to include things such as the anticipated course (anticipatory guidance), complications, need for laboratory or ECG and medication administration
10) Introduction of relieving anesthesia care provider to OR team

Rationale: Lack of communication or miscommunication between anesthesia providers during staff change can lead to patient harm.[1,2] Organizing these staff changes using a predefined handoff checklist ensures this communication occurs, and is as accurate and efficient as possible.[3,4 5]

Inclusions:

- All patients, regardless of age, who undergo a surgical, therapeutic or diagnostic procedure under anesthesia AND a permanent intraoperative in-room anesthesia staff change occurred (outgoing provider does not return within 40 minutes).

Exclusions:

- 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"
- Cases with no permanent shift relief (Outgoing provider does not return within 40 minutes)
- Handovers between supervising anesthesiologists – those not personally performing anesthesia care in the operating room

MPOG Concept IDs Required:

Staff MPOG Concept IDs		**Handoff MPOG Concept ID**	
6000	Staff Level – Anesthesia Attending	**50044**	Compliance- Intraop Handoff of care performed, report given.
6001	Staff Level- Anesthesia Resident CA1		
6002	Staff Level- Anesthesia Resident CA2		
6003	Staff Level- Anesthesia Resident CA3		
6004	Staff Level- Anesthesia Resident- Unspecified Year		
6005	Staff Level- CRNA		
6010	Staff Level- Anesthesia Assistant		
6014	Staff Level- Anesthesia Fellow		
6023	Staff Level- Student Registered Nurse Anesthetist (SRNA)		

Data Diagnostics Affected:

- Percentage of Cases with Any Staff Tracking
- Percentage of Staff rows with a Meaningful Staff Role Mapping
- Percentage of Anesthesia Provider Sign-Ins that are Timed

Other Measure Build Details:

Only permanent intraoperative handoffs between in-room providers will be considered for this measure. If an attending and CRNA/AA or resident is signed into a case, only the in-room provider (CRNA/AA or resident) permanent handoff events will be tracked. If only an attending is signed into the case, the attending will be responsible and measured on the handoff performed.

If more than one permanent intraoperative handoff occurs during the case, all events will be considered for determining success. If an intraoperative handoff is not documented for any handoff event, the case will fail. Only those providers involved in the event without a documented handoff will be attributed.

A permanent handoff is defined as:

- Staff relief for >40 minutes between staff change and Anesthesia End or,
- Staff change in which the original provider is relieved and does not sign back into the case.

A staff change is defined as the in-room provider documenting sign-out and another signing in within 5 minutes before or after the sign out.

The accepted time frame for documenting the intraoperative handoff is 15 minutes before to 15 minutes after the staff change.

Success: Documentation of intraoperative transfer of care report in the electronic anesthesia record.

Threshold: 90%.

Responsible Provider: Both providers involved in the transfer of care communication (provider signing in and the provider signing out).

Method for determining Responsible Provider:
Incoming and outgoing staff sign in and out during permanent relief events

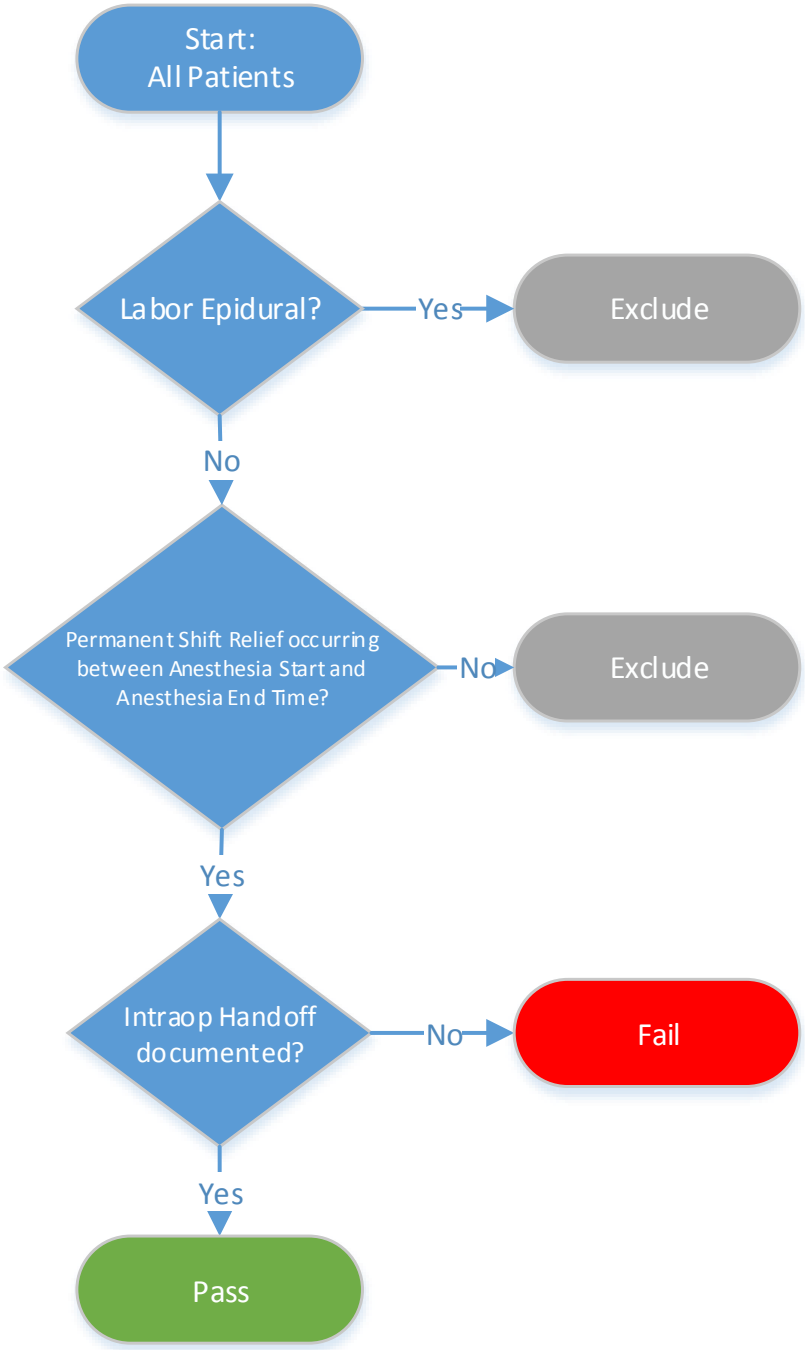
Risk Adjustment (for outcome measures): *Not applicable.*

References:

1. Epstein RH, Dexter F, Gratch DM, Lubarsky DA. Intraoperative Handoffs Among Anesthesia Providers Increase the Incidence of Documentation Errors for Controlled Drugs. *Jt Comm J Qual Patient Saf.* 2017;43(8):396-402.
2. Saager L, Hesler BD, You J, et al. Intraoperative transitions of anesthesia care and postoperative adverse outcomes. *Anesthesiology.* 2014;121(4):695-706.
3. Agarwala AV, Firth PG, Albrecht MA, Warren L, Musch G. An electronic checklist improves transfer and retention of critical information at intraoperative handoff of care. *Anesthesia and analgesia.* 2015;120(1):96-104.
4. Hall M, Robertson J, Merkel M, Aziz M, Hutchens M. A Structured Transfer of Care Process Reduces Perioperative Complications in Cardiac Surgery Patients. *Anesthesia and analgesia.* 2017;125(2):477-482.

5. Jones PM, Cherry RA, Allen BN, et al. Association Between Handover of Anesthesia Care and Adverse Postoperative Outcomes Among Patients Undergoing Major Surgery. *Jama.* 2018;319(2):143-153.

TOC 01 Flow Diagram



TOC 01 Supplement:

MPOG sites interested in auditing the transfer of care process can utilize the Intraop Handoff Audit Form available through the MQUARK application. More information regarding the MQUARK audit application is available on the MPOG website: https://mpog.org/apps/

MPOG Intraop Handoff Audit Tool Elements:

Background	**Yes**	**No**	**NA**
Identification of Patient			
Age			
Gender			
Weight			
Allergies			
Procedure/Diagnosis			
Pertinent PMH/PSH			
Contact Precautions			
Anesthetic Management			
Airway management (ETT/ LMA)			
Type of anesthetic			
Intraop anesthetic issues and plan			
Surgical issues			
Medications			
Preoperative Meds			
Sedations medications & amount administered. Reversal administered?			
Antibiotics and timing			
Muscle relaxants: Time/Amount administered. Reversal administered?			
PONV Risk & Meds Administered			
Fluids			
Vascular access			
Total Intraoperative Fluids/Blood Products Administered			
Intraoperative labs			
Plan			
Emergence/post op plan			
Pain Management Plan/Opioids/Non-opioid Adjuncts			
Questions and concerns solicited/discussed			