Measure Title
MA1: Case Delay

Measure Description:
Percentage of anesthesia cases or procedures which are delayed greater than 15 minutes after the scheduled start with a reason indicated.

NQS Domain:
Efficiency and Cost Reduction

Instructions:
This measure is to be reported each time a scheduled procedure is delayed 15 minutes past the scheduled time and a reason is indicated by the anesthesia provider for the delay.

Measure Reporting via Qualified Clinical Data Registry:
CPT codes and patient demographics are used to identify patients who are included in the measure's denominator. Registry Codes are used to report the numerator of the measure.

Denominator
All patients, regardless of age, who undergo a procedure under anesthesia.

Definition: Any procedure including surgical, therapeutic or diagnostic

Denominator Criteria (Eligible Cases):
All patients, regardless of age
AND
Patient encounter during the reporting period (CPT):
00100, 00102, 00103, 00104, 00120, 00124, 00126, 00140, 00142, 00144, 00145, 00147, 00148, 00160, 00162, 00164, 00170, 00172, 00176, 00190, 00192, 00210, 00211, 00212, 00214, 00215, 00216, 00220, 00222, 00300, 00320, 00322, 00326, 00350, 00352, 00400, 00402, 00404, 00406, 00410, 00450, 00454, 00470, 00472, 00474, 00500, 00520, 00522, 00524, 00528, 00529, 00532, 00539, 00540, 00541, 00542, 00546, 00548, 00550, 00560, 00600, 00620, 00625, 00626, 00630, 00632, 00635, 00640, 00670, 00700, 00702, 00730, 00740, 00750, 00752, 00754, 00756, 00770, 00790, 00792, 00794, 00796, 00797, 00800, 00802, 00810, 00820, 00830, 00834, 00836, 00840, 00844, 00846, 00848, 00851, 00860, 00862, 00864, 00865, 00866, 00868, 00870, 00873, 00880, 00882, 00902, 00904, 00906, 00908, 00910, 00912, 00914, 00918, 00920, 00921, 00922, 00924, 00926, 00928, 00930, 00932, 00934, 00936, 00938, 00940, 00942, 00944, 00948, 00952, 01112, 01120, 01130, 01140, 01150, 01160, 01170, 01173, 01180, 01190, 01200, 01202, 01210, 01212, 01214, 01215, 01220, 01230, 01232, 01250, 01260, 01270, 01272, 01274, 01320, 01340, 01360, 01380, 01382, 01390, 01392, 01400, 01402, 01404, 01420, 01440, 01442, 01444, 01462, 01464, 01470, 01472, 01474, 01480, 01482, 01484, 01486, 01490, 01500, 01502, 01520, 01522, 01610, 01620, 01622, 01630, 01634, 01636, 01638, 01650, 01652, 01654, 01656, 01670, 01680, 01682, 01710, 01712, 01714, 01716, 01730, 01732, 01740, 01742, 01744, 01756, 01758, 01760, 01770, 01772, 01782, 01810, 01820, 01829, 01830, 01832, 01840, 01842, 01844, 01850, 01860, 01916, 01920, 01922, 01924, 01925, 01926, 01930, 01931, 01935, 01936, 01951, 01952, 01953, 01958, 01961, 01963, 01965, 01966, 01967, 01968, 01969, 01991, 01992, 62264, 62273, 62290, 62310, 62311, 62350, 62362, 62368, 62370, 63650, 63661, 64400, 64405, 64416, 64417, 64418, 64420, 64421, 64425, 64430, 64447, 64450, 64461, 64479, 64483, 64486, 64490, 64491, 64493, 64494, 64510, 64517, 64520, 64530, 64615, 64620, 64633, 64635, 64640, 64999, 99201, 99202, 99203, 99204, 99212, 99213, 99214, 99243, 99244

Denominator Exclusions / Exceptions
• Cases that were not scheduled in advance and are add-ons the day of surgery

- Previous surgical case was delayed
- Emergent cases identified by ASA Physical Status indicating case is emergent by using 'E' designation
- Organ Donors as designated by ASA Physical Status 6

Numerator
Cases that are delayed from scheduled start and have a reason indicated.

Definition: Any procedure that is delayed form the scheduled start time and has a reason indicated by the anesthesia provider of care.

Reporting of the delay may include, but is not limited to:
- Anesthesia Late
- Contamination of Case
- Missing Labs
- Operating/Procedure Room Not Ready
- OR Staff Delay
- Paperwork Incomplete
- Pre-op Staff Delay
- Previous Case Ran Over
- Scheduling Error
- Surgeon Late
- Surgical Consent Missing
- Surgical H&P Missing

Numerator Quality-Data Coding Options for Reporting Satisfactorily:

Performance Met:
Advance 3B: Procedure delayed from scheduled start time
AND
Advance 3C: Reason for delay indicated

OR

Performance Not Met:
Advance 3A: Procedure was NOT delayed from scheduled start or reason not indicated

Numerator Note:
If a provider fails to indicate a reason for the case delay then the case should be calculated as 3A - Performance Not Met as this does not complete the required documentation of including a reason for the delay.

Measure Type: Process
High Priority: Yes
NQF Number: Not applicable
eCQM Number: Not applicable

Rationale:
Case delays not only cause a domino effect of efficiency in health care facilities but can also lead to increased anxiety and frustration in our patient population. They may also point to larger issues such as; scheduled volume not in line with facility space and capabilities, increased staff needs, room turnover efficiencies, ineffective and punctual clinical staff, etc.

Identifying and quantifying potential patterns in this area will lead to greater OR efficiencies, patient care/satisfaction and increased communication amongst clinical staff.

Additionally, the effort and resources required to schedule, preoperatively screen, and perform surgical procedures for patients represents a sizable investment by facilities, patients and providers. This measure seeks to track the rate of delay for reasons that are considered avoidable.

In a study concerning neurosurgical procedures, the costs for the supporting staff were considered. Factoring in the hourly breakdown of salaries for porters, technicians, nurses, surgeons, anesthesiologists, etc, a facility will find itself with a billable loss before the procedure even begins (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2878989/). When the first case of the day was delayed, it was found to have a domino effect, pushing back the start times of subsequently scheduled procedures, compounding the above-referenced costs (http://digitalrepository.aurorahealthcare.org/cgi/viewcontent.cgi?article=1265&context=jpcrr). One of the outcomes of the domino effect could be a reduction in the overall cases done in a day, leading to rescheduling and increasing the load not only on the doctors, hospital resources and support staff but also the patients.

Tracking the causes of scheduling delays and their reasons could aid systems in future methodologies for preparing surgical procedures as well as possible preoperative visits to reduce delays (http://anesthesiology.pubs.asahq.org/article.aspx?articleid=1926209).

Data Source: Certified Electronic Health Record Technology (CEHRT), Registry
Measure Steward: MiraMed Global Services/AdvanceQCDR
Number of Multiple Performance Rates: Not applicable
Inverse Measure: Yes
Proportion Measure Scoring: Yes
Continuous Measure Scoring: No
Risk Adjustment: No

Measure Title
ABG7: Immediate Adult Post-Operative Pain Management

Measure Description:
Percentage of patients aged 18 years or older admitted to the post anesthesia care unit (PACU) following an anesthetic with a maximum pain score < 7 out of 10 prior to anesthesia end time.

NQS Domain:
Person and Caregiver-Centered Experience and Outcomes

Instructions:
This measure is to be reported each time a patient is admitted to the PACU following a procedure that included an anesthetic during the reporting period.

Measure Reporting via Qualified Clinical Data Registry:
CPT codes, registry codes and patient demographics are used to identify patients who are included in the measure's denominator. Registry codes are used to identify the numerator.

Denominator
All patients age 18 years and older admitted to a PACU after a surgical procedure under anesthesia care.

Denominator Criteria (Eligible Cases):
Patients age 18 years or older on date of encounter
AND
Patient assessed for pain in the postanesthesia care unit: ASA14H
AND
Patient encounter during the reporting period (CPT):
00100, 00102, 00103, 00104, 00120, 00124, 00126, 00140, 00142, 00144, 00145, 00147, 00148, 00160, 00162, 00164, 00170, 00172, 00176, 00190, 00192, 00210, 00211, 00212, 00214, 00215, 00216, 00220, 00222, 00300, 00320, 00322, 00350, 00352, 00400, 00402, 00404, 00406, 00410, 00450, 00454, 00470, 00472, 00474, 00500, 00520, 00522, 00524, 00528, 00529, 00530, 00532, 00534, 00537, 00539, 00540, 00541, 00542, 00546, 00548, 00550, 00560, 00562, 00563, 00566, 00567, 00580, 00600, 00620, 00625, 00626, 00630, 00632, 00635, 00640, 00670, 00700, 00702, 00730, 00740, 00750, 00752, 00754, 00756, 00770, 00790, 00792, 00794, 00796, 00797, 00800, 00802, 00810, 00820, 00830, 00840, 00844, 00846, 00848, 00851, 00860, 00862, 00864, 00865, 00866, 00868, 00870, 00873, 00880, 00882, 00902, 00904, 00906, 00908, 00910, 00912, 00914, 00918, 00920, 00921, 00922, 00924, 00926, 00928, 00930, 00932, 00934, 00936, 00938, 00940, 00942, 00944, 00948, 00952, 01112, 01120, 01130, 01140, 01150, 01160, 01170, 01173, 01180, 01190, 01200, 01202, 01210, 01212, 01214, 01215, 01220, 01230, 01232, 01250, 01260, 01270, 01272, 01274, 01320, 01340, 01360, 01380, 01382, 01390, 01392, 01400, 01402, 01404, 01420, 01440, 01442, 01444, 01462, 01464, 01470, 01472, 01474, 01480, 01482, 01484, 01486, 01490, 01500, 01502, 01520, 01522, 01610, 01620, 01622, 01630, 01634, 01636, 01638, 01650, 01652, 01654, 01656, 01670, 01680, 01682, 01710, 01712, 01714, 01716, 01730, 01732, 01740, 01742, 01744, 01756, 01758, 01760, 01770, 01772, 01782, 01810, 01820, 01829, 01830, 01832, 01840, 01842, 01844, 01850, 01860, 01916, 01920, 01922, 01924, 01925, 01926, 01930, 01931, 01935, 01936, 01951, 01952, 01953, 01958, 01961, 01963, 01965, 01966, 01968, 01969, 01991, 01992

Denominator Exclusions / Exceptions:
- Age 17 or less
- Labor Epidurals
- Patients not transferred directly to PACU from OR

- Patient not lucid or unable to communicate pain level
- Organ Donors as designated by ASA Physical Status 6

Numerator
The number of lucid patients with a pain score < 7 out of 10 prior to anesthesia end time.

Performance Met: ASA14B/ABG 1001: Patient has an initial pain score of 0-6 OR

Performance Not Met: ASA14A/ ABG 1002: Patient has an initial pain score of 7-10

Measure Type: Outcome
High Priority: Yes
NQF Number: Not applicable
eCQM Number: Not applicable

Rationale:
Alleviation of pain is a core responsibility of the anesthesia provider, and adequate postoperative pain control is an important component of patient satisfaction with anesthesia and surgery. A large body of literature exists to support evidence-based practice in this area. Significant variability in outcomes exists at the practice, facility and individual provider level. Capture of this metric under a common definition will greatly enhance anesthesia quality management and lead directly to improvements in patient outcome.

Data Source: Certified Electronic Health Record Technology, Registry
Measure Steward: ABG
Number of Multiple Performance Rates: Not applicable
Inverse Measure: No
Proportion Measure Scoring: Yes
Continuous Measure Scoring: No
Risk Adjustment: No

Measure Title

AQI48: Patient-Reported Experience with Anesthesia†

Measure Description:
Percentage of patients, aged 18 and older, who were surveyed on their patient experience and satisfaction with anesthesia care and who reported a positive experience.

This measure will consist of two performance rates:
AQI48a: Percentage of patients, aged 18 and older, who were surveyed on their patient experience and satisfaction with anesthesia care

AQI48b: Percentage of patients, aged 18 and older, who completed a survey on their patient experience and satisfaction with anesthesia care who report a positive experience with anesthesia care

NOTE: The measure requires that a valid survey, as defined in the numerator, be sent to patients between discharge from the facility and within 30 days of facility discharge. To report AQI XXb, a minimum number of 20 surveys with the mandatory question completed must be reported.

NQS Domain:
Person and Caregiver-Centered Experience and Outcomes

Measure Type:
Outcome

High Priority Status:
Yes

Inverse Measure:
No

Instructions:
This measure, consisting of two performance rates for AQI48a and AQI48b, is to be reported each time a patient underwent a procedure* with anesthesia during the reporting period. AQI48a should be reported each time a patient undergoes a procedure under anesthesia. To report AQI48b, the provider must report the individual patient scores received by the patient who completed the survey described in AQI48a. A percentage reporting a positive experience will be calculated by the registry on the provider's behalf. It is anticipated that qualified anesthesia providers and eligible clinicians who provide denominator-eligible services will submit this measure.

Measure Reporting via the Qualified Clinical Data Registry

CPT codes and patient demographics are used to identify patients who are included in the measure denominator. Registry codes are used to report the measure numerator.

Denominator
Patients, aged 18 and older, who undergo a procedure* under anesthesia (AQI48a) and who complete a survey on their patient experience and satisfaction with anesthesia care (AQI48b)

Definition: *Any procedure including surgical, therapeutic or diagnostic.

Denominator Note: In order to report AQI48b, the denominator must include a minimum of 20 returned surveys.

Denominator Criteria (Eligible Cases):
Patient aged 18 years or older on date of encounter
AND
AQI XXa: Patient encounter during the reporting period (CPT):
00100, 00102, 00103, 00104, 00120, 00124, 00126, 00140, 00142, 00144, 00145, 00147, 00148, 00160, 00162, 00164, 00170, 00172, 00174, 00176, 00190, 00192, 00210, 00211, 00212, 00214, 00215, 00216, 00218, 00220, 00222, 00300, 00320, 00322, 00350, 00352, 00400, 00402, 00404, 00406, 00410, 00450, 00454, 00470, 00472, 00474, 00500, 00520, 00522, 00524, 00528, 00529, 00530, 00532, 00534, 00537, 00539, 00540, 00541, 00542, 00546, 00548, 00550, 00560, 00562, 00563, 00566, 00567, 00580, 00600, 00604, 00620, 00625, 00626, 00630, 00632, 00635, 00640, 00670, 00700, 00702, 00730, 00731, 00732, 00750, 00752, 00754, 00756, 00770, 00790, 00792, 00794, 00796, 00797, 00800, 00802, 00811, 00812, 00813, 00820, 00830, 00832, 00840, 00842, 00844, 00846, 00848, 00851, 00860, 00862, 00864, 00865, 00866, 00868, 00870, 00872, 00873, 00880, 00882, 00902, 00904, 00906, 00908, 00910, 00912, 00914, 00916, 00918, 00920, 00921, 00922, 00924, 00926, 00928, 00930, 00932, 00934, 00936, 00938, 00940, 00942, 00944, 00948, 00950, 00952, 01112, 01120, 01130, 01140, 01150, 01160, 01170, 01173, 01200, 01202, 01210, 01212, 01214, 01215, 01220, 01230, 01232, 01234, 01250, 01260, 01270, 01272, 01274, 01320, 01340, 01360, 01380, 01382, 01390, 01392, 01400, 01402, 01404, 01420, 01430, 01432, 01440, 01442, 01444, 01462, 01464, 01470, 01472, 01474, 01480, 01482, 01484, 01486, 01490, 01500, 01502, 01520, 01522, 01610, 01620, 01622, 01630, 01634, 01636, 01638, 01650, 01652, 01654, 01656, 01670, 01680, 01710, 01712, 01714, 01716, 01730, 01732, 01740, 01742, 01744, 01756, 01758, 01760, 01770, 01772, 01780, 01782, 01810, 01820, 01829, 01830, 01832, 01840, 01842, 01844, 01850, 01852, 01860, 01916, 01920, 01922, 01924, 01925, 01926, 01930, 01931, 01932, 01933, 01935, 01936, 01951, 01952, 01953, 01958, 01960, 01961, 01962, 01963, 01965, 01966, 01967, 01968, 01969, 01991, 01992, 20526, 20550, 20551, 20552, 20553, 20600, 20604, 20605, 20606, 20610, 20611, 27096, 36555, 36556, 36570, 36571, 36578, 36580, 36581, 36582, 36583, 36584, 36585, 62263, 62264, 62270, 62272, 62273, 62280, 62281, 62282, 62310, 62311, 62318, 62319, 62350, 62355, 62360, 62361, 62362, 62365, 62370, 63650, 63661, 63662, 63663, 63664, 63685, 63688, 64400, 64402, 64405, 64408, 64410, 64413, 64415, 64416, 64417, 64418, 64420, 64421, 64425, 64430, 64435, 64445, 64446, 64447, 64448, 64449, 64450, 64461, 64462, 64463, 64479, 64480, 64483, 64484, 64486, 64487, 64488, 64489, 64490, 64491, 64492, 64493, 64494, 64495, 64505, 64508, 64510, 64517, 64520, 64530, 64600, 64605, 64610, 64620, 64630, 64633, 64634, 64635, 64636, 64640, 64680, 64681, 72275, 93503, 95990, 95991

For AQI48b
AND
Patient completed a survey on their patient experience and satisfaction with anesthesia care
10A72

Denominator Exclusions
- 48a: Organ Donors as designated with ASA Physical Status 6
- 48a: Patient died within 30 days of the procedure: 10A11
- 48b: Patient did not complete the mandatory anesthesia satisfaction question: 10A69

Numerator - AQI48a:
Patients who received a survey within 30 days of the procedure to assess their experience and satisfaction with anesthesia.

Numerator Note: The survey should be administered to the patient shortly following discharge from the facility.

Definition: Practices and eligible clinicians may customize their patient experience and satisfaction with anesthesia surveys to meet local needs but, at a minimum, a valid survey must include a core set of questions that address three of the four following criteria related to patient experience and satisfaction and one mandatory question described below.

1. Pre-operative Education and Preparation
2. Patient and/or Family Communication
3. Care Team Response to Comfort and Well-Being
4. Post-operative pain control and/or management

Mandatory question that must be included in each valid survey (practices must also include an option for patient to indicate "Not Applicable"):
1. On a scale of 1 to 5, where 1 indicates the worst anesthesia experience and where 5 indicates the best anesthesia experience, how would you rate your overall anesthesia experience?

Numerator Note: Practices and eligible clinicians may wish to supplement these questions by taking into consideration the recommendations of the ASA Committee on Performance and Outcomes Measurement work product entitled "Patient Satisfaction and Experience with Anesthesia."

Numerator Note: Depending on local practice, practices and eligible clinicians may wish to supplement survey questions by taking into consideration the recommendations developed as part of the Perioperative Surgical Home (PSH) that are structured in five distinct components.

1. Pre-Operative Education and Preparation (Four Indicators)
    a. Patient comfort with instructions provided about eating better
    b. Patient comfort with instructions provided about exercise or physical therapy
    c. Patient comfort with instructions provided about stopping smoking (if applicable)
    d. Patient comfort with instructions provided about what to do after surgery
2. Check-In and Pre-Procedure Experience
3. Caregiver and Family Communication during Surgery
4. Care Team Response to Comfort and Well-Being
5. Post-Operative Pain Management

For more information on these resources, visit https://www.asahq.org/psh.

Numerator Quality-Data Coding Options for Reporting Satisfactorily: AQIXXa

Performance Met:
10A12 Patient provided with a survey within 30 days of the procedure to assess their experience and satisfaction with anesthesia
OR
Denominator Exception:
10A13 Documentation of patient reason(s), process reason(s)or medical reason(s) for not receiving survey (i.e. patients who are non-verbal, who are unable to be surveyed due to a medical or psychiatric reason, who are unable to be surveyed due to a language barrier, have not provided contact information, who are discharged to assisted living, skilled nursing facility or other similar location where direct access to the patient is not available, or who decline to be surveyed)
OR

Performance Not Met:
10A14 Patient was not provided with a survey within 30 days of the procedure to assess their experience and satisfaction with anesthesia

Numerator - AQI 48b:
Patients who reported a positive experience with anesthesia care.

Definition: A positive experience is defined as a response of 4 or 5 on the following mandatory patient experience and satisfaction survey question:
On a scale of 1 to 5, where 1 indicates the worst anesthesia experience and where 5 indicates the best anesthesia experience, how would you rate your overall anesthesia experience? (Practices must include an option for patient to indicate "Not Applicable")

Numerator Quality-Data Coding Options for Reporting Satisfactorily: AQI48b
Reporting note: To report this measure, the provider must report the individual patient scores. A percentage reporting a positive experience will be calculated on the provider's behalf.

Performance Met:
10A70 Patient reported a positive anesthesia experience (i.e., a 4 or 5 on the mandatory survey question)
OR
Performance Not Met:
10A71 Patient did NOT report a positive anesthesia experience (i.e., a 1, 2, or 3 on the mandatory survey question)

Rationale:
Despite the implementation of CAHPS and H-CAHPS, there is a persistent gap in the ability to adequately measure patient experience on the selection of performance measures for performance-based payment programs. To provide high quality, patient-centered care in the future, anesthesiologists and other qualified anesthesia providers should measure and respond to the patients' perception of the degree to which they felt they were treated as individuals and empowered by their anesthesiology practitioners to engage in decision-making for their care. The assessment of patient satisfaction with anesthesia care provides important feedback which enables providers to improve care delivery and quality. At present there is a vast array of tools available for practices and individuals to implement based upon local patient populations and for local quality improvement initiatives.

Data Source: Database, Registry
Measure Steward: American Society of Anesthesiologists (ASA) / Anesthesia Quality Institute (AQI)
Number of Multiple Performance Rates: 2
Proportion Measure Scoring: Yes
Continuous Measure Scoring: No
Risk Adjusted: No

Measure Title
MA3: Corneal Abrasion

Measure Description:
Percentage of patients, aged 18 years or older, who undergo anesthesia care and did not have a new diagnosis of corneal injury within 24 hours of anesthesia end time.

NQS Domain:
Person and Caregiver-Centered Experience and Outcomes

Instructions:
This measure is to be reported each time a patient underwent a procedure* with anesthesia not involving patients with pre-existing eye trauma or those patients undergoing ophthalmologic surgery.

Measure Reporting via Qualified Clinical Data Registry:
CPT codes and patient demographics are used to identify patients who are included in the measure's denominator. Registry codes are used to report the measure numerator.

Denominator
All patients, aged 18 and older, who undergo anesthesia care, except those with pre-existing eye trauma or those patients undergoing ophthalmologic surgery.

Denominator Criteria (Eligible Cases):
Patients aged 18 years or older on date of encounter
AND

Patient encounter during the reporting period (CPT):
00100, 00102, 00104, 00120, 00124, 00126, 00160, 00162, 00164, 00170, 00172, 00174, 00176, 00190, 00192, 00210, 00211, 00212, 00214, 00215, 00216, 00218, 00220, 00222, 00300, 00320, 00322, 00350, 00352, 00400, 00402, 00404, 00406, 00410, 00450, 00454, 00470, 00472, 00474, 00500, 00520, 00522, 00524, 00528, 00529, 00530, 00532, 00534, 00537, 00539, 00540, 00541, 00542, 00546, 00548, 00550, 00560, 00562, 00563, 00566, 00580, 00600, 00604, 00620, 00625, 00626, 00630, 00632, 00635, 00640, 00670, 00700, 00702, 00730, 00740, 00750, 00752, 00754, 00756, 00770, 00790, 00792, 00794, 00796, 00797, 00800, 00802, 00810, 00820, 00830, 00832, 00840, 00842, 00844, 00846, 00848, 00851, 00860, 00862, 00864, 00865, 00866, 00868, 00870, 00872, 00873, 00880, 00882, 00902, 00904, 00906, 00908, 00910, 00912, 00914, 00916, 00918, 00920, 00921, 00922, 00924, 00926, 00928, 00930, 00932, 00934, 00936, 00938, 00940, 00942, 00944, 00948, 00950, 00952, 01112, 01120, 01130, 01140, 01150, 01160, 01170, 01173, 01180, 01190, 01200, 01202, 01210, 01212, 01214, 01215, 01220, 01230, 01232, 01234, 01250, 01260, 01270, 01272, 01274, 01320, 01340, 01360, 01380, 01382, 01390, 01392, 01400, 01402, 01404, 01420, 01430, 01432, 01440, 01442, 01444, 01462, 01464, 01470, 01472, 01474, 01480, 01482, 01484, 01486, 01490, 01500, 01502, 01520, 01522, 01610, 01620, 01622, 01630, 01634, 01636, 01638, 01650, 01652, 01654, 01656, 01670, 01680, 01682, 01710, 01712, 01714, 01716, 01730, 01732, 01740, 01742, 01744, 01756, 01758, 01760, 01770, 01772, 01780, 01782, 01810, 01820, 01829, 01830, 01832, 01840, 01842, 01844, 01850, 01852, 01860, 01916, 01920, 01922, 01924, 01925, 01926, 01930, 01931, 01932, 01933, 01935, 01936, 01951, 01952, 01953, 01961, 01962, 01963, 01965, 01966, 01968, 01969, 01991, 01992

Denominator Exclusions / Exceptions:
- Patients who undergo ophthalmologic surgery or patients with a diagnosis of either eye trauma or corneal injury before anesthesia care.
- Organ Donors as designated by ASA Physical Status 6

Denominator Note:
Measure not applicable to anesthesia care described by code 00300 when the underlying surgical procedure is described by CPT Codes: 67800, 67801, 67805, 67808, 67810, 67840, 67850, 67875, 67900, or 67938.

Numerator
All patients who undergo anesthesia care and who do not have a new diagnosis of corneal injury within 24 hours of anesthesia end time.

Definition:
Corneal Injury: Includes both exposure keratitis and corneal abrasion. For the purposes of this measure, the distinction does not need to be made with fluorescein examination of the cornea under ultraviolet light; however, it can be diagnosed in this manner. Corneal injury also includes any new symptom of eye pain treated with topical antibiotic (e.g., erythromycin) while in the post-anesthesia care unit/recovery area. Other causes of eye pain (e.g. acute angle-closure glaucoma) can be excluded by instilling one drop of local anesthetic (e.g., proparacaine) into the eye. If the pain is immediately and completely relieved, corneal injury is confirmed and acute angle-closure glaucoma is excluded.

Numerator Quality-Data Coding Options for Reporting Satisfactorily:

Performance Met:
10A50: Patient was NOT newly diagnosed with exposure keratitis or corneal abrasion within 24 hours of anesthesia end time.
OR

Performance Not Met:
10A51: Patient diagnosed with new exposure keratitis or corneal abrasion within 24 hours of anesthesia end time.

Measure Type: Outcome
High Priority: Yes
High Priority Type: Patient Safety
NQF Number: Not applicable
eCQM Number: Not applicable

Rationale:
Corneal abrasion/injury is the most common ophthalmologic complication that occurs during general anesthesia for non-ocular surgery. These injuries are usually just painful for the patient, but can lead to significant microbial keratitis with possibility of permanent scarring. There is no standardized method for protecting the eyes during an anesthetic for non-ocular surgery. Adhesive tape, individual single, sterile packaged eye covers, small bio-occlusive dressings, used with or without eye ointment are some of the options used. Some practitioners may simply observe closed, non-taped eyes. The specific type of eye ointment also varies significantly. Some ointment is made with petrolatum, some is water soluble, with or without preservatives. If ointment is used, preservative-free eye ointment is preferred, because preservative can cause corneal epithelial sloughing and conjunctiva hyperemia. None of the methods described in the literature are entirely effective at preventing corneal injury and some are associated with unwanted side effects. It is important to know that petrolatum is flammable and should be avoided when cautery will be used near the face. Several large studies have demonstrated that applying these techniques while measuring performance can lead to significant improvements in patient care. Measuring the incidence of corneal injury will give practices the data they need to assess performance, compare to national benchmarks,

and if gaps are identified, undertake measures to improve eye protection for patients. The net result will be reduced corneal injuries and patient discomfort. All eye trauma cases and all eye surgery cases will be excluded from the measure. Reporting separately those procedures done on the face, including the ear, nose, and mandible, will serve as stratification allowing comparison of procedures which most anesthesiologists believe have a higher risk of corneal injury and which also remove the eyes from the direct control of the anesthesiologist.

Data Source: Certified Electronic Health Record Technology (CEHRT), Registry
Measure Steward: AdvanceQCDR
Number of Multiple Performance Rates: Not applicable
Inverse Measure: No
Proportion Measure Scoring: Yes
Continuous Measure Scoring: No
Risk Adjustment: No
Ration Measure: No

Measure Title

AQI51: Assessment of Patients for Obstructive Sleep Apnea

Measure Description:
Percentage of patients, aged 18 years and older, who underwent an elective procedure under anesthesia who were screened preoperatively for Obstructive Sleep Apnea (OSA) using a standardized tool prior to the procedure.

NQS Domain:
Patient Safety

Measure Type:
Process

High Priority Status:
Yes

Inverse Measure:
No

Instructions:
This measure is to be reported each time a patient undergoes an elective procedure under anesthesia during the reporting period. It is anticipated that qualified anesthesia providers and eligible clinicians who provide denominator-eligible services will submit this measure.

Measure Reporting via the Qualified Clinical Data Registry

Patient demographics and CPT codes are used to identify patients who are included in the measure denominator. G-codes and Registry Codes are used to capture the numerator.

Denominator
Patients, aged 18 years and older, who underwent an elective procedure* under anesthesia.

Definition: *Any procedure including surgical, therapeutic or diagnostic

Denominator Criteria (Eligible Cases):
Patient aged 18 years or older on date of encounter
AND
Elective surgery: G9643
AND
Patient encounter during the reporting period (CPT):
00100, 00102, 00103, 00104, 00120, 00124, 00126, 00140, 00142, 00144, 00145, 00147, 00148, 00160, 00162, 00164, 00170, 00172, 00174, 00176, 00190, 00192, 00210, 00211, 00212, 00214, 00215, 00216, 00218, 00220, 00222, 00300, 00320, 00322, 00350, 00352, 00400, 00402, 00404, 00406, 00410, 00450, 00454, 00470, 00472, 00474, 00500, 00520, 00522, 00524, 00528, 00529, 00530, 00532, 00534, 00537, 00539, 00540, 00541, 00542, 00546, 00548, 00550, 00560, 00562, 00563, 00566, 00567, 00580, 00600, 00604, 00620, 00625, 00626, 00630, 00632, 00635, 00640, 00670, 00700, 00702, 00730, 00731, 00732, 00750, 00752, 00754, 00756, 00770, 00790, 00792, 00794, 00796, 00797, 00800, 00802, 00811, 00812, 00813, 00820, 00830, 00832, 00840, 00842, 00844, 00846, 00848, 00851, 00860, 00862, 00864, 00865, 00866, 00868, 00870, 00872, 00873, 00880, 00882, 00902, 00904, 00906, 00908, 00910, 00912, 00914, 00916, 00918, 00920, 00921, 00922, 00924, 00926, 00928, 00930, 00932, 00934, 00936, 00938, 00940, 00942, 00944, 00948, 00950, 00952, 01112,

01120, 01130, 01140, 01150, 01160, 01170, 01173, 01200, 01202, 01210, 01212, 01214, 01215, 01220, 01230, 01232, 01234, 01250, 01260, 01270, 01272, 01274, 01320, 01340, 01360, 01380, 01382, 01390, 01392, 01400, 01402, 01404, 01420, 01430, 01432, 01440, 01442, 01444, 01462, 01464, 01470, 01472, 01474, 01480, 01482, 01484, 01486, 01490, 01500, 01502, 01520, 01522, 01610, 01620, 01622, 01630, 01634, 01636, 01638, 01650, 01652, 01654, 01656, 01670, 01680, 01710, 01712, 01714, 01716, 01730, 01732, 01740, 01742, 01744, 01756, 01758, 01760, 01770, 01772, 01780, 01782, 01810, 01820, 01829, 01830, 01832, 01840, 01842, 01844, 01850, 01852, 01860, 01916, 01920, 01922, 01924, 01925, 01926, 01930, 01931, 01932, 01933, 01935, 01936, 01951, 01952, 01953, 01958, 01960, 01961, 01962, 01963, 01965, 01966, 01967, 01968, 01969, 01991, 01992

Denominator Exclusions:
- Patients with previous diagnosis for Obstructive Sleep Apnea (OSA): G47.33
- Patients receiving CPAP treatment: Z99.89
- Mechanically ventilated patients: Z99.11
- Intubated patients: Z97.8

Numerator
Patients who are screened preoperatively for Obstructive Sleep Apnea (OSA) using a standardized tool prior to the surgical procedure.

Numerator Note: High-risk is defined by screening tool utilized. Standardized tools for Obstructive Sleep Apnea include STOP-Bang Questionnaire, Berlin Questionnaire, P-SAP Score and the ASA OSA Patient Screening Tool Checklist. Although it is preferable to use one of the standardized tools listed above, at a minimum an assessment tool must assess the following components: snoring, daytime tiredness, breathing obstruction and hypertension.

Numerator Note: Obstructive Sleep Apnea assessment can be conducted by a physician anesthesiologist, other qualified anesthesia provider or proxy.
Numerator Quality-Data Coding Options for Reporting Satisfactorily

Performance Met:
10A20 Patient was screened preoperatively for Obstructive Sleep Apnea (OSA) using a standardized tool prior to the procedure.
OR
Performance Not Met:
10A21 Patient was not screened preoperatively for Obstructive Sleep Apnea (OSA) using a standardized tool prior to the procedure

NQF Number: Not applicable
eCQM: Not applicable

Rationale
Quoted Verbatim:
Undiagnosed OSA may pose a variety of problems for anesthesiologists and qualified anesthesia providers. A number of case reports have documented an increase in the incidence of postoperative complications and deaths among patients suspected of having OSA. Untreated OSA patients are known to have a higher incidence of difficult intubation, postoperative complications, increased intensive care unit admissions, and greater duration of hospital stay. Identifying patients with OSA is the first step in preventing postoperative complications due to OSA.i
Moderate-to-severe sleep apnea is independently associated with a large increased risk of all-cause mortality, incident stroke, and cancer incidence and mortality in this community-based sample.ii

Data Source: Claims/Paper Medical Record, Registry
Measure Steward: American Society of Anesthesiologists (ASA) / Anesthesia Quality Institute (AQI)
Number of Multiple Performance Rates: Not applicable
Proportion Measure Scoring: Yes
Continuous Measure Scoring: No
Risk Adjustment: No

References

i Chung, F. et. al, 2016. "Society of Anesthesia and Sleep Medicine guidelines on preoperative screening and assessment of adult patients with obstructive sleep apnea." Anesth Analg, 123 (2): 452-473.
ii Marshall, N.S., et. al., 2014. "Sleep apnea and 20-year follow-up for all-cause mortality, stroke, and cancer incidence and mortality in the Busselton Health Study cohort." J Clin Sleep Med, 10 (4): 355-362

Measure Title
AQI50: Application of Lung-Protective Ventilation during General Anesthesia

Measure Description:
Percentage of patients, aged 12 years and older, who undergo general anesthesia care that includes an endotracheal tube who had a median exhaled tidal volume less than 10 mL/kg of ideal body weight during positive pressure ventilation (PPV).

NQS Domain:
Effective Clinical Care

Measure Type:
Intermediate Outcome

High Priority Status:
No

Inverse Measure:
No

Instructions:
This measure is to be reported each time a patient receives general anesthesia for a procedure via endotracheal tube during the reporting period. It is anticipated that qualified anesthesia providers and eligible clinicians who provide denominator-eligible services will submit this measure.

Measure Reporting via the Qualified Clinical Data Registry

Patient demographics, CPT codes and CPT Category codes are used to identify patients who are included in the measure denominator. Registry codes are used to report the numerator of the measure.

Denominator
Patients, aged 12 years and older, who undergo general anesthesia care that includes an endotracheal tube.

Denominator Criteria (Eligible Cases):
Patient aged 12 years or older on date of encounter
AND
Patient received general anesthesia care that includes an endotracheal tube: 10A15
AND
Patient encounter during the reporting period (CPT):
00100, 00102, 00103, 00104, 00120, 00124, 00126, 00140, 00142, 00144, 00145, 00147, 00148, 00160, 00162, 00164, 00170, 00172, 00174, 00176, 00190, 00192, 00210, 00211, 00212, 00214, 00215, 00216, 00218, 00220, 00222, 00300, 00320, 00322, 00350, 00352, 00400, 00402, 00404, 00406, 00410, 00450, 00454, 00470, 00472, 00474, 00500, 00520, 00522, 00524, 00528, 00529, 00530, 00532, 00534, 00537, 00539, 00540, 00541, 00542, 00546, 00548, 00550, 00560, 00562, 00563, 00566, 00567, 00580, 00600, 00604, 00620, 00625, 00626, 00630, 00632, 00635, 00640, 00670, 00700, 00702, 00730, 00731, 00732, 00750, 00752, 00754, 00756, 00770, 00790, 00792, 00794, 00796, 00797, 00800, 00802, 00811, 00812, 00813, 00820, 00830, 00832, 00840, 00842, 00844, 00846, 00848, 00851, 00860, 00862, 00864, 00865, 00866, 00868, 00870, 00872, 00873, 00880, 00882, 00902, 00904, 00906, 00908, 00910, 00912, 00914, 00916, 00918, 00920, 00921, 00922, 00924, 00926, 00928, 00930, 00932, 00934, 00936, 00938, 00940, 00942, 00944, 00948, 00950, 00952, 01112,

01120, 01130, 01140, 01150, 01160, 01170, 01173, 01200, 01202, 01210, 01212, 01214, 01215, 01220, 01230, 01232, 01234, 01250, 01260, 01270, 01272, 01274, 01320, 01340, 01360, 01380, 01382, 01390, 01392, 01400, 01402, 01404, 01420, 01430, 01432, 01440, 01442, 01444, 01462, 01464, 01470, 01472, 01474, 01480, 01482, 01484, 01486, 01490, 01500, 01502, 01520, 01522, 01610, 01620, 01622, 01630, 01634, 01636, 01638, 01650, 01652, 01654, 01656, 01670, 01680, 01682, 01710, 01712, 01714, 01716, 01730, 01732, 01740, 01742, 01744, 01756, 01758, 01760, 01770, 01772, 01780, 01782, 01810, 01820, 01829, 01830, 01832, 01840, 01842, 01844, 01850, 01852, 01860, 01916, 01920, 01922, 01924, 01925, 01926, 01930, 01931, 01932, 01933, 01935, 01936, 01951, 01952, 01953, 01958, 01960, 01961, 01962, 01963, 01965, 01966, 01968, 01969, 01991, 01992

Denominator Exclusions:
• ASA Physical Status 5 or 6
• Patients continuously receiving inhaled medications (e.g. inhaled epoprostenol or nitric oxide): 10A16
• Patients with a diagnosis of pulmonary hypertension: ICD-10-CM I27.0, I27.2
• Patients who require hyperventilation for therapeutic reasons (e.g. elevated intracranial pressure, malignant hyperthermia, or thyroid storm): 10A17
• Patient was mechanically ventilated for <45 cumulative minutes 10A99
• Single-lung ventilation procedure 11A00

Numerator
Patients who had a median exhaled tidal volume less than 10 mL/kg of ideal body weight during positive pressure ventilation (PPV).

Numerator Note: Positive pressure ventilation strategies include conservative tidal volume, lower peak airway pressures, positive end-expiratory pressure (PEEP) and lung-recruitment interventions to prevent atelectasis.

Numerator Quality-Data Coding Options for Reporting Satisfactorily
Performance Met:
10A18 Patient had a median exhaled tidal volume less than 10 mL/kg of ideal body weight during positive pressure ventilation (PPV)
OR
Performance Not Met:
10A19 Patient did not have a median exhaled tidal volume less than 10 mL/kg of ideal body weight during positive pressure ventilation (PPV)

NQF Number: Not applicable
eCQM: Not applicable

Rationale:
Anesthesia providers prescribe and implement ventilator settings and monitor tidal volume for patients under general anesthesia. These decisions are aimed at preventing lung injury while maintaining adequate oxygenation and ventilation. Several studies have reported that patients who maintained tidal volumes less than 10 ml per kg of ideal body weight experienced better outcomes than those ventilated with higher volumes. It is thought that higher tidal volumes expose the lungs to the potential for injury either due to over-expansion or pressure. AHRQ NQMC-8459 (Acute respiratory failure: percentage of patients with acute lung injury (ALI)/ acute respiratory distress syndrome receiving lung-protective ventilation) recognizes that mechanical ventilation with tidal volumes (TV) of 6-8 ml/kg is associated with fewer pulmonary complications.
There is growing evidence that intraoperative lung-protective mechanical ventilation prevents postoperative pulmonary complications (PPCs). Such complications are associated with longer lengths of hospital stay, often

requiring ICU admission.[i, ii, iii, iv] While half of the risk factors for pulmonary complications are attributable to patient comorbidities, approximately 50% of PPCs are attributable to the surgical procedure and the anesthetic management itself.[v] The number of PPCs is associated with postoperative length of stay and short term and long term mortality.[vi] Approximately 5% of patients undergoing general surgery will develop a PPC and one in five patients who develop a PPC will die within 30 days of surgery.[v] The estimated costs of postoperative pulmonary complications has not been specifically estimated, but likely contributes to significant morbidity, suffering, and economic cost.

Wanderer[vii], et al. demonstrated a current gap, noting of 295,540 cases analyzed, 43,934 (14.9%) had a median tidal volume of > 10 mL per kg of PBW. This measure is applicable to all adolescent and adult patients because it is impossible to predict who may develop PPCs and become critically ill. Additionally, by improving ventilation management for all patients, anesthesia providers will improve the likelihood that critically ill patients are managed appropriately when they come to the operating room.

There are times when the established measure threshold may be exceeded appropriately for a brief period of time (<10 minutes) to verify placement of the endotracheal tube or to reduce atelectasis by recruiting alveoli. As a result, short periods of increased ventilation are excluded. Furthermore, it must be recognized that much of the clinical literature that supports the use of lower tidal volumes also incorporated measures to minimize atelectasis, such and the introduction of PEEP and recruitment maneuvers. Anesthesiologists and qualified anesthesia providers should be cautioned against adopting only reduced tidal volumes without also incorporating measures to minimize atelectasis.

The definition of ideal body weight (IBW) is provided by table and calculation. The method for calculating median TV during PPV will vary depending on the specific software employed for the electronic anesthesia record.

Data Source: Claims/Paper Medical Record, Registry
Measure Steward: American Society of Anesthesiologists (ASA) / Anesthesia Quality Institute (AQI)
Number of Multiple Performance Rates: Not applicable
Proportion Measure Scoring: Yes
Continuous Measure Scoring: No
Risk Adjustment: No

References

i Fernandez-Perez, ER, et al. Intraoperative Ventilator Settings and Acute Lung Injury After Elective Surgery: A Nested Case Control Study. Thorax 2009; 64:121-127.

ii Hemmes SN, et al. Intraoperative ventilatory strategies to prevent postoperative pulmonary complications: a meta-analysis. Curr Opin Anaesthesiol 2013; 26:126–133

iii Futier, E, et al. Protective lung ventilation in operating room: A systematic Review. Minerva Anesthesiol 2014;80:726–735.

ivGajic, O, et al. Early Identification of Patients at Risk of Acute Lung Injury. Am J Respir Crit Care Med 2011; 183:462-470

v Canet, J, et. al. Prediction of Postoperative Pulmonary Complications in a Population-based Surgical Cohort. Anesthesiology2010;113(6):1338-50.

vi Mazo, V, et al. Prospective External Validation of a Predictive Score for Postoperative Pulmonary Complications. Anesthesiology 2014; 121:219-31.

vii Wanderer JP, et al. Temporal trends and current practice patterns for intraoperative ventilation at U.S. academic medical centers: a retrospective study. BMC Anesthesiology 2015; 15:40

Please note that measures with a preceding asterisk (*) are a part of the CMS-recommended Anesthesiology Measure Set.

Advance QCDR is also certified to submit MIPS measures.

Please note that measures with a preceding asterisk (*) are a part of the CMS-recommended Anesthesiology Measure Set.

- MIPS 005: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
- MIPS 008: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)
- MIPS 032: Stroke and Stroke Rehabilitation: Discharged on Antithrombotic Therapy
- MIPS 044*: CABG - Preoperative Beta-Blocker in Patients with Isolated CABG Surgery
- MIPS 047: Care Plan
- MIPS 076*: Prevention of CVC Related Bloodstream Infections
- MIPS 128: Preventative Care and Screening: Body Mass Index (BMI) Screening and Follow-Up Plan
- MIPS 130: Documentation of Current Medications in the Medical Record
- MIPS 226: Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention
- MIPS 317: Preventive Care and Screening: Screening for High Blood Pressure and Follow-Up Documented
- MIPS 374: Closing the Referral Loop: Receipt of Specialist Report
- MIPS 402: Tobacco Use and Help with Quitting Among Adolescents
- MIPS 404*: Anesthesiology Smoking Abstinence: The Percentage of Current Smokers Who Abstain from Cigarettes Prior to Anesthesia on the Day of Elective Procedure
- MIPS 407: Appropriate Treatment of Methicillin-Sensitive Staphylococcus Aureus (MSSA) Bacteremia
- MIPS 424*: Peri-operative Temperature Management
- MIPS 426*: Post-Anesthetic Transfer of Care: Procedure Room to PACU
- MIPS 427*: Post-Anesthetic Transfer of Care: Use of Checklist or Protocol for Direct Transfer of Care from Procedure Room to ICU
- MIPS 430*: Prevention of PONV – Combination Therapy
- MIPS 431: Preventive Care and Screening:Unhealthy Alcohol Use: Screening & Brief Counseling
- MIPS 463*: Prevention of Post-Operative Vomiting (POV) Combination Therapy (Pediatrics)