Centers for Medicare & Medicaid Services

Ambulatory Surgical Center Quality Reporting Program

Quality Measures Specifications Manual

Version 1.0

April 2012

TABLE OF CONTENTS

BACKGROUND

Quality Reporting for Ambulatory Surgical Centers

Welcome to quality reporting for Ambulatory Surgical Centers (ASCs)! This manual provides specifications for quality measures finalized for reporting to meet requirements for this recently finalized program.

A quality reporting program for ASCs was finalized by the Centers for Medicare and Medicaid Services (CMS) in the Calendar Year (CY) 2012 OPPS/ASC Final Rule with Comment Period (CMS-1525-FC). Five claims-based measures (four outcome measures and one process of care measure) were adopted for the CY 2014 payment determination. For the CY 2015 payment determination, the same claims-based measures and two structural measures (surgical procedure volume and safe surgery checklist use) were adopted for a total of seven quality measures. For the CY 2016 payment determination, the same claims-based and structural measures as adopted for the CY 2015 payment determination and one process of care measure were adopted.

ASCs that do not meet program requirements for ASC Quality Reporting may receive a 2 percent reduction in their ASC annual payment update. Thus, only separately identifiable entities certified as ASC by Medicare are affected by program requirements and possible payment penalty under the ASC Quality Reporting Program. The definition of an ASC can be found in the Claims Processing Manual, Chapter 14, Section 10.1 located on the CMS website (www.cms.hhs.gov).

The below table summarizes the quality measures, reporting periods, and payment years affected.

Table 1: ASC Quality Measures, Reporting Periods, and Initial Payment Year Affected

Measure	Reporting Period	Payments Affected
1. Patient Burn	October 1, 2012 thru December 31, 2012	CY 2014
2. Patient Fall	October 1, 2012 thru December 31, 2012	CY 2014
3. Wrong Site, Wrong Side, Wrong Patient, Wrong Procedure, Wrong Implant	October 1, 2012 thru December 31, 2012	CY 2014
4. Hospital Transfer/Admission	October 1, 2012 thru December 31, 2012	CY 2014
5. Prophylactic Intravenous (IV) Antibiotic Timing	October 1, 2012 thru December 31, 2012	CY 2014
6. Safe Surgery Checklist Use	July 1, 2013 thru August 15, 2013 (for January 1, 2012 thru December 31, 2012)	CY 2015
7. ASC Facility Volume Data on Selected ASC Surgical Procedures	July 1, 2013 thru August 15, 2013 (for January 1, 2012 thru December 31, 2012)	CY 2015
8. Influenza Vaccination Coverage Among Health Care Workers	October 1, 2014 thru March 31, 2015	CY 2016

The establishment of quality measure reporting procedures for ambulatory surgical centers was authorized under the Medicare Improvements and Extension Act of 2006 under Title I of the Tax Relief and Health Care Act of 2006 (Pub. L. 109-432).

Data Collection and Submission

Data for claims-based measures included in this specifications manual are to be reported for all Medicare fee-for-service (FFS) patients admitted to the ASC during required reporting periods (see Table 1).

For claims-based measures, the reporting period refers to dates of service, not to the claim submission date. For example, if a service was provided on September 30, 2012 with claim submission on October 1, 2012, this claim would not be included because the service date was prior to the reporting period.

Data for structural measures relates to **all** ASC patients.

Note that specifications for the Influenza Vaccination Coverage for Health Care Workers process of care measure are not included in this manual.

Claims-based Measures
ASCs are to submit information on the five claims-based measures using Quality Data Codes (QDCs) entered on their claims submitted using the CMS-1500 or associated electronic dataset. QDCs are specified CPT Category II codes or Level II G-codes that describe the clinical action required by a measure's numerator. Clinical actions can apply to more than one condition and therefore, can also apply to more than one measure. Some measures require more than one clinical action and, therefore, have more than one associated QDC. Facilities should review numerator reporting instructions carefully.

The selected QDC(s) are to be reported in addition to any codes that would be standard for billing purposes (e.g., the ICD-9-CM diagnosis and Current Procedural Terminology (CPT) codes, Healthcare Common Procedure Coding System (HCPCS) Level II and CPT Category III codes for the services performed) on the ASC claim for the encounter.

Data completeness for the reporting of these measures has been proposed to be calculated by comparing the number of claims meeting measure specifications with the appropriate QDCs to the number of claims that would meet measure specifications without the appropriate QDCs on the submitted claim. Requirements for reporting completeness will be finalized prior to data collection beginning in October 1, 2012.

Structural Measures
Data for structural measures are to be submitted using a web-based tool that will be located on the QualityNet website located at www.QualityNet.org. Data collection for structural measures is required in 2013 and the tool will be available at this time for data entry.

Public Reporting

The Secretary of Health and Human Services must establish procedures to make data collected under the Quality Reporting Programs. Under the ASC Quality Reporting Program, facilities will be provided the opportunity to review their data prior to publication. Details on the publication of data, the ability to withdraw and not have data publicly reports, and reconsideration processes have been proposed and will be finalized prior to data collection beginning October 1, 2012.

THE SPECIFICATIONS MANUAL

This Specifications Manual provides measure specifications, associated QDCs with descriptions, and references for required ASC Quality Reporting Program quality measures.

The claims-based ASC quality measures adopted by CMS for the ASC Quality Reporting Program were developed by the ASC Quality Collaboration. These measures are the intellectual property of the ASC Quality Collaboration. Additional information about the ASC quality measures endorsed by the National Quality Forum (NQF) is available in the ASC Quality Collaboration Implementation Guide (www.ascquality.org).

Information for each of the ASC Quality Collaboration measures is displayed in the following format:

Title of Measure - Provides the title of the measure

Quality Reporting Option - States whether the measure is an outcome, structural, or a process of care measure.

Description - A brief description of what is being measured.

Numerator - The patient population experiencing the outcome or process of care being measured.

Denominator - The patient population evaluated.

Numerator Inclusions - Patients to be included in the patient population experiencing the outcome or process of care being measured.

Numerator Exclusions - Patients to be excluded from the patient population experiencing the outcome or process of care being measured.

Denominator Inclusions - Patients included in the population to be evaluated.

Denominator Exclusions - Patients to be excluded from the population to be evaluated.

Coding options - A list and description of the G-code(s) used to report the measure

Data Sources - The documents that typically contain the information needed to determine the numerator and denominator.

Definitions - Specific definitions for the terms included in the numerator and denominator statements.

IMPORTANT

A QDC has been established to report that the patient did **not** experience the events for four of the five claims-based outcome measures. If this code is used, none of the other QDCs should be used for these four measures.

G8907: Patient documented **not** to have experienced any of the following events: a burn prior to discharge; a fall within the facility; wrong site, wrong side, wrong patient, wrong procedure or wrong implant event; or a hospital transfer or hospital admission upon discharge from the facility.

Note: For surgical patients with an order for prophylactic antibiotics, information on the fifth measure, Prophylactic IV Antibiotic Timing, will be reported separately. If the patient received the prophylactic antibiotic on time and did not experience any of the events (a burn prior to discharge; a fall within the facility; wrong site, wrong side, wrong patient, wrong procedure or wrong implant event; or a hospital transfer or hospital admission upon discharge from the facility), the code listed above (G8907) would be used **in addition to** G8916. See each measure for the list of available codes.

Ambulatory Surgical Center (ASC) Quality Reporting Measures

Measure Title: Patient Burn

MEASURE ID #: ASC-1

REPORTING MECHANISM:
Medicare Fee-for-Service Claims

DESCRIPTION:
The number of admissions (patients) who experience a burn prior to discharge.

DENOMINATOR:
All ASC admissions
       Inclusions: All ASC admissions.
       Exclusions: None

NUMERATOR:
ASC admissions experiencing a burn prior to discharge.
       Inclusions: ASC admissions experiencing a burn prior to discharge.
       Exclusions: None

Numerator Quality-Data Coding Options for Reporting:
G8908: Patient documented to have received a burn prior to discharge.
G8909: Patient documented **not** to have received a burn prior to discharge.
G8907: Patient documented **not** to have experienced any of the following events: a burn prior to discharge; a fall within the facility; wrong site, wrong side, wrong patient, wrong procedure or wrong implant event; or a hospital transfer or hospital admission upon discharge from the facility.

Note: If using code G8908 or G8909, do **not** use code G8907.

DEFINITIONS:
Admission - completion of registration upon entry into the facility.
Burn - Unintended tissue injury caused by any of the six recognized mechanisms: scalds, contact, fire, chemical, electrical or radiation (e.g. warming devices, prep solutions, electrosurgical unit or laser).
Discharge - occurs when the patient leaves the confines of the ASC.

SELECTION BASIS:
There are numerous case reports in the literature regarding patient burns in the surgical and procedural setting. The diversity of the causative agents underscores the multitude of potential risks that must be properly mitigated to avoid patient burns.

The literature on burns suggests that electrosurgical burns are most common. A recent publication from the ECRI Institute (www.ecri.org) highlights the increased risk of burns with newer surgical devices that apply higher currents at longer activation times. Although electrical burns are most prevalent, other mechanisms of burn injury are frequently reported in case studies and case series. These include chemical and thermal burns.

Surgical fires are rare; however, their consequences can be grave, killing or seriously injuring patients and surgical staff. The risk of surgical fire is present whenever and wherever surgery is performed, whether in an operating room (OR), a physician's office, or an outpatient clinic. Recognition of the diverse mechanisms by which a patient could sustain an unintentional burn in the ASC setting, scaling, contact, fire, chemical, electrical, or radiation, this will allow stakeholders to develop a better understanding of the incidence of these events and further refine preventive processes.

CLINICAL RECOMMENDATION STATEMENTS:
The risk of burns related to laser use can be reduced by adherence to the guidelines published by the American National Standards Institute (ANSI) for safe use of these devices in the health care setting. Similarly, the risk of burns related to the use of electrosurgical devices can be reduced by following the electrosurgery checklist published by ECRI Institute.

The risk of surgical fires can be reduced by minimizing ignition, oxidizer, and fuel risks (the "classic triangle"). The American Society of Anesthesiologist's Practice Advisory for the Prevention and Management of Operating Room Fires seeks to prevent the occurrence of OR fires, reduce adverse outcomes associated with OR fires, and identify the elements of a fire response protocol.

These guidelines are available at: http://www.asahq.org/For-Members/Practice-Management/Practice-Parameters.aspx.

Guidance for the prevention of surgical fire has also been published by the Association of Perioperative Registered Nurses (AORN).

REFERENCES
- American National Standards Institutes (ANSI) Z136.3 (2005) - Safe Use of Lasers in Health Care Facilities, 2005 Revision.
- American Society of Anesthesiologists Task Force on Operating Room Fires, Caplan RA, Barker SJ, et al. Practice advisory for the prevention and management of operating room fires. *Anesthesiology* 2008 May;108(5):786-801.
- ECRI Institute. New clinical guide to surgical fire prevention: patients can catch fire—here's how to keep them safer [guidance article]. *Health Devices* 2009 Oct;38(10):314-32.
- ECRI. Electrosurgery Checklist. http://www.mdsr.ecri.org/summary/detail.aspx?doc_id=8271.
- National Fire Protection Association (NFPA). NFPA 99: standard for health care facilities. Quincy (MA): NFPA; 2005.
- Association of Operating Room Nurses (AORN). AORN Guidance Statement: Fire Prevention in the Operating Room in Standards, Recommended Practices, and Guidelines. Denver, CO: AORN, 2006.
- AORN. Fire safety Tool Kit. 2011. http://www.aorn.org/PracticeResources/ToolKits/FireSafetyToolKit/.
- National Quality Forum. Serious Reportable Events in Healthcare 2006 Update. Washington, DC: NQF, 2007.
- Joint Commission. Joint Commission Sentinel Event Alert. Issue 12, February 4, 2000. Operative and Postoperative Complications: Lessons for the Future. Chicago, IL.
- Tucker R. Laparoscopic electrosurgical injuries: survey results and their implications. *Surg Laparosc Endosc.* 1995;5(4):311- 7.
- ECRI. Higher currents, greater risks: preventing patient burns at the return-electrode site during high-current electrosurgical procedures. *Health Devices.* 2005;34(8):273-9.

- Demir E, O'Dey D, and Pallua N. Accidental burns during surgery. *J Burn Care Res.*. 2006;27(6):895-900.
- Cheney F, Posner K, Caplan R, and Gild W. Burns from warming devices in anesthesia. A closed claims analysis. *Anesthesiology.* 1994;80(4):806-10.
- Barker S and Polson J. Fire in the operating room: a case report and laboratory study. *Anesth Anal.* 2001;93:960-965.
- ECRI. Devastation of patient fires. *Health Devices.* 1992;21:3-39.
- Bhananker S, Posner K, Cheney F, Caplan R, Lee L, and Domino K. Injury and liability associated with monitored anesthesia care: a closed claims analysis. *Anesthesiology.* 2006;104(2):228-34.

MEASURE ID #: ASC-2

REPORTING MECHANISMS:
Medicare Fee-for-Service Claims

DESCRIPTION:
The number of admissions (patients) who experience a fall within the ASC.

DENOMINATOR:
All ASC admissions
> **Inclusions**: All ASC admissions.
> **Exclusions**: None

NUMERATOR:
ASC admissions experiencing a fall within the confines of the ASC.
> **Inclusions**: ASC admissions experiencing a fall within the confines of the ASC.
> **Exclusions**: ASC admissions experiencing a fall outside the ASC.

Numerator Quality-Data Coding Options for Reporting:
G8910: Patient documented to have experienced a fall within the ASC.
G8911: Patient documented **not** to have experienced a fall within the ASC.
G8907: Patient documented **not** to have experienced any of the following events: a burn prior to discharge; a fall within the facility; wrong site, wrong side, wrong patient, wrong procedure or wrong implant event; or a hospital transfer or hospital admission upon discharge from the facility.

Note: If using code G8910 or G8911, do **not** use code G8907.

DEFINITIONS:
Admission - completion of registration upon entry into the facility.
Fall - a sudden, uncontrolled, unintentional, downward displacement of the body to the ground or other object, excluding falls resulting from violent blows or other purposeful actions (source: National Center for Patient Safety).

SELECTION BASIS:
"Falls per 100,000 patient days" has been endorsed as a serious reportable event by the NQF. While ASCs have a relatively low incidence of adverse events in general; information regarding the incidence of patient falls is not currently available. Stakeholders have expressed an interest in the public reporting of such adverse events. Due to the use of anxiolytics, sedatives, and anesthetic agents as adjuncts to procedures, patients undergoing outpatient surgery are at increased risk for falls.

CLINICAL RECOMMENDATION STATEMENTS:
The Agency for Healthcare Research and Quality's (AHRQ) *Prevention of Falls in Acute Care* guidelines state that patient falls can be reduced by following a four-step approach: 1) evaluating and identifying risk factors for falls in the older patient; 2) developing an appropriate plan of care

for prevention; 3) performing a comprehensive evaluation of falls that occur; and 4) performing a post-fall revision of plan of care as appropriate.

REFERENCES

- Institute for Clinical Systems Improvement (ICSI). Prevention of falls (acute care). Health care protocol. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2010 Apr. p 34.
- Boushon B, Nielsen G, Quigley P, Rutherford P, Taylor J, Shannon D. Transforming Care at the Bedside How-to Guide: Reducing Patient Injuries from Falls. Cambridge, MA: Institute for Healthcare Improvement; 2008.
- ECRI Institute. Falls Prevention Resources: https://www.ecri.org/Products/Pages/Fall_Prevention_Resources.aspx.
- Joint Commission. 2011-2012 National Patient Safety Goals: http://www.jointcommission.org/standards_information/npsgs.aspx.
- National Center for Patient Safety: United States Department of Veterans Affairs. http://www.patientsafety.gov/CogAids/FallPrevention/index.html#page=page-1.
- National Quality Forum. Serious Reportable Events in Healthcare – 2006 Update: A Consensus Report. March 2007.
- Gray-Micelli D. Preventing falls in acute care. In: Capezuti E, Zwicker D, Mezey M, Fulmer T, editor(s). Evidence-based geriatric nursing protocols for best practice. 3rd ed. New York (NY): Springer Publishing Company; 2008. p. 161-98.
- American Geriatrics Society, British Geriatrics Society, American Academy of Orthopedic Surgeons (AGS/BGS/AAOS) Guidelines for the Prevention of Falls in Older Persons (2001). *Journal of American Geriatrics Society*, 49, 664–672.
- American Medical Directors Association (AMDA). Falls and fall risk. Columbia, MD: American Medical Directors Association.
- ECRI Institute: Falls Prevention Strategies in Healthcare Settings (2006). Plymouth Meeting, PA.
- Institute for Clinical Systems Improvement. Prevention of Falls (Acute Care). Second Edition. April 2010.
- Resnick, B. (2003). Preventing falls in acute care. In: M. Mezey, T. Fulmer, I. Abraham (Eds.) & D. Zwicker (Managing Ed.), Geriatric nursing protocols for best practice (2nd ed., pp. 141–164). New York: Springer Publishing Company, Inc.
- University of Iowa Gerontological Nursing Interventions Research Center (UIGN). (2004). Falls prevention for older adults. Iowa City, IA: University of Iowa Gerontological Nursing Interventions Research Center, Research Dissemination Core.

Measure Title: Wrong Site, Wrong Side, Wrong Patient, Wrong Procedure, Wrong Implant

MEASURE ID #: ASC-3

REPORTING MECHANISM:
Medicare Fee-for-Service Claims

DESCRIPTION:
Any ASC admissions (patients) who experience a wrong site, side, patient, procedure or implant.

DENOMINATOR:
All ASC admissions
> **Inclusions**: All ASC admissions.
> **Exclusions**: None

NUMERATOR:
All ASC admissions experiencing a wrong site, wrong side, wrong patient, wrong procedure or wrong implant.
> **Inclusions**: All ASC admissions experiencing a wrong site, wrong side, wrong patient, wrong procedure or wrong implant.
> **Exclusions**: None

Numerator Quality-Data Coding Options for Reporting:
G8912: Patient documented to have experienced a wrong site, wrong side, wrong patient, wrong procedure or wrong implant event.

G8913: Patient documented **not** to have experienced a wrong site, wrong side, wrong patient, wrong procedure or wrong implant event.

G8907: Patient documented **not** to have experienced any of the following events: a burn prior to discharge; a fall within the facility; wrong site, wrong side, wrong patient, wrong procedure or wrong implant event; or a hospital transfer or hospital admission upon discharge from the facility.

Note: If using code G8912 or G8913, do **not** use code G8907.

DEFINITIONS:
Admission - completion of registration upon entry into the facility.
Wrong - not in accordance with intended site, side, patient, procedure or implant.

SELECTION BASIS:
"Surgery performed on the wrong body part," "surgery performed on the wrong patient," and "wrong surgical procedure performed on a patient" have all been endorsed as serious reportable surgical events by NQF. This outcome measure serves as an indirect measure of providers' adherence to

The Joint Commission, an accreditation body, has developed a "Universal Protocol" guideline for eliminating wrong site, wrong procedure, wrong person surgery. The Universal Protocol is based on the consensus of experts and is endorsed by more than forty professional medical associations and organizations. To encompass the outcomes of all key identification verifications, the ASC

Quality Collaboration's measure incorporates not only wrong site, wrong side, wrong patient and wrong procedure, but also wrong implant in its specifications.

CLINICAL RECOMMENDATION STATEMENTS:
The Joint Commission's "Universal Protocol" is based on the consensus of experts from the relevant clinical specialties and professional disciplines and is endorsed by more than 40 professional medical associations and organizations.

REFERENCES
- Joint Commission. *Universal Protocol For Preventing Wrong Site, Wrong Procedure, Wrong Person Surgery.* Available at: http://www.jointcommission.org/standards_information/up.aspx. Last accessed December 14, 2010.
- American Academy of Ophthalmology. Recommendations of American Academy of Ophthalmology Wrong-Site Task Force. http://one.aao.org/ce/practiceguidelines/patient_content.aspx?cid=d0db838c-2847-4535-baca-aebab3011217.
- American Academy of Orthopaedic Surgeons. Wrong-Site Surgery. Information Statement 1015 http://www.aaos.org/about/papers/advistmt/1015.asp.
- American College of Obstetricians and Gynecologists. ACOG committee opinion #464: patient safety in the surgical environment. Obstet Gynecol. 2010; 116(3):786-790.
- American College of Surgeons. [ST-41] Statement on ensuring correct patient, correct site, and correct procedure surgery http://www.facs.org/fellows_info/statements/st-41.html
- AORN. AORN Position Statement on Preventing Wrong-Patient, Wrong-Site, Wrong-Procedure Events. http://www.aorn.org/PracticeResources/AORNPositionStatements/PositionCorrectSiteSurgery/.
- Institute of Medicine. To Err is Human: Building a Safer Health System. Washington, DC: National Academy Press, 2000.
- Joint Commission. 2011 National Patient Safety Goals. http://www.jointcommission.org/standards_information/npsgs.aspx.
- National Quality Forum. Serious Reportable Events in Healthcare – 2006 Update: A Consensus Report. March 2007.
- World Health Organization. WHO Guidelines for Safe Surgery 2009. http://whqlibdoc.who.int/publications/2009/9789241598552_eng.pdf.

Measure Title: Hospital Transfer/Admission

MEASURE ID #: ASC-4

REPORTING MECHANISM:
Medicare-Fee-for-Service Claims

DESCRIPTION:
ASC admissions (patients) who are transferred or admitted to a hospital upon discharge from the ASC.

DENOMINATOR:
All ASC admissions
       Inclusions: All ASC admissions.
       Exclusions: None

NUMERATOR:
ASC admissions requiring a hospital transfer or hospital admission upon discharge from the ASC.
       Inclusions: ASC admissions requiring a hospital transfer or hospital admission upon
       discharge from the ASC.
       Exclusions: None

Numerator Quality-Data Coding Options for Reporting:
G8914: Patient documented to have experienced a hospital transfer or hospital admission upon
       discharge from ASC.
G8915: Patient documented **not** to have experienced a hospital transfer or hospital admission
       upon discharge from ASC.
G8907: Patient documented **not** to have experienced any of the following events: a burn prior to
       discharge; a fall within the facility; wrong site, wrong side, wrong patient, wrong procedure
       or wrong implant event; or a hospital transfer or hospital admission upon discharge from
       the facility.

Note: If using code G8914 or G8915, do **not** use code G8907.

DEFINITIONS:
Admission - completion of registration upon entry into the facility.
Hospital Transfer/Admission - any transfer/admission from an ASC directly to an acute care hospital including hospital emergency room.
Discharge - occurs when the patient leaves the confines of the ASC.

SELECTION BASIS:
The need for transfer/admission is an unanticipated outcome and could be the result of insufficient rigor in patient or procedure selection. Hospital transfers/admissions can result in unplanned cost and time burdens that must be borne by patients and payers.

Selected states have expressed an interest in the public reporting of such events. While hospital transfers and admissions undoubtedly represent good patient care when necessary, high rates may be an indicator that practice patterns or patient selection guidelines are in need of review.

CLINICAL RECOMMENDATION STATEMENTS:
No clinical practice guidelines specifically addressing transfers or admissions from ASCs to acute care hospitals are available at this time.

REFERENCES

- Coley K et al. Retrospective evaluation of unanticipated admissions and readmissions after same day surgery and associated costs. *J Clin Anesth*. 2002;14:349-353.
- Lin D, Dalgorf D, Witterick IJ. Predictors of unexpected hospital admissions after outpatient endoscopic sinus surgery: retrospective review. *J Otolaryngol Head Neck Surg*. 2008 Jun;37(3):309-11.
- Hofer RE, Kai T, Decker PA, Warner DO. Obesity as a risk factor for unanticipated admissions after ambulatory surgery. *Mayo Clin Proc*. 2008 Aug;83(8):908-16.
- Tewfik MA, Frenkiel S, Gasparrini R, Zeitouni A, Daniel SJ, Dolev Y, Kost K, Samaha M, Sweet R, Tewfik TL. Factors affecting unanticipated hospital admission following otolaryngologic day surgery. *J Otolaryngol*. 2006 Aug;35(4):235-41.
- Shirakami G, Teratani Y, Namba T, Hirakata H, Tazuke-Nishimura M, Fukuda K. Delayed discharge and acceptability of ambulatory surgery in adult outpatients receiving general anesthesia. *J Anesth*. 2005;19(2):93-101.
- Lau H, Brooks DC. Predictive factors for unanticipated admissions after ambulatory laparoscopic cholecystectomy. *Arch Surg*. 2001 Oct;136(10):1150-3.
- Junger A, Klasen J, Benson M, Sciuk G, Hartmann B, Sticher J, Hempelmann G. Factors determining length of stay of surgical day-case patients. *Eur J Anaesthesiol*. 2001 May;18(5):314-21.
- Fortier J, Chung F, Su J. Unanticipated admission after ambulatory surgery—a prospective study. *Can J Anaesth*. 1998 Jul;45(7):612-9.
- Margovsky A. Unplanned admissions in day-case surgery as a clinical indicator for quality assurance. *Aust N Z J Surg*. 2000 Mar;70(3):216-20.
- Lledó JB, Planells M, Espí A, Serralta A, García R, Sanahuja A. Predictive model of failure of outpatient laparoscopic cholecystectomy. *Surg Laparosc Endosc Percutan Tech*. 2008 Jun;18(3):248-53.
- Shaikh S, Chung F, Imarengiaye C, Yung D, Bernstein M. Pain, nausea, vomiting and ocular complications delay discharge following ambulatory microdiscectomy. *Can J Anaesth*. 2003 May;50(5):514-8.

Measure Title: Prophylactic Intravenous (IV) Antibiotic Timing

MEASURE ID #: ASC-5

REPORTING MECHANISM:
Medicare-Fee-for-Service Claims

DESCRIPTION:
Intravenous (IV) antibiotics given for prevention of surgical site infection were administered on time.

DENOMINATOR:
All ASC admissions with a preoperative order for a prophylactic IV antibiotic for prevention of surgical site infection.
>   **Inclusions**: All ASC admissions with a preoperative order for a prophylactic IV antibiotic for prevention of surgical site infection.
>   **Exclusions**: ASC admissions with a preoperative order for a prophylactic IV antibiotic for prevention of infections other than surgical site infections (e.g. bacterial endocarditis); ASC admissions with a preoperative order for a prophylactic antibiotic not administered by the intravenous route.

NUMERATOR:
Number of ASC admissions with an order for a prophylactic IV antibiotic for prevention of surgical site infection who received the prophylactic antibiotic on time.
>   **Inclusions**: All ASC admissions with a preoperative order for a prophylactic IV antibiotic for prevention of surgical site infection.
>   **Exclusions**: None

Numerator Quality-Data Coding Options for Reporting:
G8916: Patient with preoperative order for IV antibiotic surgical site infection (SSI) prophylaxis, antibiotic initiated on time.
G8917: Patient with preoperative order for IV antibiotic surgical site infection (SSI) prophylaxis, antibiotic **not** initiated on time.
G8918: Patient without preoperative order for IV antibiotic surgical site infection (SSI) prophylaxis.

Note: The QDC of G8907 can be used If the patient did not experience any of the events for the four outcome measures (a burn prior to discharge; a fall within the facility; wrong site, wrong side, wrong patient, wrong procedure or wrong implant event; or a hospital transfer or hospital admission upon discharge from the facility); this code would be used **plus** one of the codes above for the prophylactic antibiotic timing measure for complete reporting of the 5 claims-based measures.

DEFINITIONS:
Admission - completion of registration upon entry into the facility.

Antibiotic administered on time - Antibiotic infusion is initiated within one hour prior to the time of the initial surgical incision or the beginning of the procedure (e.g., introduction of endoscope, insertion of needle, inflation of tourniquet) or two hours prior if vancomycin or fluoroquinolones are administered.

Intravenous - Administration of a drug within a vein, including bolus, infusion or IV piggyback.

Order - a written order, verbal order, standing order or standing protocol.

Prophylactic antibiotic - an antibiotic prescribed with the intent of reducing the probability of an infection related to an invasive procedure. For purposes of this measure, the following antibiotics are considered prophylaxis for surgical site infections: Ampicillin/sulbactam, Aztreonam, Cefazolin, Cefmetazole, Cefotetan, Cefoxitin, Cefuroxime, Ciprofloxacin, Clindamycin, Ertapenem, Erythromycin, Gatifloxacin, Gentamicin, Levofloxacin, Metronidazole, Moxifloxacin, Neomycin and Vancomycin.

SELECTION BASIS:

The CMS Surgical Infection Prevention performance measure states, "Surgical site infections occur in 2-5 percent of clean extra-abdominal surgeries and up to 20 percent of intra-abdominal surgeries. Each infection is estimated to increase a hospital stay by an average of 7 days and add over $3,000 in charges (1992 data). Patients who develop surgical site infections are 60 percent more likely to spend time in an ICU (intensive care unit), five times more likely to be readmitted to the hospital, and have twice the incidence of mortality. Despite advances in infection control practices, surgical site infections remain a substantial cause of morbidity and mortality among hospitalized patients. Studies indicate that appropriate preoperative administration of antibiotics is effective in preventing infection. Systemic and process changes that promote compliance with established guidelines and standards can decrease infectious morbidity."

There is no literature available on variation in adherence to recommended prophylactic IV antibiotic timing among ASC providers. However, variability in the accuracy of timing of administration has been demonstrated in other clinical settings.

CLINICAL RECOMMENDATION STATEMENTS:

This performance measure is aligned with current surgical infection prevention guidelines recommending that prophylactic antibiotics be administered within one hour prior to surgical incision, or within two hours prior to incision when vancomycin or fluoroquinolones are used.

REFERENCES

- Horan T, Culver D, Gaynes R, Jarvis W, Edwards J, and Reid C. Nosocomial infections in surgical patients in the United States, January 1986-June 1992. National Nosocomial Infections Surveillance (NNIS) System. *Infect Control HospEpidemiol*. 1993; 14(2):73-80.
- Marton W, Jarvis W, Culver D, and Haley R. Incidence and nature of endemic and epidemic nosocomial infections. In: Bennett J, Brachman P, editor(s). *Hospital infections*. 3rd ed. Boston, MA: Little, Brown and Co.; 1992. 577-596.
- Kirkland K, Briggs J, Trivette S, Wilkinson W, and Sexton D. The impact of surgical-site infections in the 1990s: attributable mortality, excess length of hospitalization, and extra costs. *Infect Control Hosp Epidemiol.* 1999; 20(11):725-30.
- Burke J. Maximizing appropriate antibiotic prophylaxis for surgical patients: an update from LDS Hospital, Salt Lake City. *Clin Infect Dis.* 2001; 33(Suppl 2):S78-83.
- Classen D et al. The timing of prophylactic administration of antibiotics and the risk of surgical wound infection. *NEJM.* 1992; 326(5):281-286.
- Silver A et al. Timeliness and use of antibiotic prophylaxis in selected inpatient surgical procedures. The Antibiotic Prophylaxis Study Group. *Am J Surg.* 1996; 171(6):548-552.
- Papaioannou N, Kalivas L, Kalavritinos J, and Tsourvakas S. Tissue concentrations of third-generation cephalosporins (ceftazidime and ceftriaxone) in lower extremity tissues using a tourniquet. *Arch Orthop Trauma Surg.* 1994; 113(3):167-9.

- Dounis E, Tsourvakas S, Kalivas L, and Giamacellou H. Effect of time interval on tissue concentrations of cephalosporins after tourniquet inflation. Highest levels achieved by administration 20 minutes before inflation. *Acta Orthop Scand.* 1995; 66(2):158-60.
- Friedrich L, White R, Brundage D, Kays M, Friedman R. The effect of tourniquet inflation on cefazolin tissue penetration during total knee arthroplasty. *Pharmacotherapy.* 1990; 10(6):373-7.
- Steinberg JP, Barun BI, Hellinger WC, Kusek L, Bozikis MR, Bush AJ, Dellinger EP, Burke JP, Simmons B, Kritchevsky SB, Trial to reduce antimicrobial prophylaxis errors (TRAPE) study group. Timing of antimicrobial prophylaxis and the risk of surgical site infections: results from the trial to reduce antimicrobial prophylaxis errors. Ann Surg 2009; 250(1):10-6.
- Forbes SS, Stephen WJ, Harper WL, Loeb M, Smith R, Christoffersen EP, McLean RF. Implementation of evidence-based practices for surgical site infection prophylaxis: results of a pre- and post intervention study. J Am Coll Surg. 2008 Sep; 207(3):336-41.
- Koopman E, Nix DE, Erstad BL, Demeure MJ, Hayes MM, Ruth JT, Mattias KR. End-of-procedure cefazolin concentrations after administration for prevention of surgical-site infection. Am J Health Syst Pharm. 2007 Sep; 64(18):1927-34.
- Manniën J, van Kasteren ME, Nagelkerke NJ, Gyssens IC, Kullberg BJ, Wille JC, de Boer AS. Effect of optimized antibiotic prophylaxis on the incidence of surgical site infection. Infect Control Hosp Epidemiol. 2006; 27(12):1340-6.

Measure Title: ASC Facility Volume Data on Selected ASC Surgical Procedures

MEASURE ID#: ASC-6

REPORTING MECHANISM:
Web-based tool on QualityNet

DESCRIPTION: The aggregate count of selected surgical procedures. Most ASC procedures fall into one of eight categories: Cardiovascular, Eye, Gastrointestinal, Genitourinary, Musculoskeletal, Nervous System, Respiratory, and Skin. The eight categories and corresponding HCPCS are listed in the table below. The procedures and codes in Table 2 were selected based on recent ASC data and update the procedure codes listed in the Calendar Year (CY) 2012 OPPS/ASC Final Rule with Comment Period (CMS-1525-FC).

Measure ascertains response to the following question(s):
- What was the aggregate count of selected surgical procedures per category?

Annual data submission period: July 1, 2013 – August 15, 2013 covering the performance period January 1, 2012- December 31, 2012.

Table 2: Categories and HCPCS for ASC-6

Organ System	CMS Procedure Category	Surgical Procedure Codes
Cardiovascular	Placement of long-term vascular access catheter	36561
	Vascular procedures to improve blood flow to coronary (heart) vessels	92980, 92981, 92982, 92984
Eye	Organ transplant (eye)	65756, V2785
	Laser procedure of eye	65855, 66761, 66821
	Glaucoma procedures	66170, 66180
	Cataract procedures	66982, 66984
	Injection of eye	67028, J2778, J3300, J3396
	Retina, macular and posterior segment procedures	67041, 67042, 67210, 67228
	Repair of surrounding eye structures	67900, 67904, 67917, 67924
Gastrointestinal	GI endoscopy procedures	43239, 43235, 43248, 43249, 43251, 44361, 45330, 45331, 45378, 45380, 45381, 45383, 45384, 45385
	Swallowing tube (esophagus)	43450
	Hernia repair	49505
	GI screening procedures	G0105, G0121
Genitourinary	Kidney stone fragmentation	50590
	Bladder related procedures	52000, 52005, 52204, 52281, 52310, 52332,
	Prostate biopsy	55700
	Radiologic procedures (GU)	74420
	Ultrasound procedures (GU)	76872

Musculoskeletal	Joint or muscle aspiration or injection	20610
	Removal of musculoskeletal implants	20680
	Repair of tendons and ligaments	23412
	Repair of foot, toes, fingers, and wrist	26055, 28270, 28285, 28296, , 29848
	Removal of musculoskeletal lesion	26160
	Joint arthroscopy	29824, 29826, 29827, 29880, 29881
	Musculoskeletal drug injection	J0585
Nervous	Injection procedures in or around the spine	62310, 62311, 64479, 64483, 64484, 64490, 64491, 64492, 64493, 64494, 64495, 64622, 64623, 64626, 64627, G0260
	Device implant	63650
	Nerve decompression	64718
	Repair of foot, toes, fingers, and wrist	64721
Respiratory	Sinus procedure	31255
Skin	Skin procedures	11042, 13132, 14040, 14060, 15260, Q4101, Q4102, Q4106
	Repair of surrounding eye structures	15823
Multi-system*	Brachytherapy	C2638, C2639, C2640, C2641
	Cancer treatment	C9257

*Multi-System: procedures that can be performed in more than one organ system.

Measure Title: Safe Surgery Checklist Use

MEASURE ID #: ASC-7

REPORTING MECHANISM:
Web-based tool on QualityNet

Description: The use of a Safe Surgery Checklist for surgical procedures that includes safe surgery practices during each of the three critical perioperative periods: the period prior to the administration of anesthesia, the period prior to skin incision, and the period of closure of incision and prior to the patient leaving the operating room.

Measure ascertains response to the following question(s):

- Does/did your facility use a safe surgery checklist based on accepted standards of practice at any time during the designated period? Yes/No

Annual data submission period: July 1, 2013 – August 15, 2013 covering the designated time period January 1, 2012- December 31, 2012.

Examples for Safe Surgery Practices*

First critical point (period prior to administering anesthesia)	Second critical point (period prior to skin incision)	Third critical point (period of closure of incision and prior to patient leaving the operating room)
- Verbal confirmation of patient identity - Mark surgical site - Check anesthesia machine/medication - Assessment of allergies, airway and aspiration risk	- Confirm surgical team members and roles - Confirm patient identity, procedure and surgical incision site - Administration of antibiotic prophylaxis within 60 minutes before incision - Communication among surgical team members of anticipated critical events - Display of essential imaging as appropriate	- Confirm the procedure - Complete count of surgical instruments and accessories - Identify key patient concerns for recovery and management of the patient

*Hospital safe surgery checklist items are not limited to the examples listed in this table.

APPENDIX A: DATA DEFINITIONS

Admission: Completion of registration upon entry into the facility.

Antibiotic administered on time: Antibiotic infusion is *initiated* within one hour prior to the time of the initial surgical incision or the beginning of the procedure (e.g., introduction of endoscope, insertion of needle, inflation of tourniquet) or two hours prior if vancomycin or fluoroquinolones are administered.

Burn: Unintended tissue injury caused by any of the six recognized mechanisms: scalds, contact, fire, chemical, electrical or radiation, (e.g. warming devices, prep solutions, electrosurgical unit or laser).

Discharge: Occurs when the patient leaves the confines of the ASC.

Fall: A sudden, uncontrolled, unintentional, downward displacement of the body to the ground or other object, excluding falls resulting from violent blows or other purposeful actions. (National Center for Patient Safety)

Hospital transfer/admission: Any transfer/admission from an ASC directly to an acute care hospital including hospital emergency room or emergency department.

Intravenous: Administration of a drug within a vein, including bolus, infusion or IV piggyback.

Order: A written order, verbal order, standing order or standing protocol.

Prophylactic antibiotic: An antibiotic prescribed with the intent of reducing the probability of an infection related to an invasive procedure. For purposes of the Prophylactic IV Antibiotic Timing measure, the following antibiotics are considered prophylaxis for surgical site infections: Ampicillin/sulbactam, Aztreonam, Cefazolin, Cefmetazole, Cefotetan, Cefoxitin, Cefuroxime, Ciprofloxacin, Clindamycin, Ertapenem, Erythromycin, Gatifloxacin, Gentamicin, Levofloxacin, Metronidazole, Moxifloxacin, Neomycin and Vancomycin.

Quality Data Code (QDC): Non-payable Healthcare Common Procedure Coding System (HCPCS) codes comprised of specified CPT Category II codes and/or G-codes that describe the clinical action required by a measure's numerator.

Wrong: Not in accordance with intended site, side, patient, procedure or implant.

Additional information and resources, such as sample data collection sheets or logs and frequently asked questions (FAQs) about the measures, can be found on the ASC Quality Collaboration website at www.ascquality.org.