

# ASC Quality Measures: Implementation Guide

---

Version 12.0  
January 2024

ASC Quality Collaboration

---



[www.ascquality.org](http://www.ascquality.org)

## **TABLE OF CONTENTS**

<b>About the ASC Quality Collaboration</b>	<b>1</b>
<b>Using This Implementation Guide</b>	<b>2</b>
<b>Measure Information: All-Cause Hospital Transfer/Admission</b>	<b>4</b>
<b>Measure Information: All-Cause Emergency Department Visit Within One Day of Discharge</b>	<b>6</b>
<b>Measure Information: All-Cause Unplanned Hospital Admission Within One Day of Discharge</b>	<b>8</b>
<b>Measure Information: Appropriate Surgical Site Hair Removal</b>	<b>10</b>
<b>Measure Information: Normothermia</b>	<b>12</b>
<b>Measure Information: Patient Burn</b>	<b>15</b>
<b>Measure Information: Patient Fall in the ASC</b>	<b>17</b>
<b>Measure Information: Prophylactic IV Antibiotic Timing</b>	<b>19</b>
<b>Measure Information: Toxic Anterior Segment Syndrome (TASS)</b>	<b>23</b>
<b>Measure Information: Unplanned Anterior Vitrectomy</b>	<b>25</b>
<b>Measure Information: Wrong Site, Side, Patient, Procedure or Implant</b>	<b>27</b>
<b>Appendix A: Data Dictionary</b>	
<b>Appendix B: Sample Data Collection Logs</b>	
<b>Appendix C: Post-Discharge Surveillance Guidelines</b>	

### **About the ASC Quality Collaboration**

The ASC Quality Collaboration (ASC QC) is a cooperative effort of organizations and companies interested in ensuring that ASC quality data is measured and reported in a meaningful way. The ASC QC was formed in 2006 with a view toward developing standardized ASC quality measures. The organization's stakeholders include leaders from ASC management companies, industry associations, accreditation organizations, information technology companies, and professional physician and nursing associations with a focus on health care quality and safety in the ASC setting. A list of the current members of the ASC QC can be found on the ASC QC website at [www.ascquality.org](http://www.ascquality.org).

The measures included in this implementation guide have been developed using a multi-step process. Each has been vetted with both our internal panel of technical experts and an external panel of individuals and/or organizations with relevant expertise. All of the measures have been pilot tested in ASCs and assessed for validity, feasibility, usability and reliability.

## Using This Implementation Guide

The ASC QC has developed this implementation guide to help ASCs implement and collect data for the ASC facility-level quality measures it has developed. This guide is updated periodically.

The measures developed by the ASC QC include both *outcome measures* and *process measures*. An *outcome measure* assesses patients for a specific result of health care intervention. A *process measure* evaluates a particular aspect of the care that is delivered to the patient.

Of the eleven ASC QC measures, nine are outcome measures. These measures include 1) all-cause hospital transfer/admission, 2) all-cause emergency department visit within one day of discharge, 3) all-cause unplanned hospital admission within one day of discharge, 4) normothermia, 5) patient falls, 6) patient burns, 7) toxic anterior segment syndrome (TASS), 8) unplanned anterior vitrectomy, and 9) wrong site/wrong side/wrong patient/wrong procedure/wrong implant. The remaining measures are infection control process measures that evaluate the timing of the administration of intravenous antibiotics for prophylaxis of surgical site infection and appropriate surgical site hair removal.

In the sections that follow, details regarding each measure are presented first in tabular form, followed by additional supporting information. The table displayed below shows both the general format for sharing key information regarding the measure as well as an explanation of each element.

Name of Measure	
<b>Measure Type</b>	States whether the measure is an outcome measure or a process measure.
<b>Description</b>	A brief description of what is measured.
<b>Numerator/Denominator</b>	Numerator: Patient population experiencing the outcome or process of care being measured.
	Denominator: The patient population evaluated.
<b>Inclusions/Exclusions</b>	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.
<b>Data Sources</b>	The documentation that typically contains the information needed to determine the numerator and denominator.
<b>Definitions</b>	Specific definitions for the terms included in the numerator and denominator statements.

To report the results for each measure as a rate, count the number of patients meeting the numerator criteria and the number of patients meeting the denominator criteria. To calculate the results as a percentage, divide the numerator by the denominator and multiply by 100.

The appendices to this guide include a Data Dictionary (Appendix A), sample data collection logs for the Normothermia, Prophylactic IV Antibiotic Timing and Appropriate Surgical Site Hair Removal measures (Appendix B) and the ASC QC Post-Discharge Surveillance Protocol (Appendix C).

### **Frequently Asked Questions about the ASC QC's Quality Measures**

*Do we count patients who are treated at the ASC, but not in an OR/procedure room? An example would be patients who come for a YAG Capsulotomy.*

All ASC admissions are counted.

*Do the measures offer opportunity for improvement?*

Given there is little in the literature on ASC performance and outcomes, implementing these measures will provide a better understanding of the true incidence of these outcomes. The use of common definitions allows for standardized reporting of this information on a nationwide basis. This also allows ASCs to benchmark their results and focus their quality improvement efforts. The ASC QC publishes quarterly benchmarking data for its measures at [ascquality.org](http://ascquality.org).

*Why are these measures important to ASC industry?*

These measures are important for several reasons:

- 1) There is little in the literature that is specific to ASC performance and outcomes and the frequency of these events is not currently known. Data collection will help provide the information needed and establish benchmarks.
- 2) Since most ASCs track at least some of these outcomes, they already recognize these as important measures of quality and therefore there is a greater opportunity for acceptance by the ASC industry, a greater chance that systems are in place to collect data, and a greater chance for compliance with reporting.
- 3) The outcomes and processes can be applied to any setting that performs outpatient surgery such as hospital outpatient departments, freestanding ASCs, and physician's offices - allowing the opportunity to apply these measures across patient care different settings.

*How will the measures be updated?*

These measures are updated by re-evaluating and updating the specifications on an annual or as-needed basis.

*Who can I contact with questions?*

If your question is not answered after reading the implementation guide, you can access [www.ascquality.org](http://www.ascquality.org) for more information.

*How do I collect data for these measures?*

For selected measures, sample data collection logs are available in Appendix B. For measures that evaluate outcomes occurring after discharge, please reference the Post-Discharge Surveillance Guidelines in Appendix C.

## Measure Information: All-Cause Hospital Transfer/Admission

All-Cause Hospital Transfer/Admission	
<b>Measure Type</b>	Outcome
<b>Description</b>	This measure is used to assess the percentage of ASC admissions (patients) that are transferred or admitted to a hospital upon discharge from the ASC.
<b>Numerator/Denominator</b>	Numerator: Ambulatory Surgery Center (ASC) admissions requiring a hospital transfer or hospital admission upon discharge from the ASC. Denominator: All ASC admissions.
<b>Inclusions/Exclusions</b>	Numerator Inclusions: ASC admissions requiring a hospital transfer or hospital admission upon discharge from the ASC. Numerator Exclusions: None. Denominator Inclusions: All ASC admissions. Denominator Exclusions: None.
<b>Data Sources</b>	ASC medical records, incident/occurrence reports and variance reports are potential data sources.
<b>Definitions</b>	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.

### Rationale

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.

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. It should be noted that issues identified preoperatively are included because they also represent good patient care when a hospital transfer/admission is necessary.

### Clinical Practice Guidelines

No clinical practice guidelines addressing transfers or admissions from ASCs to acute care hospitals are currently available.

### Frequently Asked Questions for All-Cause Hospital Transfer/Admission

Should patients who go to a hospital emergency room sometime after their discharge be counted?

To allow consistent reporting, only patients who are directly transferred or directly admitted to the hospital upon their discharge from the ASC are counted for purposes of this measure.

Do we count ASC patients who are admitted to the hospital sometime after their discharge from the ASC secondary to a complication of surgery?

No, only patients who are directly transferred or admitted to the hospital upon their discharge from the ASC should be counted.

Do we capture data for all ASC patients who are directly transferred or admitted to the hospital setting regardless of reason?

Yes, all transfers or admissions to the hospital that take place upon discharge from the ASC should be counted, regardless of the reason for the transfer or admission.

Do we count a patient who was transferred to the emergency room because an issue was identified in pre-op?

Yes, patients with issues identified in pre-op that are transferred or admitted to a hospital/emergency room directly from the ASC are counted.

Do we count patients who are transferred to the hospital setting in an automobile upon discharge?

Yes. All transfers or admissions upon discharge from the ASC are counted, regardless of the mode of transportation.

### **Selected 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.

Sawhney M et al. Pain and haemorrhage are the most common reasons for emergency department use and hospital admission in adults following ambulatory surgery: results of a population-based cohort study. *Perioper Med (Lond).* 2020 Aug 19;9:25.

Brown CR et al. Unplanned Emergency Visits and Admissions After Orthopaedic Ambulatory Surgery in the First 2 Years of Operation of a University Ambulatory Surgery Center. *Am J Sports Med.* 2021 Feb;49(2):505-511.

Tewfik MA et al. Factors affecting unanticipated hospital admission following otolaryngologic day surgery. *J Otolaryngol.* 2006 Aug;35(4):235-41.

Mull HJ et al. Factors Associated with Hospital Admission after Outpatient Surgery in the Veterans Health Administration. *Health Serv Res.* 2018 Oct;53(5):3855-3880.

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.

Fox JP, Vashi AA, Ross JS, Gross CP. Hospital-based, acute care after ambulatory surgery center discharge. *Surgery.* 2014 May;155(5):743-53.

## Measure Information: All-Cause Emergency Department Visit Within One Day of Discharge

All-Cause Emergency Department Visit Within One Day of Discharge	
<b>Measure Type</b>	Outcome
<b>Description</b>	This measure is used to assess the percentage of ASC admissions (patients) that have an emergency department visit within one day of discharge from the ASC.
<b>Numerator/Denominator</b>	Numerator: All ASC admissions who had an emergency department visit within one day of discharge from the ASC.
	Denominator: All ASC admissions.
<b>Inclusions/Exclusions</b>	Numerator Exclusions: ASC admissions who were transferred/admitted directly to an acute care hospital, including a hospital emergency room, upon discharge from the ASC (report using the All-Cause Hospital Transfer/Admission measure); ASC admissions who had an unplanned hospital admission within one day of being discharged from the ASC (report using All-Cause Unplanned Hospital Admission Within One Day of Discharge measure)
	Denominator Exclusions: None.
<b>Definitions</b>	Admission: completion of registration upon entry into the facility.
	Discharge: occurs when the patient leaves the confines of the ASC.
	Emergency department visit: any visit to the emergency department of an acute care hospital that does not result in admission (including an observation stay) to the hospital
	Within one day: within one day, where the day of discharge is day 0
<b>Implementation Requirement</b>	To ensure comparable results, this measure must be implemented using the ASC QC Post-Discharge Surveillance Guidelines.

### Rationale

An emergency department visit within the first day of ASC discharge is an unanticipated outcome that results in unplanned cost and time burdens that must be borne by patients and payers.

While emergency department visits 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 Practice Guidelines

No clinical practice guidelines addressing emergency room visits following ASC discharge are currently available.

### Frequently Asked Questions for All-Cause Emergency Department Visit Within One Day of Discharge

Should patients who are transferred directly from the ASC to a hospital emergency room be counted?

No, only patients who have an emergency department visit following their discharge from the ASC should be counted for purposes of this measure. ASC admissions that were transferred



directly to an emergency room upon discharge from the ASC should be reported using the All-Cause Hospital Transfer/Admission measure.

*Do we count ASC patients who are admitted to the hospital within one day of their discharge from the ASC?*

No, only patients who have an emergency department visit following their discharge from the ASC should be counted. ASC admissions that had an unplanned hospital admission within one day of being discharged from the ASC should be reported using the All-Cause Unplanned Hospital Admission Within One Day of Discharge measure.

*Do we capture data for all ASC patients who are directly transferred or admitted to the hospital setting regardless of reason?*

Yes, all emergency room visits that take place within one day of discharge from the ASC should be counted, regardless of the reason.

*How do I collect data for this measure?*

To ensure reliable results, this measure must be implemented using the ASC QC Post-Discharge Surveillance Protocol, which can be found in Appendix C.

## **Selected References**

Pershing S, Morrison DE, Hernandez-Boussard T. Cataract Surgery Complications and Revisit Rates among 3 States. *Am J Ophthalmol.* 2016 Sep 8.

Bhattacharyya N. Unplanned revisits and readmissions after ambulatory sinonasal surgery. *Laryngoscope.* 2014 Sep;124(9):1983-7.

Vadivelu N, Kai AM, Kodumudi V, Berger JM. Challenges of pain control and the role of the ambulatory pain specialist in the outpatient surgery setting. *J Pain Res.* 2016 Jun 17;9:425-35.

Spataro E, Branham GH, Kallogjeri D, Piccirillo JF, Desai SC. Thirty-Day Hospital Revisit Rates and Factors Associated With Revisits in Patients Undergoing Septorhinoplasty. *JAMA Facial Plast Surg.* 2016 Jun 16.

Hansen DG, Abbott LE, Johnson RM, Fox JP. Variation in hospital-based acute care within 30 days of outpatient plastic surgery. *Plast Reconstr Surg.* 2014 Sep;134(3):370e-378e.

Fox JP, Vashi AA, Ross JS, Gross CP. Hospital-based, acute care after ambulatory surgery center discharge. *Surgery.* 2014 May;155(5):743-53.

Sivasundaram L et al. Emergency department utilization after outpatient hand surgery. *J Am Acad Orthop Surg.* 2019 Nov 8.

Brown CR et al. Unplanned Emergency Visits and Admissions After Orthopaedic Ambulatory Surgery in the First 2 Years of Operation of a University Ambulatory Surgery Center. *Am J Sports Med.* 2021 Feb;49(2):505-511.

Sawhney M et al. Pain and haemorrhage are the most common reasons for emergency department use and hospital admission in adults following ambulatory surgery: results of a population-based cohort study. *Perioper Med (Lond).* 2020 Aug 19;9:25.

Mull HJ et al. Emergency Department Use After Outpatient Surgery Among Dually Enrolled VA and Medicare Patients. *Qual Manag Health Care.* 2019 Oct/Dec;28(4):191-199.

Rajasingh CM, Wren SM. Emergency Department Visit Rates After Ambulatory Surgery. *JAMA Surg.* 2024;159(1):107–109.

## Measure Information: All-Cause Unplanned Hospital Admission Within One Day of Discharge

All-Cause Unplanned Hospital Admission Within One Day of Discharge	
<b>Measure Type</b>	Outcome
<b>Description</b>	This measure is used to assess the percentage of ASC admissions (patients) that have an unplanned hospital admission, including an observation stay, within one day of discharge from the ASC.
<b>Numerator/Denominator</b>	Numerator: All ASC admissions who had an unplanned hospital admission within one day of discharge from the ASC.
	Denominator: All ASC admissions.
<b>Inclusions/Exclusions</b>	Numerator Exclusions: ASC admissions who were transferred/admitted directly to an acute care hospital, including a hospital emergency room, upon discharge from the ASC (report using 'All-Cause Hospital Transfer/Admission' measure); ASC admissions who had a visit to the emergency department of an acute care hospital within one day of discharge that did not result in an admission to the hospital (report using All-Cause Emergency Department Visit Within One Day of Discharge measure); ASC admission who had a previously planned hospital admission within one day of discharge from the ASC.
	Denominator Exclusions: None.
<b>Definitions</b>	Admission: completion of registration upon entry into the facility.
	Discharge: occurs when the patient leaves the confines of the ASC.
	Unplanned hospital admission: any admission to an acute care hospital, including an observation stay, which was not already scheduled at the time of the patient's admission to the ASC.
	Within one day: within one day, where the day of discharge is day 0
<b>Implementation Requirement</b>	<b>To ensure comparable results, this measure must be implemented using the ASC QC Post-Discharge Surveillance Guidelines.</b>

### Rationale

An unplanned hospital admission within the first day of ASC discharge is an unanticipated outcome that results in unplanned cost and time burdens that must be borne by patients and payers.

While hospital admission undoubtedly represents good patient care when necessary, high rates may be an indicator that practice patterns or patient selection guidelines are in need of review.

### Clinical Practice Guidelines

No clinical practice guidelines addressing unplanned hospital admissions following ASC discharge are currently available.

### Frequently Asked Questions for All-Cause Unplanned Hospital Admission Within One Day of Discharge

*Should patients who are transferred directly from the ASC to a hospital be counted?*

No, only patients who have an unplanned hospital admission following their discharge from the ASC should be counted for purposes of this measure. ASC admissions that were admitted

directly to a hospital upon discharge from the ASC should be reported using the All-Cause Hospital Transfer/Admission measure.

*Do we count ASC patients who have an emergency department visit within one day of their discharge from the ASC?*

No, only patients who have an unplanned hospital admission following their discharge from the ASC should be counted. ASC admissions that had an emergency department visit within one day of being discharged from the ASC should be reported using the All-Cause Emergency Department Visit Within One Day of Discharge measure.

*Do we count ASC patients who have a hospital observation stay within one day of their discharge from the ASC?*

Yes, for purposes of this measure, an observation stay that occurs within one day of discharge from the ASC is considered an unplanned hospital admission.

*Do we capture data for all ASC patients who are admitted to the hospital within one day of discharge regardless of reason?*

All *unplanned* hospital visits that take place within one day of discharge from the ASC should be counted, regardless of the reason. *Planned* hospital admissions that occur within one day of ASC discharge should not be counted.

*How do I collect data for this measure?*

To ensure reliable results, this measure must be implemented using the ASC QC Post-Discharge Surveillance Protocol, which can be found in Appendix C.

### **Selected References**

Whippey A, Kostandoff G, Paul J, Ma J, Thabane L, Ma HK. Predictors of unanticipated admission following ambulatory surgery: a retrospective case-control study. *Can J Anaesth*. 2013 Jul;60(7):675-83.

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.

Brown CR et al. Unplanned Emergency Visits and Admissions After Orthopaedic Ambulatory Surgery in the First 2 Years of Operation of a University Ambulatory Surgery Center. *Am J Sports Med*. 2021 Feb;49(2):505-511.

Van Caelenberg E et al. Analysis of failed discharge after ambulatory surgery: unanticipated admission. *Acta Chir Belg*. 2019 Jun;119(3):139-145.

Lau H, Brooks DC. Predictive factors for unanticipated admissions after ambulatory laparoscopic cholecystectomy. *Arch Surg*. 2001 Oct;136(10):1150-3.

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.

Fox JP, Vashi AA, Ross JS, Gross CP. Hospital-based, acute care after ambulatory surgery center discharge. *Surgery*. 2014 May;155(5):743-53.

## Measure Information: Appropriate Surgical Site Hair Removal

Appropriate Surgical Site Hair Removal	
<b>Measure Type</b>	Process
<b>Description</b>	This measure is used to assess the percentage of admissions (patients) that have appropriate surgical site hair removal.
<b>Numerator/Denominator</b>	Numerator: ASC admissions with surgical site hair removal with a razor or clippers from the scrotal area, or with clippers or depilatory cream from all other surgical sites.
	Denominator: All ASC admissions with surgical site hair removal.
<b>Inclusions/Exclusions</b>	Numerator Inclusions: ASC admissions with surgical site hair removal with a razor or clippers from the scrotal area, or with clippers or depilatory cream from all other surgical sites.
	Numerator Exclusions: None
	Denominator Inclusions: None
	Denominator Exclusions: ASC admissions who perform their own hair removal.
<b>Data Sources</b>	Potential data sources include records such as a pre-surgical checklist, nursing notes, operating room record, and operative report documenting the method of hair removal. Clinical logs designed to capture information relevant to preoperative hair removal are also potential sources.
<b>Definitions</b>	Admission: completion of registration upon entry into the facility.

### Rationale

Razors can cause microscopic cuts and nicks to the skin, not visible to the unaided eye. Use of razors prior to surgery increases the incidence of wound infection when compared to clipping, depilatory use, or no hair removal at all. (Seropian. *Am J Surg.* 1971;121:251)

### Clinical Practice Guidelines

The CDC's guidelines for the prevention of surgical site infection include recommendations which specifically address preoperative hair removal practices. The CDC guidelines state that providers should not remove hair preoperatively unless the hair at or around the incision site will interfere with the operation. If hair is removed, it should be removed immediately before the operation, and preferably with electric clippers. See eAppendix 1 to the Centers for Disease Control and Prevention Guideline for Prevention of Surgical Site Infection, 2017. Berrios-Torres SI et al; Hospital Infection Control Practices Advisory Committee. *JAMA Surg.* 2017;152(8):784-791.

AORN's standards of recommended practice are in alignment with this measure.

### Frequently Asked Questions for Appropriate Surgical Site Hair Removal

Do we capture data for all patients who are admitted to the ASC?

No, only those patients with surgical site hair removal are counted.

Do we count ASC patients who shave themselves?

No, ASC admissions that perform their own hair removal are excluded.

How do I collect data for this measure?

A sample data collection log is available in Appendix B.

**Selected References**

Alexander JW, Fischer JE, Boyajian M, Palmquist J, Morris MJ. The influence of hair-removal methods on wound infections. *Arch Surg*. 1983 Mar;118(3):347-52.

Balthazar ER, Colt JD, Nichols RL. Preoperative hair removal: a random prospective study of shaving versus clipping. *South Med J*. 1982 Jul;75(7):799-801.

Berrios-Torres SI et al; Hospital Infection Control Practices Advisory Committee. Centers for Disease Control and Prevention Guideline for Prevention of Surgical Site Infection,2017. *JAMA Surg*.2017;152(8):784-791. eAppendix 1.

Court-Brown CM. Preoperative skin depilation and its effect on postoperative wound infections. *J R Coll Surg Edinb*. 1981 Jul;26(4):238-41.

Kjonniksen I, Andersen BM, Sondenaa VG, Segadal L. Preoperative hair removal--a systematic literature review. *AORN J*. 2002 May;75(5):928-38, 940.

Mangram AJ, Horan TC, Pearson ML, Silver LC, Jarvis WR. Guideline for prevention of surgical site infection, 1999. Hospital Infection Control Practices Advisory Committee. *Infect Control Hosp Epidemiol*. 1999;20:250 -78.

Powis SJ, Waterworth TA, Arkell DG. Preoperative skin preparation: clinical evaluation of depilatory cream. *Br Med J*. 1976 Nov 13;2(6045):1166-8.

Seropian R, Reynolds BM. Wound infections after preoperative depilatory versus razor preparation. *Am J Surg*. 1971 Mar;121(3):251-4.

Tanner J, Melen K. Preoperative hair removal to reduce surgical site infection. *Cochrane Database Syst Rev*. 2021 Aug26;8(8):CD004122.

Thur de Koos P, McComas B. Shaving versus skin depilatory cream for preoperative skin preparation. A prospective study of wound infection rates. *Am J Surg*. 1983 Mar;145(3):377-8.

Gurkan I, Wenz Sr, JF. Perioperative infection control: an update for patient safety in orthopedic surgery. *Orthopedics*. 2006 Apr;29(4):329.

Fletcher N, Sofianos D, Berkes MB, Obremsky WT. Prevention of perioperative infection. *J Bone Joint Surg Am*. 2007;89:1605-18.

Cruse P. Wound infection surveillance. *Rev Infect Dis*. 1981; 3:734-737.

Cruse PJ, Foord R. The epidemiology of wound infection: a 10-year prospective study of 62,939 wounds. *Surg Clin North Am*. 1980; 60:27-40.

Anderson DJ et al. Strategies to prevent surgical site infections in acute care hospitals. *Infect Control Hosp Epidemiol*. 2008 Oct;29 Suppl 1:S51-61.

Association of Operating Room Nurses. Guideline for preoperative patient skin antisepsis. *AORN J*. 2021 Apr; 113(4):P5-P7.

## Measure Information: Normothermia

Normothermia	
Measure Type	Outcome
<b>Description</b>	This measure is used to assess the percentage of patients having surgical procedures under general or neuraxial anesthesia of 60 minutes or more in duration are normothermic within 15 minutes of arrival in PACU.
<b>Numerator/Denominator</b>	Numerator: Surgery patients with a body temperature equal to or greater than 96.8 Fahrenheit/36 Celsius recorded within fifteen minutes of arrival in PACU
	Denominator: All patients, regardless of age, undergoing surgical procedures under general or neuraxial anesthesia of greater than or equal to 60 minutes duration
<b>Inclusions/Exclusions</b>	Numerator Exclusions: Patients with a postoperative body temperature less than 96.8 Fahrenheit/36 Celsius; patients whose body temperature was recorded sixteen minutes or more after Arrival in PACU; patients with no postoperative body temperature recorded
	Denominator Exclusions: Patients who did not have general or neuraxial anesthesia; patients whose length of anesthesia was less than 60 minutes; patients with physician/APN/PA documentation of intentional hypothermia for the procedure performed
<b>Data Sources</b>	ASC medical records, as well as anesthesia administration and nursing records may serve as data sources. Clinical logs designed to capture information relevant to normothermia are also potential sources.
<b>Data Element Definitions</b>	Anesthesia duration: the difference, in minutes, between the time associated with the start of anesthesia for the principal procedure and the time associated with the end of anesthesia for the principal procedure
	Arrival in PACU: Time of patient arrival in PACU*
	General anesthesia: drug-induced loss of consciousness during which the patient is not arousable, even by painful stimulation
	Intentional hypothermia: A deliberate, documented effort to lower the patient's body temperature in the perioperative period
	Neuraxial anesthesia: Epidural or spinal anesthesia
	Temperature: A measure in either Fahrenheit or Celsius of the warmth of a patient's body. Axillary, bladder, core, esophageal, oral, rectal, skin surface, temporal artery, or tympanic temperature measurements may be used.

\* Definition of Arrival in PACU is consistent with the definition in the Procedural Times Glossary of the Association of Anesthesia Clinical Directors as approved by the ASA, ACS and AORN.

### Rationale

Impairment of thermoregulatory control due to anesthesia may result in perioperative hypothermia. Hypothermia, even when mild, is associated with consequences such as increased susceptibility to infection, impaired coagulation, cardiovascular stress and cardiac complications, as well as post-anesthetic shivering and thermal discomfort. Several methods to maintain normothermia are available.

There is no literature available on variation in rates of normothermia among ASC providers. However, variability in maintaining normothermia has been demonstrated in other settings.

### **Clinical Practice Guidelines**

This performance measure is aligned with current guidelines regarding temperature management in patients undergoing general or neuraxial anesthesia lasting 60 minutes or more.

### **Frequently Asked Questions for Normothermia**

*If the patient receives local or regional anesthesia, should they be included?*

No, only patients having surgery under general or neuraxial anesthesia should be included in the denominator.

*This patient was under general anesthesia for 60 minutes. Should they be counted?*

Yes, any patient having general anesthesia that lasts for 60 minutes or more should be counted in the denominator.

*We checked this patient's temperature 16 minutes after they arrived in PACU and it was 98.7 F. Since they were normothermic, do we count them in the numerator?*

No, only patients who were normothermic within 15 minutes of arrival in PACU can be included in the numerator.

*We forgot to check a patient's temperature after surgery. Do we count them in the numerator?*

No, without documentation that the patient was normothermic within 15 minutes of arrival in PACU the patient cannot be included in the numerator.

*Our center does not have a formal PACU. Patients recover in their pre-op room. Should these patients be counted?*

Yes, these patients should be counted. Other locations in the center may, for purposes of this measure, function as a space for post-anesthesia recovery in the facility.

*Is the start of anesthesia the same as the start of anesthesia billing time?*

No, the basis for this measure is the physiologic impairment in temperature regulation associated with the administration of general/neuraxial anesthesia. It is not related to billing time.

*Is it possible to have a measure score greater than 100%?*

No, the numerator cannot be larger than the denominator. To use the measure, first identify the patients that meet the criteria outlined in the denominator, then evaluate each of those patients to see if they meet the criteria defined in the numerator. For example, if 100 patients meet the denominator criteria, you will then evaluate each of those 100 patients to determine which of them meet the numerator criteria. A score of 100% is the maximum possible.

*How do I collect data for this measure?*

A sample data collection log is available in Appendix B.

### **Selected References**

- American Society of PeriAnesthesia Nurses (ASPAN). ASPAN's evidence-based clinical practice guideline for the promotion of perioperative normothermia: second edition. *J Perianesth Nurs*. 2010;25(6):346-65.
- Anderson DJ et al. Strategies to prevent surgical site infections in acute care hospitals: 2014 update. *Infect Control Hosp Epidemiol*. 2014;35 Suppl 2:S66-88.
- Ban KA, Minei JP, Laronga C, Harbrecht BG, Jensen EH, Fry DE, Itani KM, Dellinger EP, Ko CY, Duane TM. American College of Surgeons and Surgical Infection Society: Surgical Site Infection Guidelines, 2016 Update. *J Am Coll Surg*. 2017 Jan;224(1):59-74.
- Balki I et al. Effect of Perioperative Active Body Surface Warming Systems on Analgesic and Clinical Outcomes: A Systematic Review and Meta-analysis of Randomized Controlled Trials. *Anesth Analg*. 2020 Nov;131(5):1430-1443.
- Berrios-Torres SI et al. Centers for Disease Control and Prevention Guideline for the Prevention of Surgical Site Infection, 2017. *JAMA Surg*. 2017 Aug 1;152(8):784-791.
- Fleisher LA, Fleischmann KE, Auerbach AD, Barnason SA, Beckman JA, Bozkurt B, Davila-Roman VG, Gerhard-Herman MD, Holly TA, Kane GC, Marine JE, Nelson MT, Spencer CC, Thompson A, Ting HH, Uretsky BF, Wijeyesundera DN. 2014 ACC/AHA guideline on perioperative cardiovascular evaluation and management of patients undergoing noncardiac surgery: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *Circulation*. 2014 Dec 9;130(24):e278-333.
- Frank SM, Fleisher LA, Breslow MJ, et al. Perioperative maintenance of normothermia reduces the incidence of morbid cardiac events. A randomized clinical trial. *JAMA*. 1997;277(14): 1127-1134.
- Frank SM, Beattie C, Christopherson R, et al. Unintentional hypothermia is associated with postoperative myocardial ischemia. The Perioperative Ischemia Randomized Anesthesia Trial Study Group. *Anesthesiology*. 1993;78(3):468-476.
- Kurz A. Physiology of thermoregulation. *Best Pract Res Clin Anaesthesiol*. 2008;22(4):627-644.
- Kurz A, Sessler DI, Lenhardt R. Perioperative normothermia to reduce the incidence of surgical-wound infection and shorten hospitalization. Study of Wound Infection and Temperature Group. *N Engl J Med*. 1996;334(19):1209-1215.
- Kurz A, Sessler DI, Schroeder M, Kurz M. Thermoregulatory response thresholds during spinal anesthesia. *Anesth Analg*. 1993;77(4):721-726.
- Lista F, Doherty CD, Backstein RM, Ahmad J. The impact of perioperative warming in an outpatient aesthetic surgery setting. *Aesthet Surg J*. 2012 Jul;32(5):613-20.
- Matsukawa T, Sessler DI, Sessler AM, et al. Heat flow and distribution during induction of general anesthesia. *Anesthesiology*. 1995;82(3):662-673.
- Morris RH. Operating room temperature and the anesthetized, paralyzed patient. *Arch Surg*. 1971;102(2):95-97.
- Ozaki M, Kurz A, Sessler DI, et al. Thermoregulatory thresholds during epidural and spinal anesthesia. *Anesthesiology*. 1994;81(2):282-288.
- Rajagopalan S, Mascha E, Na J, Sessler DI. The effects of mild perioperative hypothermia on blood loss and transfusion requirement. *Anesthesiology*. 2008;108(1):71-77.
- Schmied H, Kurz A, Sessler DI, Kozek S, Reiter A. Mild hypothermia increases blood loss and transfusion requirements during total hip arthroplasty. *Lancet*. 1996;347(8997):289-292.
- Scott EM, Buckland R. A systematic review of intraoperative warming to prevent postoperative complications. *AORN J*. 2006;83(5):1090-1104, 1107-1113.



## Measure Information: Patient Burn

Patient Burn	
<b>Measure Type</b>	Outcome
<b>Description</b>	This measure is used to assess the number of admissions (patients) that experience a burn prior to discharge.
<b>Numerator/Denominator</b>	Numerator: Ambulatory Surgery Center (ASC) admissions experiencing a burn prior to discharge. Denominator: All ASC admissions.
<b>Inclusions/Exclusions</b>	Numerator Inclusions: ASC admissions experiencing a burn prior to discharge. Numerator Exclusions: None. Denominator Inclusions: All ASC admissions. Denominator Exclusions: None.
<b>Data Sources</b>	ASC medical records, as well as incident/occurrence reports, and variance reports are potential data sources.
<b>Definitions</b>	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 device, prep solutions, electrosurgical unit or laser). Discharge: Occurs when the patient leaves the confines of the ASC.

### Rationale

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 publication from the ECRI 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, a physician's office, or an outpatient clinic.

Recognizing the diversity of mechanisms by which a patient could sustain an unintentional burn in the ASC setting, the definition of burn is broad, encompassing all six recognized means by which a burn can occur - scalds, contact, fire, chemical, electrical, or radiation. This will allow stakeholders to develop a better understanding of the incidence of these events and further refine means to ensure prevention.

### Clinical Practice Guidelines

The risk of burns related to laser use can be reduced by adherence to the guidelines published by the ANSI (American National Standards Institute) 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 guidelines for electrosurgical safety from AORN.

The risk of surgical fires can be reduced by minimizing ignition, oxidizer, and fuel risks (the “classic triangle”). The American Society of Anesthesiologists’ Practice Advisory for the Prevention and Management of Operating Room Fires (2013) seeks to prevent the occurrence of OR fires, reduce adverse outcomes associated with OR fires and identify the elements of a fire response protocol.

### **Frequently Asked Questions Regarding the Patient Burn Measure**

#### *Do all ASCs have conditions that would result in a patient burn?*

Yes, because the definition of burn in this measure is comprehensive, every ASC has the potential for a patient to experience a burn during an episode of care.

#### *Did the ASC Quality Collaboration consider stratifying by type of burn?*

Stratification by type of burn was considered, but the consensus of the workgroup was that a burn is an unexpected outcome in an ASC and should not occur regardless of the source, degree, or type of burn.

### **Selected References**

American National Standards Institutes (ANSI) Z136.3-2018 - Safe Use of Lasers in Health Care, 2018 Revision.

Anesthesia Patient Safety Foundation (APSF). Prevention and management of operating room fires [video]. February 2010. <https://www.apsf.org/videos/or-fire-safety-video/>.

Apfelbaum JL, et al. Practice advisory for the prevention and management of operating room fires: an updated report by the American Society of Anesthesiologists Task Force on Operating Room Fires. *Anesthesiology*. 2013 Feb;118(2):271-90.

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.

Cowles CE Jr, Culp WC Jr. Prevention of and response to surgical fires. *JA Educ*. 2019 Aug;19(8):261-266.

Croke L. Guideline for electrosurgical safety. *AORN J*. 2020 Jul;112(1):P9-P11. doi: 10.1002/aorn.13124. PMID: 32598069.

Demir E, O'Dey D, and Pallua N. Accidental burns during surgery. *J Burn Care Res*. 2006 ;27(6):895-900.

ECRI. Continued use of "flying lead" bipolar electrosurgical cables could result in misconnections and patient burns. *Health Devices*. 2018 Nov 28.

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.

Jones EL, et al. Operating Room Fires and Surgical Skin Preparation. *J Am Coll Surg*. 2017 Jul;225(1):160-165.

Jones SB, et al. Fundamental Use of Surgical Energy (FUSE): An Essential Educational Program for Operating Room Safety. *Perm J*. 2017;21. pii: 16-050.

Mehta SP, Bhananker SM, Posner KL, Domino KB. Operating room fires: a closed claims analysis. *Anesthesiology*. 2013 May;118(5):1133-9.

National Fire Protection Association (NFPA). NFPA 99: Health Care Facilities Code. Quincy, MA: NFPA, 2024.

Tucker R. Laparoscopic electrosurgical injuries: survey results and their implications. *Surg Laparosc Endosc*. 1995;5(4):311-7.

## Measure Information: Patient Fall in the ASC

Patient Fall in the ASC	
Measure Type	Outcome
<b>Description</b>	This measure is used to assess the number of admissions (patients) that experience a fall within the ASC.
<b>Numerator/Denominator</b>	Numerator: Ambulatory Surgery Center (ASC) admissions experiencing a fall within the confines of the ASC. Denominator: All ASC admissions.
<b>Inclusions/Exclusions</b>	Numerator Inclusion: ASC admissions experiencing a fall within the confines of the ASC. Numerator Exclusion: ASC admissions experiencing a fall outside the ASC. Denominator Inclusion: All ASC admissions. Denominator Exclusions: None
<b>Data Sources</b>	ASC medical records, as well as incident/occurrence reports, and variance reports are potential data sources.
<b>Definitions</b>	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. (National Center for Patient Safety)

### Rationale

Patient death or injury associated with a fall while being cared for in a healthcare setting has been listed as a serious reportable event by the National Quality Forum. 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 Practice Guidelines

According to the Agency for Healthcare Research and Quality's *Prevention of Falls in Acute Care* guideline, patient falls may 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.

### Frequently Asked Questions for Patient Fall in the ASC

#### Should we count assisted falls under this measure?

Yes, assisted falls are considered falls for the purposes of this measure.

#### What about falls in the parking lot? Should those be counted?

The physical plant and location of ASCs is highly variable. To assure that the measure would be applicable to all settings, reportable falls are limited to those that occur within the confines of the facility itself. Falls in the parking lot should not be counted.

#### Should we count falls that are not witnessed?

All patient falls are counted, regardless of whether they are witnessed or not.

### Does the ASC QC offer resources for falls prevention?

Yes, the ASCQC has a Prevention of Patient Falls Toolkit available at the ASC QC website at: <https://www.ascquality.org/ascqualitycollaboration/advancingascquality/prevention-of-patient-falls-toolkit>.

### **Selected References**

Amador LF, Loera JA. Preventing Postoperative Falls in the Older Adult. *J Am Coll Surg*. 2007 Mar;204(3):447-453.

Beyea SC. Preventing patient falls in perioperative settings. *AORN J*. 2005 Feb;81(2):393-5.

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; 2012.

Croke L. Preventing Falls Among Perioperative Patients. *AORN J*. 2022 Nov;116(5):P8-P10.

ECRI. Preventing Fall-Related Injuries. August 15, 2018.

Fritz BA, King CR, Mehta D, Somerville E, Kronzer A, Ben Abdallah A, Wildes T, Avidan MS, Lenze EJ, Stark S; ENGAGES Research Group. Association of a Perioperative Multicomponent Fall Prevention Intervention With Falls and Quality of Life After Elective Inpatient Surgical Procedures. *JAMA Netw Open*. 2022 Mar 1;5(3):e221938.

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.

LeCuyer M, Lockwood B, Locklin M. Development of a Fall Prevention Program in the Ambulatory Surgery Setting. *J Perianesth Nurs*. 2017 Oct;32(5):472-479.

Kaiser TJ, Shanley E, Denninger TR, Reuschel B, Kissenberth MJ, Tolan SJ, Thigpen CA, Pill SG. Preoperative screening in patients having elective shoulder surgery reveals a high rate of fall risk. *J Shoulder Elbow Surg*. 2021 Jul;30(7S):S84-S88.

Kronzer VL, Wildes TM, Stark SL, Avidan MS. Review of perioperative falls. *Br J Anaesth*. 2016 Dec;117(6):720-732.

National Quality Forum. List of Serious Reportable Events.

[https://www.qualityforum.org/topics/sres/list\\_of\\_sres.aspx](https://www.qualityforum.org/topics/sres/list_of_sres.aspx). Last accessed January 16, 2024.

The Joint Commission. Sentinel Event Alert 55: Preventing falls and fall-related injuries in health care facilities. September 28, 2015.

Valencia Morales DJ, Laporta ML, Johnson RL, Schroeder DR, Sprung J, Weingarten TN. A Case-Control Study of Accidental Falls During Surgical Hospitalizations. *Am Surg*. 2023 Jan;89(1):61-68. doi: 10.1177/00031348211011114. Epub 2021 Apr 18. PMID: 33870764.

VA National Center for Patient Safety: United States Department of Veterans Affairs. Falls Toolkit.

<http://www.patientsafety.va.gov/professionals/onthejob/falls.asp>. Last accessed January 16, 2024.

## Measure Information: Prophylactic IV Antibiotic Timing

Prophylactic IV Antibiotic Timing	
<b>Measure Type</b>	Process
<b>Description</b>	This measure is used to assess whether intravenous antibiotics given for prevention of surgical site infection were administered on time.
<b>Numerator/Denominator</b>	Numerator: Number of Ambulatory Surgery Center (ASC) admissions with an order for a prophylactic IV antibiotic for prevention of surgical site infection who received the prophylactic antibiotic on time.
	Denominator: All ASC admissions with a preoperative order for a prophylactic IV antibiotic for prevention of surgical site infection.
<b>Inclusions/Exclusions</b>	Numerator Exclusions: None.
	Denominator 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.
<b>Data Sources</b>	ASC medical records, as well as medication administration records, and variance reports may serve as data sources. Clinical logs designed to capture information relevant to prophylactic IV antibiotic administration are also potential sources.
<b>Data Element Definitions</b>	Admission: completion of registration upon entry into the facility.
	Antibiotic administered on time: Antibiotic infusion is <i>initiated</i> 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.

### Rationale

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, 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.”

### **Clinical Practice Guidelines**

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.

### **Frequently Asked Questions for Prophylactic IV Antibiotic Timing:**

*For prophylactic antibiotics, do we only count those ordered for IV administration? Not eye drops when used for the same purpose?*

Only patients with orders that specify an intravenous route of administration should be counted.

*If an antibiotic is ordered that is not included in the list of prophylactic antibiotics for this measure, should we count it?*

No, the only antibiotics that are considered for inclusion in this measure are those that are included in the definition of “prophylactic antibiotic”.

*If an antibiotic is ordered for the prophylaxis of spontaneous bacterial endocarditis (SBE), should we count it?*

No, the only antibiotics administered for the prophylaxis of surgical site infection are included for measurement.

*What happens when two or more prophylactic antibiotics are given to the same patient for the same procedure?*

The infusion of all prophylactic IV antibiotics ordered for surgical site infection would need to be initiated within the one-hour time frame (two hours for vancomycin or fluoroquinolones). In cases involving more than one antibiotic, all antibiotics must be initiated within the appropriate time frame in order for the case to meet criteria.

*Does the timing of the antibiotic start at the completion of the antibiotic or the start of the antibiotic?*

The timing begins at the time the antibiotic infusion is initiated. To meet the intent the antibiotic should be initiated within one hour of the initial surgical incision or the beginning of the procedure (two hours for vancomycin or fluoroquinolones).

*Do you include patients who do not have an order for prophylactic IV antibiotics?*

Patients without an order for prophylactic IV antibiotics are not included.

*If the order for the antibiotic is given after the procedure has started, should the case be counted?*

If the order for the antibiotic is given after the procedure has started, the case should not be included. The denominator for this measure specifically requires a preoperative order.

*This measure is difficult to track. Why did you develop an IV antibiotic timing measure?*

Evidence shows initiating prophylactic antibiotics within one hour of incision, procedure, or tourniquet results in better outcomes.

### Is tourniquet time a substitute for incision time?

Tourniquet time is included based on published studies that demonstrate higher tissue concentrations of prophylactic antibiotics when the administration is prior to tourniquet inflation. The use of tourniquet time is consistent with the American Academy of Orthopedic Surgery Advisory Statement that recommends infusion prior to inflation of a proximal tourniquet, rather than prior to incision.

### How do I collect data for this measure?

A sample data collection log is available in Appendix B.

## **Selected 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 Hosp Epidemiol*. 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 postintervention 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.

Cruse P. Wound infection surveillance. *Rev Infect Dis*. 1981; 3:734-737.

Cruse PJ, Foord R. The epidemiology of wound infection: a 10-year prospective study of 62,939 wounds. *Surg Clin North Am*. 1980; 60:27-40.

Coello R, Glenister H, Fereres J, et al. The cost of infection in surgical patients: a case-control study. *J Hosp Infect* 1993; 25:239- 250.

Encinosa WE, Hellinger FJ. The impact of medical errors on ninety-day costs and outcomes: An examination of surgical patients. *Health Serv Res*. 2008 Dec;43(6):2067-85.

Koch CG, Li L, Hixson E, Tang A, Gordon S, Longworth D, Phillips S, Blackstone E, Henderson JM. Is it time to refine? An exploration and simulation of optimal antibiotic timing in general surgery. *J Am Coll Surg*. 2013 Oct;217(4):628-35.

Ho VP, Barie PS, Stein SL, Trencheva K, Milsom JW, Lee SW, Sonoda T. Antibiotic regimen and the timing of prophylaxis are important for reducing surgical site infection after elective abdominal colorectal surgery. *Surg Infect (Larchmt)*. 2011 Aug;12(4):255-60.

Hawn MT, Richman JS, Vick CC, Deierhoi RJ, Graham LA, Henderson WG, Itani KM. Timing of surgical antibiotic prophylaxis and the risk of surgical site infection. *JAMA Surg*. 2013 Jul;148(7):649-57.

de Jonge SW, Gans SL, Atema JJ, Solomkin JS, Dellinger PE, Boermeester MA. Timing of preoperative antibiotic prophylaxis in 54,552 patients and the risk of surgical site infection: A systematic review and meta-analysis. *Medicine (Baltimore)*. 2017 Jul;96(29):e6903.

de Jonge SW, et al. Timing of Preoperative Antibiotic Prophylaxis and Surgical Site Infection: TAPAS, An Observational Cohort Study. *Ann Surg*. 2021 Oct 1;274(4):e308-e314.

Sommerstein R, Troillet N, Harbarth S, de Kraker MEA, Vuichard-Gysin D, Kuster SP, Widmer AF; Swissnoso group. Timing of Cefuroxime Surgical Antimicrobial Prophylaxis and Its Association With Surgical Site Infections. *JAMA Netw Open*. 2023 Jun 1;6(6):e2317370.



## Measure Information: Toxic Anterior Segment Syndrome (TASS)

Toxic Anterior Segment Syndrome (TASS)	
<b>Measure Type</b>	Outcome
<b>Description</b>	This measure is used to assess the number of ophthalmic anterior segment surgery patients diagnosed with TASS within 2 days of surgery.
<b>Numerator/Denominator</b>	Numerator: All anterior segment surgeries after which the patient is diagnosed with TASS within 2 days of surgery
	Denominator: All anterior segment surgeries
<b>Inclusions/Exclusions</b>	Numerator Exclusions: None
	Denominator Exclusions: None
<b>Data Sources</b>	Physician diagnosis and report, clinical administrative data, paper medical records, incident/occurrence reports and variance reports are potential data sources
<b>Definitions</b>	Anterior segment surgery: for purposes of this measure, CPT codes 65400-65756, 65760-66986, and 66999
	Toxic Anterior Segment Syndrome (TASS): an acute, sterile post-operative anterior segment inflammation that develops following anterior segment surgery
	Within 2 days of surgery: within 2 days of surgery, where the day of surgery is day 0

CPT® contained in these measure specifications is copyright American Medical Association.

### Rationale

Toxic anterior segment syndrome (TASS), an acute, noninfectious inflammation of the anterior segment of the eye, is a complication of anterior segment eye surgery that typically develops within 24 hours after surgery. Various contaminants, including those from surgical equipment or supplies, have been implicated as causes of TASS. Although most cases of TASS can be treated, the inflammatory response associated with TASS can cause serious damage to intraocular tissues, resulting in vision loss. Prevention requires careful attention to solutions, medications, and ophthalmic devices and to cleaning and sterilization of surgical equipment because of the numerous potential etiologies. Despite a recent focus on prevention, cases of TASS continue to occur, sometimes in clusters. With millions of anterior segment surgeries being performed in the United States each year, measurement and public reporting have the potential to serve as an additional tool to drive further preventive efforts.

### Clinical Practice Guidelines

The American Society of Cataract and Refractive Surgery Ophthalmic Instrument Cleaning and Sterilization Task Force has published recommended practices for cleaning and sterilizing intraocular surgical instruments. The goal of these recommended practices is to prevent single-facility outbreaks of TASS related to contaminated or degraded instruments, and to facilitate the identification of causes of TASS and resolution of single-facility outbreaks of TASS when they occur.

### Frequently Asked Questions for Toxic Anterior Segment Syndrome

*Do we count all our patients who are having some kind of intraocular surgery?*

No, only patients having anterior segment surgery should be included in the denominator.

### What day is considered to be day 2?

For purposes of this measure, the day of surgery is day 0. So, day 2 would be the second day following the day of surgery. For example, if July 1 were the day of surgery, day 2 would be July 3.

### **Selected References**

Bene C, Kranias G. Possible intraocular lens contamination by surgical glove powder. *Ophthalmic Surg* 1986; 17:290–291.

Bodnar Z, Clouser S, Mamalis N. Toxic anterior segment syndrome: Update on the most common causes. *J Cataract Refract Surg*. 2012 Nov;38(11):1902-10.

Breebaart.AC, Nuyts.RMMA, PelsE, et al. Toxic endothelial cell destruction of the cornea after routine extracapsular cataract surgery. *Arch Ophthalmol* 1990; 108:1121–1125.

Centers for Disease Control and Prevention (CDC). Toxic anterior segment syndrome after cataract surgery--Maine, 2006. *MMWR Morb Mortal Wkly Rep*. 2007 Jun 29;56(25):629-30.

Chang DF, Mamalis N; Ophthalmic Instrument Cleaning and Sterilization Task Force. Guidelines for the cleaning and sterilization of intraocular surgical instruments. *J Cataract Refract Surg*. 2018 Jun;44(6):765-773.

Cox MJ, Woods JA, Newman S, Edlich RF. Toxic effects of surgical glove powders on the eye. *J Long-Term Eff Med Implants* 1996; 6:219–226.

Cutler Peck CM, Brubaker J, Clouser S, Danford C, Edelhauser HE, Mamalis N. Toxic anterior segment syndrome: common causes. *J Cataract Refract Surg*. 2010 Jul;36(7):1073-80.

Duffy RE, Brown SE, Caldwell KL, et al. An epidemic of corneal destruction caused by plasma gas sterilization; the Toxic Endothelial Cell Destruction Syndrome Investigative Team. *Arch Ophthalmol* 2000; 118:1167–1176.

Hellinger WC, Hasan SA, Bacalis LP, et al. Outbreak of toxic anterior segment syndrome following cataract surgery associated with impurities in autoclave steam moisture. *Infect Control Hosp Epidemiol* 2006; 27:294–298.

Kim JH. Intraocular inflammation of denatured viscoelastic substance in cases of cataract extraction and lens implantation. *J Cataract Refract Surg* 1987; 13:537–542.

Kreisler KR, Martin SS, Young CW, et al. Postoperative inflammation following cataract extraction caused by bacterial contamination of the cleaning bath detergent. *J Cataract Refract Surg* 1992; 18:106–110.

Mamalis N. Toxic anterior segment syndrome: Role of enzymatic detergents used in the cleaning of intraocular surgical instruments. *J Cataract Refract Surg*. 2016 Sep;42(9):1249-1250.

Moyle W, Yee RD, Burns JK, Biggins T. Two consecutive clusters of toxic anterior segment syndrome. *Optom Vis Sci*. 2013 Jan;90(1):e11-23.

Sorenson AL, Sorenson RL, Evans DJ. Toxic anterior segment syndrome caused by autoclave reservoir wall biofilms and their residual toxins. *J Cataract Refract Surg*. 2016 Nov;42(11):1602-1614.

## Measure Information: Unplanned Anterior Vitrectomy

Unplanned Anterior Vitrectomy	
<b>Measure Type</b>	Outcome
<b>Description</b>	This measure is used to assess the percentage of cataract surgeries that have an unplanned anterior vitrectomy.
<b>Numerator/Denominator</b>	Numerator: All cataract surgeries that had an unplanned anterior vitrectomy Denominator: All cataract surgeries
<b>Inclusions/Exclusions</b>	Numerator Exclusions: None Denominator Exclusions: None
<b>Data Sources</b>	ASC medical records, incident/occurrence reports and variance reports are potential data sources
<b>Definitions</b>	Cataract surgery: for purposes of this measure, CPT code 66982 (Cataract surgery, complex), CPT code 66983 (Cataract surgery w/IOL, 1 stage) and CPT code 66984 (Cataract surgery w/IOL, 1 stage) Unplanned anterior vitrectomy: an anterior vitrectomy that was not scheduled at the time of the patient's admission to the ASC

CPT® contained in these measure specifications is copyright American Medical Association.

### Rationale

The need for unplanned anterior vitrectomy is an unanticipated event that can decrease the probability of good postoperative visual acuity, and generally result in worse long-term outcome after cataract surgery. Because cataract surgery is the most common surgery performed in ASCs, with millions being performed every year, even low unplanned anterior vitrectomy rates translate to relatively high total numbers of affected patients. ASCs can help keep rates low by tracking and comparing rates to established benchmarks, and facilitating mentoring as needed.

### Clinical Practice Guidelines

No clinical practice guidelines addressing unplanned anterior vitrectomy in cataract surgery are available at this time. However, rates of unplanned anterior vitrectomy have been published in the clinical literature and can serve as comparative benchmarks of performance.

### Frequently Asked Questions for Unplanned Anterior Vitrectomy

One of our cataract surgery patients was also scheduled for an anterior vitrectomy. Should this patient be counted?

No, only patients who had an unplanned anterior vitrectomy should be counted.

Do we count all our patients who are having any kind of intraocular surgery?

No, only cataract surgeries should be included in the denominator.

How could a facility benefit from this measure?

If unplanned anterior vitrectomies are determined to be at a level higher than expected, ASCs could facilitate mentoring within their facility.

## Selected References

American Academy of Ophthalmology Preferred Practice Pattern Cataract/Anterior Segment Panel. Cataract in the Adult Eye Preferred Practice Pattern. *Ophthalmology*. 2022 Jan;129(1):P1-P126.

Chen M, Lamattina KC, Patrianakos T, Dwarakanathan S. Complication rate of posterior capsule rupture with vitreous loss during phacoemulsification at a Hawaiian cataract surgical center: a clinical audit. *Clin Ophthalmol*. 2014 Feb 5;8:375-8.

Johansson B, Lundström M, Montan P, Stenevi U, Behndig A. Capsule complication during cataract surgery: Long-term outcomes: Swedish Capsule Rupture Study Group report 3. *J Cataract Refract Surg*. 2009 Oct;35(10):1694-8.

Lum F, Schein O, Schachat AP, et al. Initial two years of experience with the AAO National Eyecare Outcomes Network (NEON) cataract surgery database. *Ophthalmology* 2000;107:691-7.

Powe NR, Schein OD, Gieser SC, et al, Cataract Patient Outcome Research Team. Synthesis of the literature on visual acuity and complications following cataract extraction with intraocular lens implantation. *Arch Ophthalmol* 1994;112:239-52.

Schein OD, Steinberg EP, Javitt JC, et al. Variation in cataract surgery practice and clinical outcomes. *Ophthalmology* 1994;101:1142-52.

Song C, Baharozian CJ, Hatch KM, Grasset GC, Talamo JH. Rate of Unplanned Vitrectomies in Femtosecond Laser-Assisted Cataract Surgery Compared to Conventional Phacoemulsification. *J Refract Surg*. 2018 Sep 1;34(9):610-614.

Tan JH, Karwatowski WS. Phacoemulsification cataract surgery and unplanned anterior vitrectomy--is it bad news? *Eye (Lond)*. 2002 Mar;16(2):117-20.

Zaidi FH, Corbett MC, Burton BJ, Bloom PA. Raising the benchmark for the 21st century--the 1000 cataract operations audit and survey: outcomes, consultant-supervised training and sourcing NHS choice. *Br J Ophthalmol* 2007;91:731-6.

## Measure Information: Wrong Site, Wrong Side, Wrong Patient, Wrong Procedure, Wrong Implant

<b>Wrong Site, Wrong Side, Wrong Patient, Wrong Procedure, Wrong Implant</b>	
<b>Measure Type</b>	Outcome
<b>Description</b>	This measure is used to assess the number of ASC admissions (patients) experiencing a wrong site, side, patient, procedure or implant.
<b>Numerator/Denominator</b>	Numerator: All Ambulatory Surgery Center (ASC) admissions experiencing a wrong site, wrong side, wrong patient, wrong procedure or wrong implant.
	Denominator: All ASC admissions.
<b>Inclusions/Exclusions</b>	Numerator Inclusions: All ASC admissions experiencing a wrong site, wrong side, wrong patient, wrong procedure or wrong implant.
	Numerator Exclusions: None.
	Denominator Inclusions: All ASC admissions.
	Denominator Exclusions: None.
<b>Data Sources</b>	ASC medical records, as well as incident/occurrence reports, and variance reports are potential data sources.
<b>Definitions</b>	Admission: completion of registration upon entry into the facility.
	Wrong: not in accordance with intended site, side, patient, procedure or implant.

### Rationale

“Surgery or other invasive procedure performed on the wrong site”, “surgery or other invasive procedure performed on the wrong patient”, and “wrong surgical or other invasive 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’s “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 Practice Guidelines

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.

### Frequently Asked Questions for Wrong Site, Wrong Side, Wrong Patient, Wrong Procedure, Wrong Implant

*Isn't the incidence of wrong site, etc. surgery low in surgery centers?*

While the incidence of wrong-site surgeries is low, the potential for wrong-site (bilateral options) and the impact on patient care associated with each incident make this a priority in ASCs.

Do you count a block (preoperative or intraoperative) given on the incorrect side?

Yes, you count any procedure that was done on the wrong side.

Do you count an injection of local given on the incorrect side?

Yes, you count this as a wrong side event.

Should the administration of topical anesthetic drops in the wrong eye be considered a wrong site event?

No, administration of topical anesthetic drops in the wrong eye should not be counted as a wrong site event. Such an occurrence would be considered a medication administration variance.

Is the placement of an expired implant considered a wrong implant event?

Yes, the placement of an expired implant is considered a wrong implant event. Such an occurrence is not considered to be in accordance with the intended implant.

A patient is scheduled for a right carpal tunnel release, but the left side was done. The patient was going to need the left one done in the future. Should this be reported as a wrong side?

Yes, this would be considered a wrong side event. It was not the procedure that was consented for or intended to be performed that day, even though both sides were eventually going to be done.

During an orthopedic case, a screw was placed but then intentionally replaced with one determined to be a better fit. Should this be reported as a wrong implant?

No, this would not be reported as a wrong implant. The decision to change the screw was intentional to achieve a better fit. The change did not result from an error in implantation of the first screw.

During a knee arthroplasty, an incorrect tibial insert was handed to the surgeon and implanted. The incorrect insert was subsequently removed prior to closure, and the correct implant was placed. Should this be reported as a wrong implant?

Yes, this would be reported as a wrong implant event. The placement of the first implant was unintentional and in error.

## Selected References

Joint Commission. *Universal Protocol for Preventing Wrong Site, Wrong Procedure, Wrong Person Surgery*. Available at: <https://www.jointcommission.org/standards/universal-protocol>. Last accessed January 16, 2024.

American Academy of Ophthalmology. Recommendations of American Academy of Ophthalmology Wrong-Site Task Force. <https://www.aao.org/patient-safety-statement/recommendations-of-american-academy-ophthalmology>. Aug 2014.

American Academy of Orthopaedic Surgeons. Surgical Site and Procedure Confirmation. Information Statement 1043. March 2015.

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. Revised Statement on Safe Surgery Checklists, and Ensuring Correct Patient, Correct Site, and Correct Procedure Surgery. October 1, 2016. <https://www.facs.org/about-ac/s/statements/93-surgery-checklists>. Last accessed January 16, 2024.

AORN. AORN Position Statement on Preventing Wrong-Patient, Wrong-Site, Wrong-Procedure Events. <https://www.aorn.org/guidelines/clinical-resources/position-statements>. Last accessed January 16, 2024.

Institute of Medicine. *To Err is Human: Building a Safer Health System*. Washington, DC: National Academy Press, 2000.

National Quality Forum. List of Serious Reportable Events. [https://www.qualityforum.org/Topics/SREs/List\\_of\\_SREs.aspx](https://www.qualityforum.org/Topics/SREs/List_of_SREs.aspx). Last accessed January 16, 2024.

World Health Organization. *WHO Guidelines for Safe Surgery 2009*.

## Appendix A: Data Dictionary

**Admission:** Completion of registration upon entry into the facility

**Anesthesia duration:** the difference, in minutes, between the time associated with the start of anesthesia for the principal procedure and the time associated with the end of anesthesia for the principal procedure

**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

**Arrival in PACU:** Time of patient arrival in PACU (Procedural Times Glossary of the Association of Anesthesia Clinical Directors)

**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

**Emergency department visit:** any visit to the emergency department of an acute care hospital that does not result in admission (including an observation stay) to the hospital

**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)

**General anesthesia:** drug-induced loss of consciousness during which the patient is not arousable, even by painful stimulation

**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

**Neuraxial anesthesia:** Epidural or spinal anesthesia

**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

**Toxic Anterior Segment Syndrome (TASS):** an acute, sterile post-operative anterior segment inflammation that develops following anterior segment surgery

**Unplanned anterior vitrectomy:** an anterior vitrectomy that was not scheduled at the time of the patient's admission to the ASC



**Unplanned hospital admission:** any admission to an acute care hospital, including an observation stay, which was not already scheduled at the time of the patient's admission to the ASC

**Within one day:** within one day, where the day of discharge is day 0

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

## **Appendix B: Sample Data Collection Logs**

The following pages present sample data collection logs for three of the measures (Appropriate Surgical Site Hair Removal, Normothermia, and Prophylactic IV Antibiotic Timing) developed by the ASC Quality Collaboration. These are examples only; their use is not required.

## Sample Data Collection Log: Prophylactic IV Antibiotic Timing

This tool may be used to track patients with an order for prophylactic IV antibiotics for surgical site infection. It is not necessary to track patients who do not have a preoperative order for IV antibiotic prophylaxis.

Center Name: \_\_\_\_\_

Data Collection Period: \_\_\_\_\_

Date of Service	Pt Identifier	Antibiotic Ordered	Infusion Start Time	Procedure Start Time	Elapsed Time	Timely Administration	
						Yes	No

**Instructions:**

1. Enter the date of service in the first column.
2. Enter the unique patient identifier in the second column.
3. Enter the prophylactic IV antibiotic ordered in the third column. For purposes of this measure, the following antibiotics are considered prophylaxis for surgical site infection: Ampicillin/sulbactam (Unasyn), Aztreonam (Azactam), Cefazolin (Ancef), Cefmetazole (Zefazone), Cefotetan (Cefotan), Cefoxitin (Mefoxin), Cefuroxime (Zinacef), Ciprofloxacin (Cipro), Clindamycin (Cleocin), Ertapenem (Invanz), Erythromycin (Erythrocin), Gatifloxacin (Tequin), Gentamicin (Garamycin), Levofloxacin (Levaquin), Metronidazole (Flagyl, Metro IV), Moxifloxacin (Avelox), Neomycin and Vancomycin (Vancocin).
4. Enter the time the intravenous infusion of antibiotic was started in the fourth column.
5. Enter the start time of the procedure or surgery in the fifth column. The start time is the time the initial surgical incision is made. For procedures involving a tourniquet, the start time is the time the tourniquet is inflated. For procedures that do not involve an incision, the start time is the time the needle is inserted or the time the endoscope is introduced.
6. Determine the elapsed time between the start of the infusion and the start of the procedure and enter that value into the sixth column.
7. If the antibiotic was initiated within 60 minutes of the start of the procedure (within 120 minutes for fluoroquinolones and vancomycin), the timely administration requirements of the measure have been met.

**NOTE: If more than one prophylactic IV antibiotic from the list above was ordered, each of the antibiotics must be given timely for the requirements of the measure to be met. For patients with more than one antibiotic ordered, use additional lines as needed to record the data for each additional antibiotic.**

## Sample Data Collection Log: Appropriate Surgical Site Hair Removal

This tool may be used to track patients with surgical site hair removal. It is not necessary to track patients who do not have surgical site hair removal.

**NOTE:** Cases in which the patient performed their own surgical site hair removal are excluded from the measure and should not be included below.

Center Name: \_\_\_\_\_

Data Collection Period: \_\_\_\_\_

Date of Service	Pt Identifier	Scrotal Hair Removal with Razor	Hair Removal with Clippers	Hair Removal with Depilatory Cream	Hair Removal with Razor from Non-Scrotal Sites	Specifications Met:	
						Yes	No

**Instructions:**

1. Enter the date of service in the first column.
2. Enter the unique patient identifier in the second column.
3. Indicate the method of surgical site hair removal by marking removal with a razor from the scrotum in the third column, removal with clippers in the fourth column, removal with depilatory cream in the fifth column and removal with a razor from non-scrotal surgical sites in the sixth column.
4. If hair removal at the surgical site was accomplished using a razor or clippers from the scrotal area, or with clippers or depilatory cream from all other surgical sites, the measure specifications have been met.

### Sample Data Collection Log: Normothermia

This tool may be used to track patients who undergo general or neuraxial anesthesia. It is not necessary to track patients who do not undergo general or neuraxial anesthesia.

Center Name: \_\_\_\_\_

Data Collection Period: \_\_\_\_\_

Date of Service	Pt Identifier	Anesthesia Duration	Time Into PACU	Time Temp Measured	Elapsed Time (mins)	Patient Temp		Specifications Met:	
						°F	°C	Yes	No

**Instructions:**

- 1. Enter the date of service in the first column.
- 2. Enter the unique patient identifier in the second column.
- 3. Enter the duration of general or neuraxial anesthesia in the third column. If the duration of anesthesia was less than 60 minutes, no further data entry is necessary.
- 4. Enter the Time into PACU in the fourth column.
- 5. Enter the time the patient's temperature was taken after arriving in the PACU in the fifth column.
- 6. Determine the elapsed time by subtracting the Time into PACU from the time the patient's temperature was taken after arriving in the PACU. Record the number of minutes in the sixth column.
- 7. Enter the patient's temperature in the seventh column under either the Fahrenheit (°F) or Celsius (°C) heading.
- 8. If the patient's temperature was greater than or equal to 96.8°F/36°C within 15 minutes of the time into PACU, the requirements of the measure have been met. Enter "Yes" section of the eighth column. If these requirements have not been met (temperature is less than 96.8°F/36°C; temperature was not taken within 15 minutes of the Time into PACU; a postoperative temperature was not recorded), enter "No" section of the eighth column.

## **Appendix C: Post-Discharge Surveillance Guidelines**

In order to ensure comparable measure results for outcomes that occur after patient discharge, centers must use the same approach to surveillance when implementing the following measures:

- All-Cause Emergency Department Visit within One Day of Discharge
- All-Cause Unplanned Hospital Admission within One Day of Discharge

Surveillance guidelines for each of these measures are presented in the pages that follow.

## **Surveillance Guidelines for the All-Cause Emergency Department Visit Within One Day of Discharge Measure**

To ensure measure results are comparable, all facilities employing the All-Cause Emergency Department (ED) Visit within One Day of Discharge measure should use the same approach to case detection. All patients must be included for follow-up.

### **Procedure:**

A. Prior to procedure or surgery:

1. Physicians should be made aware in advance of your plans to follow-up for ED visits that occur within one day of discharge.
2. Patients (or guardians for patients who are incapacitated or less than 18 years of age) should be informed that you intend to contact them for follow-up and that you will need to know the best way to reach them. Patients should also be advised that you would like to hear from them if they go to an emergency department for any reason within one day of their discharge from the center.
3. Patients should be asked to provide the name and contact information for another person whom they would allow to be contacted in the event the patient cannot be reached.

B. Following discharge

1. No sooner than one day after the patient's discharge, contact the patient for follow-up.
2. If the patient cannot be reached after three attempts on different days of the week and at different times, the center should contact the patient's proxy for follow-up.
3. If the patient does not have a proxy, or the proxy cannot be reached after three attempts on different days of the week and at different times, the center should contact the patient's surgeon/physician for follow-up.

### **Reporting Instructions:**

To report an ED visit, at least one of the following criteria must be met:

1. The patient reports an ED visit within one day of discharge, OR
2. The patient's proxy reports an ED visit within one day of discharge, OR
3. The patient's physician reports an ED visit within one day of discharge, OR
4. The emergency department contacts the ASC and reports the patient was seen within one day

To report NO ED visit, at least one of the following criteria must be met:

1. The patient reports they did not visit an ED within one day of discharge OR
2. The patient's proxy reports that the patient did not visit an ED within one day of discharge.

In the event that the patient cannot be reached/does not respond AND the patient's proxy cannot be reached/does not respond AND the patient's physician does not report an ED visit within one day of discharge AND no report is received from an emergency department regarding an ED visit within one day of discharge, the case is considered "unable to determine".

## **Surveillance Guidelines for the All-Cause Unplanned Hospital Admission Within One Day of Discharge Measure**

To ensure measure results are comparable, all facilities employing the All-Cause Unplanned Hospital Admission within One Day of Discharge measure should use the same approach to case detection. All patients must be included for follow-up.

### **Procedure:**

#### **A. Prior to procedure or surgery:**

1. Physicians should be made aware in advance of your plans to follow-up for hospitalizations that occur within one day of discharge.
2. Patients (or guardians for patients who are incapacitated or less than 18 years of age) should be informed that you intend to contact them for follow-up and that you will need to know the best way to reach them. Patients should also be advised that you would like to hear from them if they are hospitalized for any reason within one day of their discharge from the center.
3. Patients should be asked to provide the name and contact information for another person whom they would allow to be contacted in the event the patient cannot be reached.

#### **B. Following discharge**

1. No sooner than one day after the patient's discharge, contact the patient for follow-up.
2. If the patient cannot be reached after three attempts on different days of the week and at different times, the center should contact the patient's proxy for follow-up.
3. If the patient does not have a proxy, or the proxy cannot be reached after three attempts on different days of the week and at different times, the center should contact the patient's surgeon/physician for follow-up.

### **Reporting Instructions:**

To report a hospitalization, at least one of the following criteria must be met:

1. The patient reports a hospitalization within one day of discharge, OR
2. The patient's proxy reports a hospitalization within one day of discharge, OR
3. The patient's physician reports a hospitalization within one day of discharge, OR
4. The admitting hospital contacts the ASC and reports the patient had an unplanned admission within one day of discharge.

To report NO hospitalization, at least one of the following criteria must be met:

1. The patient reports they were not hospitalized within one day of discharge OR
2. The patient's proxy reports that the patient was not hospitalized within one day of discharge.

In the event that the patient cannot be reached/does not respond AND the patient's proxy cannot be reached/does not respond AND the patient's physician does not report a hospitalization within one day of discharge AND no report is received from an admitting hospital regarding an unplanned hospital admission within one day of discharge, the case is considered "unable to determine".