National Healthcare Safety Network (NHSN) Outpatient Procedure Component Manual

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Please Note: The NHSN Outpatient Procedure Component Manual is updated annually based on subject matter expert review and user feedback. Over time, certain chapters may be retired or moved to another NHSN component. To avoid confusion, the chapters in the OPC manual do not shift to account for these changes.

National Healthcare Safety Network (NHSN) Overview

CDC's NHSN is a secure, web-based surveillance application that is the nation's most widely used healthcare-associated infection (HAI) tracking system. The application is managed and maintained by the Division of Healthcare Quality Promotion (DHQP) at the Centers for Disease Control and Prevention (CDC).

While ensuring data security, integrity, and confidentiality, NHSN gives healthcare facilities the ability to see their data in real-time and share that information with clinicians and facility leadership, as well as with other facilities (e.g., a multihospital system) and partners such as health departments or quality improvement organizations. CDC provides the standard national measures for HAIs as well as analytic tools that enable each facility to assess its progress and identify where additional efforts are needed. In addition, NHSN is the conduit for facilities to comply with Centers for Medicare and Medicaid Services (CMS) infection reporting requirements.

NHSN provides medical facilities, states, regions, and the nation with data collection and reporting capabilities needed to:

- identify infection prevention problems by facility, state, or specific quality improvement project
- benchmark progress of infection prevention efforts
- comply with state and federal public reporting mandates, and ultimately,
- drive national progress toward elimination of HAIs.

NHSN Fact Sheet

NHSN includes the following components: Patient Safety, Long-term Care Facility, Outpatient Dialysis, Healthcare Personnel Safety, Biovigilance, Outpatient Procedure, and Neonatal (Figure 1).

Figure 1: NHSN Components

- The **Patient Safety Component** (PSC) includes modules that focus on events associated with medical devices, surgical procedures, antimicrobial agents used during healthcare, multidrug resistant organisms, and hospital Coronavirus Disease (COVID) data. Device-associated Modules:
    - Bloodstream Infection (CLABSI – Central line-associated Bloodstream infection)
    - Central Line Insertion Practices (CLIP) adherence
    - Urinary Tract Infection (CAUTI – Catheter-associated urinary tract infection)
    - Pediatric Ventilator-associated Events (PedVAE) (NICU and pediatric locations only)
    - Ventilator-associated Events (VAE) (adult locations only)
    - Pneumonia (VAP – Ventilator-associated Pneumonia) - in pediatric locations (in-plan* or off-plan*), or NICU and adult locations (off-plan* only)
- Procedure-associated Module:
    - Surgical Site Infection (SSI)
- Antimicrobial Use and Resistance Module (AUR)
- Multidrug-Resistant Organism and *Clostridioides difficile* Infection (MDRO/CDI) Module
- Hospital Coronavirus Disease (COVID) Data Module

***Note:** "In-plan" surveillance means that the facility has committed to following the NHSN surveillance protocol, in its entirety, for that particular event, as shown in the facility's NHSN monthly reporting plan. "Off-plan" surveillance is surveillance that is done because a facility has decided to track a particular event for internal use. Data that are entered into NHSN "off-plan" are not included in NSHN annual reports or other NHSN publications. A facility makes no commitment to follow the NHSN protocol for "off-plan" events. Further, "off-plan" data cannot be uploaded into NHSN via Clinical Document Architecture (CDA) and must be manually entered. Instructions and standardized surveillance methods and definitions for each module of the Patient Safety Component are provided in this manual and on the NHSN website (www.cdc.gov/nhsn). Modules may be used singly or simultaneously.

The NHSN **Long-term Care Facility Component** provides long-term care facilities (LTCFs) with standardized surveillance methods and definitions for four modules: 1) Respiratory Pathogens and Vaccination (RPV); 2) Multidrug resistant organism (MDRO) and *Clostridioides difficile* Infection (CDI) Laboratory-identified (LabID) Events; 3) Urinary Tract Infections (UTI); and 4) Prevention Process Measures. The component is accessible to nursing homes, skilled nursing facilities, chronic care facilities, assisted living and residential care facilities, intermediate care facilities for individuals with intellectual disabilities, psychiatric residential treatment facilities, and State Veteran's Homes. LTCF surveillance protocols, training materials, data collection forms, instructions, and other supporting materials are provided on the Long-term Care Facility Component website: https://www.cdc.gov/nhsn/ltc/index.html.

Outpatient hemodialysis centers have surveillance options that are tailored for the specific facility patient population and clinical setting within the **Dialysis Component**. The Dialysis component consists of the following: 1) Dialysis Event (Outpatient Hemodialysis and Acute Kidney Injury (AKI)); 2) Prevention Process Measures; and 3) Summary Data. These modules focus on monitoring and reporting adverse events for the purpose of evaluating prevention efforts among hemodialysis patients. Facilities that treat hemodialysis outpatients should refer to the Dialysis Component protocol, instructions and standardized surveillance methods and definitions at www.cdc.gov/nhsn/dialysis/index.html.

There are two modules in the **Healthcare Personnel Safety (HPS) Component** of NHSN: The Healthcare Personnel Exposure Module and the Healthcare Personnel Vaccination Module. These modules may be used separately or simultaneously. Data collected in this surveillance component can assist healthcare facilities, health systems, and public health agencies to monitor and report trends in blood/body fluid exposures, to characterize antiviral medication use for exposures to influenza, and to monitor influenza and COVID-19 vaccination coverage among healthcare personnel.

The Healthcare Personnel Exposure Module includes Blood/Body Fluid Exposure Only; Blood/Body Fluid Exposure with Exposure Management; and Influenza Exposure Management. This module is no longer available for enrollment and should only be used by facilities that have already been reporting Blood/Body Fluid Exposure and Exposure Management data to the system.

The Healthcare Personnel Vaccination Module includes the Influenza Vaccination Summary and COVID-19 Vaccination Summary. Information on reporting annual influenza data for healthcare personnel can be found here: https://www.cdc.gov/nhsn/hps/vaccination/index.html. Information on reporting COVID-19 Vaccination Summary data for healthcare personnel can be found here: https://www.cdc.gov/nhsn/hps/weekly-covid-vac/index.html

The **NHSN Biovigilance Component**, Hemovigilance Module facilitates national surveillance of transfusion-related recipient adverse events. The Hemovigilance Module is designed for transfusion service staff to collect data on annual facility and transfusion service characteristics, individual reports on adverse transfusion reactions, errors or accidents associated with adverse reactions, and monthly counts of transfused or discarded components. The Hemovigilance Module surveillance protocol, training materials, data collection forms, instructions, and other supporting materials are provided on the Hemovigilance Module website: www.cdc.gov/nhsn/acute-care-hospital/bio-hemo/index.html.

The **Outpatient Procedure Component (OPC)** includes two modules that focus on adverse events associated with surgical procedures performed in Ambulatory Surgery Centers (ASCs). The two modules include Same Day Outcome Measures and Surgical Site Infections.

- Same Day Outcome Measures (OPC-SDOM) are a grouping of outpatient care quality indicators that represent a broad range of risks encountered by patients accessing care in various outpatient settings. The four individual outcome measures are:
    - Patient Burn
    - Patient Fall
    - Wrong Site, Wrong Side, Wrong Patient, Wrong Procedure, Wrong Implant
    - All-Cause Hospital Transfer/Admission

- Surgical Site Infection (OPC-SSI) - SSI surveillance for outpatient operative procedures using the Outpatient Procedure Component (OPC).

The OPC surveillance protocols, training materials, data collection forms, instructions, and other supporting materials are provided on the Outpatient Procedure Component website: https://www.cdc.gov/nhsn/ambulatory-surgery/index.html.

The **Neonatal Component** includes one module, Late-Onset Sepsis/ Meningitis (LOS/MEN). This module will track late-onset sepsis and meningitis events in very low birthweight neonates housed in Level II/III, Level III, and Level IV nursery locations. The following events will be tracked in the LOS/MEN module:

- Late-Onset Sepsis Event: In an eligible infant, a recognized pathogen or common commensal identified from one or more blood specimens by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment. Under this major type of infection, there are two specific types of infection (see below).
  - NLCBI 1
  - NLCBI 2
- Meningitis Event: In an eligible infant, a recognized pathogen or common commensal identified from a CSF specimen by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment. Under this major type of infection, there are two specific types of infection (see below).
  - NLCM 1
  - NLCM 2

The LOS/MEN surveillance protocols, training materials, data collection forms, instructions, and other supporting materials are provided on the Neonatal Component website: https://www.cdc.gov/nhsn/neonatal/index.html.

Surveillance Techniques

Surveillance for healthcare acquired conditions/infections require a combination of active, concurrent, prospective, or retrospective approaches and surveillance techniques and resources. Trained Infection Preventionists (IPs) and designees shall seek out infections/conditions by screening a variety of data sources, such as laboratory, pharmacy, admission/discharge/transfer, radiology/imaging, and pathology databases, as well as patient charts, including history and physical exam notes, nurses'/ physicians' notes, temperature charts, etc. Others may be trained to screen data sources for these events, but the IP must make the final determination. Laboratory-based surveillance should not be used alone, unless all possible criteria for identifying an infection are solely determined by laboratory evidence (for example, LabID event detection in the MDRO/CDI Module). Retrospective chart reviews should be used only when patients are discharged before all information can be gathered. NHSN forms should be used to collect all required data, using the NHSN definitions of each data field. To minimize the IP's data collection burden, others may be trained to collect the denominator data and process of care data; additionally, electronic capture of data is an option for reporting as an aide to optimizing available resources.

Procedure-Associated Module

Surgical site infection (SSI) monitoring is offered through this module. SSI surveillance requires active, patient-based, prospective surveillance techniques (see Surveillance Techniques above).

Concurrent and post-discharge surveillance methods should be used to detect SSIs following inpatient operative procedures and post-discharge surveillance for outpatient operative procedures. These methods may include 1) direct examination of patients' wounds during hospitalization, or follow-up visits to either surgery clinics or physicians' offices, 2) review of medical records or surgery clinic patient records, 3) visits to the ICU and wards; interview primary care staff, 4) surgeon surveys by mail or telephone, and 5) patient surveys and/or reports (though patients may have a difficult time assessing their infections). Any combination of these methods (or other methods identified by the facility) with the capacity to identify all SSIs is acceptable for use; however, NHSN criteria for SSI must be used. See Surgical Site Infection Event (SSI) protocol for additional examples of concurrent and post-discharge surveillance methods (www.cdc.gov/nhsn/pdfs/pscmanual/9pscssicurrent.pdf). To minimize IPs' workload of collecting denominator data, operating room data may be downloaded (see file specifications at https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/ImportingProcedureData.pdf).

Device-Associated Module

Medical instrumentation increases the risk of developing an HAI and most patients admitted to a healthcare facility will have a medical device used in the course of their admission. Such devices include, but are not limited to, vascular access devices, urinary catheters, and ventilators. NHSN enables facilities to monitor for infections associated with the use of these medical devices and to monitor processes related to their use which might increase infection risk. Specifically, NHSN allows facilities to perform surveillance on central line-associated bloodstream infection (CLABSI), catheter-associated urinary tract infection (CAUTI), ventilator-associated events (VAE and PedVAE), and/or ventilator-associated pneumonia (VAP). See the Dialysis Component for detailed instructions for Dialysis Event (DE) surveillance of hemodialysis outpatients (www.cdc.gov/nhsn/dialysis/index.html).

Device-associated denominator data should be collected for CLABSI, CAUTI, VAE, PedVAE, and VAP surveillance (see the CLABSI, CAUTI, VAE, PedVAE, and PNEU protocols for guidance) at the same time each day, or by weekly sampling methods in certain locations. When denominator data are available from electronic databases (for example, ventilator days from respiratory therapy), these sources may be used as long as the counts are not substantially different (+/- 5%) from manually collected counts that have been validated for a minimum of three months. See the respective device-associated event protocols for detailed surveillance instructions.

Antimicrobial Use and Resistance (AUR) Module

The use of antimicrobial agents has a direct effect on antimicrobial resistance patterns of pathogens. The observed increase in multidrug resistance is in part due to inappropriate prescription of, as well as only partial completion of courses of antibiotics.

The AUR Module allows facilities to collect information on the amount of antimicrobials that are used for patient care within their systems, as well as to collect data on the prevalence of drug-resistant organisms in their inpatient and outpatient areas. Electronic capture and reporting of microbiology and pharmacy data are the only available options for reporting data into this module.

See the Antimicrobial Use and Resistance protocol for detailed surveillance instructions.

Multidrug-resistant Organism and *Clostridioides difficile* Infection (MDRO/CDI) Module

The NHSN MDRO/CDI Module offers a means for facilities to meet criteria and metrics that are outlined in several organizational guidelines to control and measure the spread of MDROs and CDI within their healthcare system. The module has two separate and independent reporting options, Laboratory-identified (LabID) Event and Infection Surveillance, that may be tailored to meet the needs of participating NHSN facilities.

In addition, the following process measures are available: (1) adherence to hand hygiene; (2) adherence to contact precautions when caring for patients infected or colonized with an MDRO or *C. difficile;* and (3) adherence to active surveillance testing (AST) of MRSA and/or VRE. Active surveillance testing outcome measures is also available in locations where AST adherence is being performed and enables facilities to use the results of AST to monitor the incidence and prevalence of positive MRSA and/or VRE cultures. See the MDRO/CDI protocol for detailed surveillance instructions.

Outpatient Procedure Component Monthly Reporting Plan and Ambulatory Surgery Center Annual Facility Survey

Monthly Reporting Plan

The *Outpatient Procedure Component (OPC) Monthly Reporting Plan* form (CDC 57.401) is used by NHSN facilities to inform CDC which OPC modules are used during a given month. This allows CDC to select the data that should be included in the aggregate data analysis used for creating national benchmarks. Data submitted into NHSN may represent either "in-plan" or "off-plan" surveillance. "In-plan" surveillance means that the facility has committed to following the NHSN surveillance protocol, in its entirety, for that particular event, as shown in the facility's NHSN monthly reporting plan. "Off-plan" surveillance is surveillance that is done because a facility has decided to track a particular event for internal use. Each participating facility must identify and enter a monthly plan to indicate the module(s) used, if any, and the events, locations and/or procedures that will be monitored in-plan. The modules and locations selected for the month represent in-plan surveillance and indicate that the NHSN surveillance protocols will be used in their entirety for that surveillance.

- Only in-plan data are included in NHSN annual reports or other NHSN publications.
- "Off-plan" surveillance is surveillance that is done because a facility has decided to track a particular event for internal use. A facility makes no commitment to follow the NHSN protocol for "off-plan" events and such data are not included NHSN annual reports or other NHSN publications.

For every month for which data are entered into NHSN, an MRP must be completed; a facility may choose the option "No NHSN Patient Safety Modules Followed this Month". The MRP should reflect reporting requirements (for example, local, state, or CMS mandates) when applicable to the facility. The MRP is the first step in indicating the data that NHSN should submit to CMS as part of the CMS Quality Reporting Programs.

Table of instructions for completing the Outpatient Procedure Component Monthly Reporting Plan form can be found at Table of Instructions for Completion of the Outpatient Procedure Component (OPC) Monthly Reporting Plan Form (CDC 57.401).

Ambulatory Surgery Center (ASC) Annual Facility Survey

The *Outpatient Procedure Component (OPC) Annual Facility Survey* (CDC 57.400) is used by CDC to classify facilities for appropriate comparisons in aggregate data analyses and to learn more about common practices among ASCs. Participating facilities must complete the Annual Facility Survey at the time that they enroll or activate the OPC and at the beginning of each calendar year thereafter. Most survey questions are based on facility characteristics and practices during the previous calendar year.

For example, at the beginning of 2024, an ambulatory surgery center completes a 2023 ASC Annual Facility Survey containing data from 2023.

A newly enrolled facilities that was non-operational in the previous calendar year will be prompted to complete a shortened version of the survey containing basic facility characteristic questions. At the start of the next calendar, that follows when a facility enrolled into NHSN, the facility will complete the survey and will complete all questions. For example, if a facility enrolls in NHSN for the first time in March of 2024, they will complete a shortened version of the 2024 survey during enrollment. In January 2025, they will complete an entire survey 2024 with data from enrollment, March 2024, through December 2024.

Surveys must be completed by March 1st each year. After March 1st, facilities will be prevented from entering new monthly reporting plans until completion of the applicable survey(s).

The NHSN recommends that users collect all survey information using the paper form before attempting to enter data into the web application. The application will **not save incomplete** surveys, meaning all required questions must be answered to complete and save the survey.

Instructions for completing the Annual Survey for Ambulatory Surgery Centers can be found at Table of Instructions for Completion of the Outpatient Procedure Component Annual Ambulatory Surgery Center Survey (CDC 57.400*).*

Same Day Outcome Measures (SDOM)

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Introduction

In 2021, 254 Medicare-certified ambulatory surgery centers (ASCs) were opened, bringing the total number of ASCs in 2021 to 607 [2]. Therefore, it may be safe to assume that the continued growth in outpatient ASCs equate to an increase in the volume of surgical procedures performed in the outpatient ambulatory surgery arena. The OPC-SDOM module will provide data for analyses to determine how frequently adverse outcomes occur following operative procedures in ASCs, with the increase in the number of ASCs, tracking and reporting adverse patient outcomes becomes even more important. Tracking these outcomes will provide insight into ensuring that facilities are following best practice and taking important safety precautions.

The measures that are included in this grouping of care quality indicators represent a broad range of risks encountered by patients accessing care in various outpatient settings. The four measures reflect the potential outcome resulting from procedures performed in the Ambulatory Surgery Center (ASC) outpatient environment. These potential outcomes can occur on the same day (during or immediately following) a procedure performed in an ASC. Same Day Outcome Measures includes four individual measures, which are:

1. Patient Burn
2. Patient Fall
3. Wrong Site, Wrong Side, Wrong Patient, Wrong Procedure, Wrong Implant
4. All-Cause Hospital Transfer/Admission

The goal of the SDOM NHSN reporting system is to collect data on events with potentially high impact on the patient, provide a view of the burden of these events, encourage benchmarking, and analyze data to drive and underline prevention efforts. Patient safety events may be related to equipment and supplies, medication administration and side effects, processes and techniques while preparing the patient for the procedure, or occurrences during the procedure.

Patient falls and burns are considered preventable, with published prevention guidelines and efforts. Burns during surgical procedures are rare and can be prevented as well with correct use, maintenance of equipment and diligent implementation of safety precautions.[1] The occurrence of a patient transferred to a hospital while cared for at an ambulatory surgical center indicates an unplanned event and will also be captured with these event measures.

A balance of data needs and reporting burden was considered.

This NHSN protocol is intended to be consistent with the measure specifications from the following:

- ASC Quality Reporting Specifications Manual Release Notes Version 12.0 published by the Centers for Medicare & Medicaid Services (CMS) Quality Reporting.
- ASC Quality Measures: Implementation Guide Version 10.0, published by the Ambulatory Surgery Center Quality Collaboration.

Key Terms for SDOM

Term	Definition
Burn	Unintended tissue injury caused by any of the six recognized mechanisms: scalds, contact, fire, chemical, electrical or radiation, (for example, warming devices, prep solutions, electrosurgical unit or laser).
Discharge	Occurs when the patient leaves the confines of the ASC.
Encounter	Any patient visit to an ASC where the patient completes the registration process upon entry into the facility. Some ASCs may refer to this as an admission into the facility.
Fall	A sudden, uncontrolled, unintentional, and downward displacement of the body to the ground or other object, excluding falls resulting from violent blows or other purposeful action. This definition also excludes falls that do not occur within the confines of the Ambulatory Surgery Center (ASC), such as in a parking lot.
Hospital transfer/admission	Any transfer or admission from an Ambulatory Surgery Center (ASC) directly to an acute care hospital including the hospital emergency room. Directly means upon discharge from the outpatient facility. This measure applies regardless of the reason for the hospital transfer/admission, and no direct hospital transfers/admissions should be excluded based on an assessment about whether the transfer/admission is or is not related to the outpatient facility admission. This measure excludes patients who are discharged from the ASC and then later go to a hospital emergency room or acute care hospital, even if they do so on the same date as the ASC admission.

Wrong (site, side, patient, procedure or implant)	Procedure is performed in a way that is not consistent with what is documented in the informed consent for a patient - not in accordance with intended site, side, patient, procedure or implant. May also be referred to as Wrong Event.

SDOM Requirements

Setting(s)
An Ambulatory Surgical Center (ASC) means any distinct entity that operates exclusively for the purpose of providing surgical services to patients not requiring hospitalization and in which the expected duration of services would not exceed 24 hours following an admission. An ASC must be certified by the Center for Medicare & Medicaid Services, licensed by a state agency or both.

Surveillance for SDOM
Monitor **all patient** encounters for the following events:

- Burn prior to discharge from the ASC
- Fall within the ASC
- Wrong site, side, patient, procedure or implant while admitted to the ASC (Wrong)
- Transfer or admission to a hospital upon discharge from the ASC

SDOM surveillance should be indicated on the *NHSN Outpatient Procedure Component Monthly Reporting Plan* form (CDC 57.401).

Monitoring for SDOM require active, patient-based, prospective surveillance. Surveillance for SDOMs starts at the beginning of the encounter and ends at discharge from the ASC. No post-discharge surveillance is required for these measures.

Methods for surveillance may vary based on resources within the facility. Examples of resources for data collection include outpatient facility medical records, incident/occurrence reports, or variance reports.

Reporting these measures using the NHSN SDOM does not meet any reporting requirement(s) for the CMS Ambulatory Surgical Center Quality Reporting (ASCQR) Program. Reporting this NHSN measure is optional.

SDOM Specifications

- **Patient Burn**

There are several accounts in literature of patient burns in the surgical and procedural environment. The wide range of factors resulting in burns highlights several possible risks that must be addressed to prevent patient burns.

Many instances of burns are associated with electrosurgical equipment suggest that this is the most common causative agent. Recent reports demonstrate increased risk of burns may be related to newer

devices that use higher currents at longer activation times. Although electrical burns may be the most predominant, burns from other mechanisms such as chemicals and direct contact have been reported.

Surgical fires are infrequent, but they are life threatening and the outcome (such as burns) can be severe to both patient and surgical staff. Any area where surgery is performed and flammable agents are used, such as medical gases and skin preparation agents, may pose a risk for surgical fires and subsequent patient burns.

Understanding that there are a number of causative agents related to patient burns in a surgical setting including ASCs, the term burn is very broad. This term covers burn from the various means by which a burn can occur – chemical, contact, electrical, fire radiation or scalds. This allows stakeholders and partners to gain a more robust understanding of the incidence of burn events and further improve prevention strategies.

Measure Specifications:
This measure is used to assess the number of encounters (patients) who experience a burn prior to discharge from the ASC.

Numerator: ASC encounters (admissions) experiencing a burn prior to discharge
Exclusions: None

Denominator: All ASC encounters (admissions)
Exclusions: None

- **Patient Fall**

The incidence of patient falls is currently unavailable, although in general the incidence of adverse events in ASCs is relatively low. There is growing interest in public reporting of adverse events such as falls. Patients undergoing outpatient surgical procedures are at increased risk for falls when adjunct therapies such as anxiolytics, sedatives, and anesthetic agents are used.

Measure Specifications:
This measure is used to assess the number of encounters (patients) who experience a fall within the ASC.

Numerator: ASC encounters (admissions) experiencing a fall within the confines of the ASC
Exclusions: ASC encounters (admissions) experiencing a fall outside the ASC

Denominator: All ASC encounters (admissions)
Exclusions: Falls resulting from violent blows or other purposeful actions

- **Wrong Site, Wrong Side, Wrong Patient, Wrong Procedure, and Wrong Implant** (*collectively referred to as Wrong*)

The Wrong outcome measure serves as a proxy for adherence to The Joint Commission's "Universal Protocol" guideline. The goal for of the "Universal Protocol" guideline is to eliminate wrong site, wrong

procedure, and wrong person surgery[1,2]. The "Universal Protocol" is a consensus guideline that is endorsed by professional medical organizations and associations. The ASC Quality Collaboration added wrong implant to wrong site, wrong side, wrong patient, and wrong procedure to create a more complete "wrong" event measure.

Measure Specifications:
This measure is used to assess the number of encounters (patients) who experience a wrong

Numerator: All ASC encounters (admissions) experiencing a wrong site, side, patient, procedure, or implant
Exclusions: None

Denominator: All ASC encounters (admissions)
Exclusions: None

- **All-Cause Hospital Transfer/Admission**

An unanticipated outcome after care is provided in an ASC, is a direct transfer or admission to a hospital from the ASCs. This unexpected event may result in additional cost and recovery time, which may pose an increased burden to the patient, family and payer.

At times, unforeseen events or complications may result in the need to transfer or admit an ASC patient to a hospital. Such occurrences demonstrate good judgement and signifies good patient care, but higher rates may be a signal that less than optimal patient and/or procedure selection by the ASC are occurring.

Measure Specifications:
This measure is used to assess the percentage of ASC encounters (admissions) who are transferred or admitted to a hospital upon discharge from the ASC.

Numerator: ASC encounters (admissions) requiring a hospital transfer or hospital admission upon discharge from the ASC
Exclusions: None

Denominator: All ASC encounters (admissions)
Exclusions: None

Reporting Instructions

1. Indicate on the *Outpatient Procedure Component Monthly Reporting Plan* form (CDC 57.401) that the ASC is participating in surveillance for the Same Day Outcome Measures. Selecting SDOM means all four outcome measures will be monitored and reported.

2. For each patient that experiences a SDOM event during an ASC encounter, complete an *Outpatient Procedure Component Same Day Outcome Measures Event* form (CDC 57.402) and select the appropriate event by checking the corresponding box.
   a. If the same patient experiences more than one event of a **different measure** during the same encounter, all events should be recorded on the same event form. Example: a patient experiences a fall and a burn during the same encounter.
   b. If a patient experiences more than one event of the **same measure** during the same encounter, record only one event of that measure type for the encounter. Example: a patient has multiple wrong site procedures or multiple falls.
   c. If no events occur during an encounter, no Outpatient Procedure Component Same Day Outcome Measures Event form (CDC 57.402) should be completed.

3. If no events occur during the reporting month, select "No Same Day Outcome Measures (events) reported this month" on the Outpatient Procedure Component Denominator for Same Day Outcome Measures form (CDC 57.403).

4. At the end of the reporting month specified in the Monthly Reporting Plan, enter the total number of ASC encounters (admissions) on the Outpatient Procedure Component Denominator for Same Day Outcome Measures form (CDC 57.403).

See the following for assistance with completing forms for the OPC Same Day Outcome Measures:

- *Table of Instructions for Completion of the Outpatient Procedure Component Monthly Reporting Plan Form (CDC 57.401)*
- *Table of Instructions for Completion of Outpatient Procedure Component Same Day Outcome Measures Form (CDC 57.402)*
- *Table of Instructions for Completion of the Outpatient Procedure Component Denominator for Same Day Outcome Measures Form (CDC 57.403)*

Data Analysis

Descriptive analysis options of numerator and denominator data, such as line listings, frequency tables, and bar and pie charts, are available in the NHSN application for analysis of SDOMs. Guides on using the NHSN OPC analysis features are available in the Analysis Resources section found at https://www.cdc.gov/nhsn/ambulatory-surgery/ssi/index.html.

References

1. Ambulatory Surgical Center Quality Collaboration Quality Report. Retrieved from Quality Report - ASC Quality Collaboration (ascassociation.org) on September 1, 2023.

2. Centers for Medicare & Medicaid Services (CMS). QualityNet: Ambulatory Surgical Center Quality Reporting Specifications Manual Version 13.0. Retrieved from https://qualitynet.cms.gov/asc/specifications-manuals on September 1, 2023.

3. Ambulatory Surgery Center Quality Collaboration (ASC QC). ASC Quality Collaboration Measures: Implementation Guide Version 11.0. Retrieved from https://www.ascquality.org/home on September 1, 2023.

Outpatient Procedure Component Surgical Site Infection (OPC-SSI) Surveillance

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Introduction

With advances in surgical technology, patients are offered an incredible opportunity for restored health and function. The opposing force to technology advancements is increased risks of adverse and unintended outcomes such as surgical site infection (SSI). The CDC healthcare-associated infection (HAI) prevalence survey found that there were an estimated 110,800 surgical site infections (SSIs) associated with inpatient surgeries in 2015[1]. As these data demonstrate, the frequency of SSI is primarily based on the analysis of operative procedures performed in inpatient settings such as acute care hospitals. These data represent only a fraction of the operative procedures performed on an annual basis and does not reflect the continued trend of surgical services transitioning to the outpatient ambulatory surgery setting.

In 2021, 254 Medicare-certified ambulatory surgery centers (ASCs) were opened, bringing the total number of ASCs in 2021 to 607 [2]. Therefore, it may be safe to assume that the continued growth in outpatient ASCs equate to an increase in the volume of surgical procedures performed in the outpatient ambulatory surgery arena. Procedures performed in ambulatory surgery centers may be considered lower risk and thereby have a lower SSI rate than inpatient surgery settings, the continued growth in these facilities is a signal for the need to monitor procedures performed in the outpatient setting for adverse events such as SSIs. The OPC-SSI module will provide data for analyses to determine how operative procedures performed in ASCs contribute to the burden of SSIs. Data from this module can help identify factors associated with infections as well as targets for prevention strategies.

A successful surveillance program includes the use of epidemiologically-sound infection definitions and effective surveillance methods, stratification of SSI rates according to risk factors associated with SSI development, and data feedback.[3,4] Surveillance of SSI with feedback of appropriate data to surgeons has been shown to be an important strategy to reduce SSI risk.[3,4,5, 6]

Advances have been made in infection control practices, including improved operating room ventilation, sterilization methods, barriers, surgical technique, and availability of antimicrobial prophylaxis, yet SSIs remain a substantial cause of morbidity, prolonged hospitalization, and death in the inpatient setting. Continued efforts are needed to identify preventable causes and develop strategies for SSI prevention in all settings including ambulatory surgery centers.

The Outpatient Procedure Component (OPC) is designed for use by ASCs. Surveillance for operative procedure(s) may focus on high risk and/or high-volume procedures. In addition, ASCs should use sound risk assessment practices as well as considerations for mandated reporting requirements to determine which operative procedure(s) to monitor. ASCs may voluntarily enroll in OPC-SSI but federal, state or organizational mandates supersedes voluntary enrollment and individual ASCs must verify and comply with mandated SSI reporting requirements.

OPC-SSI Reporting Requirements

OPC SSI reporting is based on the NHSN operative procedure categories. The NHSN operative procedure categories are listings of operative procedures grouped and categorized around a specific operative description. The OPC operative procedure categories can be found in Table 1. The Current Procedural Terminology (CPT) codes and code descriptions can be found at https://www.cdc.gov/nhsn/xls/opc/opc-cpt-pcm-nhsn.xlsx**. The CPT codes are required for reporting.**

Setting(s)
An Ambulatory Surgical Center (ASC) means any distinct entity that operates exclusively for the purpose of providing surgical services to patients not requiring hospitalization and in which the expected duration of services would not exceed 24 hours following an admission. An ASC must be certified by the Center for Medicare & Medicaid Services, licensed by a state agency or both.

These ASCs will use this protocol for SSI surveillance of surgical patients receiving an eligible NHSN outpatient procedure (Table 1).

Reporting Plan
A facility may choose to perform surgical site surveillance "in-plan" or "off-plan" for any of the NHSN operative procedure categories:

- In-plan surveillance – Facility has indicated in their NHSN *OPC Monthly Reporting Plan* (CDC 57.401) that the OPC-SSI protocol will be used, in its entirety for SSI surveillance. Only in-plan data are included in NHSN annual reports or other NHSN publications.
- Off-plan surveillance – Facility has **not** indicated in their NHSN *OPC Monthly Reporting Plan* (CDC 57.401) that the OPC-SSI protocol will be used, in its entirety for SSI surveillance. Off-plan data are **not** included in NHSN annual reports or other NHSN publications.

Targeted Surveillance using OPC-SSI

a) For each calendar month in which surveillance is conducted, indicate in the *OPC Monthly Reporting Plan* the NHSN operative procedure category selected from Table 1 that is under surveillance for SSI.
b) A facility may choose to monitor any of the NHSN operative procedure categories that are found in Table 1.
c) Perform surveillance for SSI following at least one NHSN operative procedure category (CPT Mapping) as indicated in the *OPC Monthly Reporting Plan* (CDC 57.401) and otherwise specified by mandates and other reporting requirements.
d) Collect SSI event (numerator) and operative procedure (denominator) **data on all procedures** included in the selected procedure category.
e) A procedure must meet the NHSN definition of an operative procedure in order to be included in the surveillance. All procedures included in the NHSN monthly surveillance plan are followed for the prescribed length of time based on the procedure category, for all SSI types: superficial incisional, deep incisional, and organ/space. The type of SSI reported must reflect the deepest tissue level (superficial, deep and organ/space) where SSI criteria are met based on the procedure category.

NOTES:

- *An SSI event is attributed to the facility in which the NHSN operative procedure was performed.*
- *Facilities that have identified potential SSI events that are attributable to procedures performed at a different facility should provide details of the potential events to the facility where the procedure was performed.*

Table 1. NHSN OPC Operative Procedure Categories

Procedure Category	Operative Procedure	Procedure Description
AMP	Limb amputation	Total or partial amputation or disarticulation of the upper or lower limbs, including digits
APPY	Appendix surgery	Operation of appendix
AVSD	AV shunt for dialysis	Arteriovenostomy for renal dialysis
BILI	Bile duct, liver or pancreatic surgery	Excision of bile ducts or operative procedures on the biliary tract, liver or pancreas (does not include operations on gall bladder only)
BRST	Breast surgery	Excision of lesion or tissue of breast including radical, modified, or quadrant resection, lumpectomy, incisional biopsy, or mammoplasty
CEA	Carotid endarterectomy	Endarterectomy on vessels of head and neck (includes carotid artery and jugular vein)
CHOL	Gallbladder surgery	Cholecystectomy and cholecystotomy
COLO	Colon surgery	Incision, resection, or anastomosis of the large intestine; includes large-to-small and small-to-large bowel anastomosis; see REC for rectal operations
FUSN	Spinal fusion	Immobilization of spinal column
FX	Open reduction of fracture	Open reduction of fracture or dislocation of long bones without internal or external fixation; does not include placement of joint prosthesis
GAST	Gastric surgery	Incision or excision of stomach; includes subtotal or total gastrectomy; does not include vagotomy and fundoplication
HER	Herniorrhaphy	Repair of inguinal, femoral, umbilical, or anterior abdominal wall hernia; does not include repair of diaphragmatic or hiatal hernia or hernias at other body sites
HPRO	Hip prosthesis	Arthroplasty of hip

HYST	Abdominal hysterectomy	Abdominal hysterectomy; includes that by laparoscope
KPRO	Knee prosthesis	Arthroplasty of knee
LAM	Laminectomy	Exploration or decompression of spinal cord through excision or incision into vertebral structures
NECK	Neck surgery	Major excision or incision of the larynx and radical neck dissection; does not include thyroid and parathyroid operations
NEPH	Kidney surgery	Resection or manipulation of the kidney with or without removal of related structures
OVRY	Ovarian surgery	Operations on ovary and related structures
PACE	Pacemaker surgery	Insertion, manipulation or replacement of pacemaker
PRST	Prostate surgery	Suprapubic, retropubic, radical, or perineal excision of the prostate; does not include transurethral resection of the prostate
PVBY	Peripheral vascular bypass surgery	Bypass operations on peripheral arteries and veins
REC	Rectal surgery	Operations on rectum
SB	Small bowel surgery	Incision or resection of the small intestine; does not include small-to-large bowel anastomosis
SPLE	Spleen surgery	Resection or manipulation of spleen
THOR	Thoracic surgery	Noncardiac, nonvascular thoracic surgery; includes pneumonectomy and hiatal hernia repair or diaphragmatic hernia repair (except through abdominal approach)
THYR	Thyroid and/or parathyroid surgery	Resection or manipulation of thyroid and/or parathyroid
VHYS	Vaginal hysterectomy	Vaginal hysterectomy; excludes the use of laparoscope
VSHN	Ventricular shunt	Ventricular shunt operations, including revision and removal of shunt
XLAP	Exploratory laparotomy	Abdominal operations not involving the gastrointestinal tract or biliary system; includes diaphragmatic hernia repair through abdominal approach

NHSN Operative Procedure Category Mappings to CPT Codes

Operative procedure codes are used in various health care settings as a uniform way to communicate essential information. This wide use of operative procedure codes allows NHSN to standardize the SSI surveillance reporting process. **Current Procedural Terminology (CPT) codes are the operative procedure codes used in OPC and are required for use within the application**.

NHSN has mapped Current Procedural Terminology (CPT) codes to the NHSN OPC operative procedure categories to assist users in determining the correct operative procedures to report for SSI surveillance. The CPT mapping to OPC operative procedure categories can be found in the "Operative Procedure Code Documents" section of the OPC SSI webpage. The procedure code mapping document includes a general definition for each OPC operative procedure category as well as a procedure description for each individual CPT code.

Custom Procedures, Custom Events and Custom Fields

Custom procedures, custom events and custom fields are created by individual facilities. These custom data are optional and allow facility-defined data entry for the facility's own surveillance purposes.

- Custom procedures are non-NHSN operative procedures and cannot be included in the Monthly Reporting Plan and are therefore considered off-plan surveillance.
- Custom events are non-NHSN defined events based on criteria developed by the facility.
- Custom fields are non-NHSN defined variables. These fields may be added to NHSN-defined procedures.

Custom fields, custom procedures and custom events must be created in the application before data can be entered. These data may provide value to the facility if they are entered in a consistent manner. For example, if a facility chooses to create a custom field for admission or discharge diagnosis of infected patients, standardized responses should be entered in a consistent and uniform manner in order to provide meaningful data for the facility.

Data entered in custom fields or in association with custom procedures and events are not included in any of the NHSN reports and there are no available NHSN comparative data. Any related analyses must be performed by the facility.

Instructions for creating custom fields, procedures and events may be found in the "Supporting Materials" section of the OPC SSI webpage.

Key Terms for OPC-SSI

Physician - for NHSN surveillance purposes, the term physician includes the surgeon(s), infectious disease physician, emergency physician, other physician on the case, or physician's designee (nurse practitioner or physician's assistant).

Date of event (DOE) - the date when the first element used to meet the OPC-SSI infection criterion occurs for the first time during the SSI surveillance period. The DOE must fall within the SSI surveillance period to meet SSI criteria. The type of SSI (superficial incisional, deep incisional, or organ/space) reported should reflect the deepest tissue layer involved in the infection during the surveillance period. Synonym: infection date.

> Note: SSI guidelines do not offer a strict timeframe for elements of criteria to occur but in NHSN's experience, all elements required to meet an SSI criterion usually occur within a 7-10 day timeframe with typically no more than 2-3 days between elements. To ensure that all elements associate to the SSI, the elements must occur in a relatively tight timeframe. For example, an element that occurs on day 2 of the surveillance period with another element that occurs three weeks later should not be used to cite an SSI. Each case differs based on the individual elements occurring and the type of SSI but the DOE for an SSI must occur within the appropriate 30- or 90-day SSI surveillance period.

NHSN Operative Procedure - is a procedure that

- is included in the NHSN CPT operative procedure category code mapping
  And
- takes place during an operation where at least one incision (including laparoscopic approach) is made through the skin or mucous membrane, or entry is through an existing incision (such as an incision from a prior operative procedure)
  And
- takes place in an operating room (OR), defined as a patient care area that met criteria for an operating room when it was constructed or renovated outlined by the Facilities Guidelines Institute's (FGI)[7], American Institute of Architects' (AIA) or requirements of the State in which it operates. This may include an interventional radiology room or a cardiac catheterization lab.

Surveillance Period - the timeframe following an NHSN operative procedure for monitoring and identifying an SSI event. The surveillance period is determined by the NHSN operative procedure category (for example, laminectomy (LAM) has a 30-day SSI surveillance period and breast surgery (BRST) has a 90-day SSI surveillance period, see Table 2). If a patient returns to the OR and the same surgical site is entered this ends the surveillance period for the prior NHSN operative procedure and begins a new SSI surveillance period if an NHSN operative procedure is performed.

Table 2. Surveillance Periods for SSIs Following Selected NHSN Operative Procedure Categories. Day 1 = the date of the procedure.

30-day Surveillance			
Category	**Operative Procedure**	**Category**	**Operative Procedure**
AMP	Limb amputation	NECK	Neck surgery
APPY	Appendix surgery	NEPH	Kidney surgery
AVSD	Shunt for dialysis	OVRY	Ovarian surgery
BILI	Bile duct, liver or pancreatic surgery	PRST	Prostate surgery
CEA	Carotid endarterectomy	REC	Rectal surgery
CHOL	Gallbladder surgery	SB	Small bowel surgery
COLO	Colon surgery	SPLE	Spleen surgery
GAST	Gastric surgery	THOR	Thoracic surgery
HYST	Abdominal hysterectomy	THYR	Thyroid and/or parathyroid surgery
LAM	Laminectomy	VHYS	Vaginal hysterectomy
-	-	XLAP	Exploratory Laparotomy
90-day Surveillance			
Category	**Operative Procedure**		
BRST	Breast surgery		
FUSN	Spinal fusion		
FX	Open reduction of fracture		
HER	Herniorrhaphy		
HPRO	Hip prosthesis		
KPRO	Knee prosthesis		
PACE	Pacemaker surgery		
PVBY	Peripheral vascular bypass surgery		
VSHN	Ventricular shunt		

NOTES:

- *Superficial incisional SSIs are monitored for a 30-day period for all procedure types.*
- *Secondary incisional SSIs are monitored for a 30-day period regardless of the surveillance period for the primary site.*

Table 3. Denominator for Procedure Required Details

These are required elements for reporting each operative procedure performed within the selected operative procedure category. The elements have been identified as risk factors for SSIs. See the *Instructions for Completion of Outpatient Procedure Component (OPC) Denominator for Procedure Form (CDC 57.404)* for further details.

ASA physical status	Assessment by the anesthesiologist (or designee) of the patient's preoperative physical condition using the American Society of Anesthesiologists' (ASA) Physical Status Classification System[8]. Patients are assigned an ASA score of 1-6 at the time of surgery. Patients with an ASA score of 1-5 are eligible for NHSN OPC-SSI surveillance. *NOTES:* • *Do NOT report procedures that do not have an ASA score assigned by an anesthesiologist (or designee).* • *Do NOT report procedures with an ASA score of 6 (a declared brain-dead patient whose organs are being removed for donor purposes) to NHSN.*
Diabetes	The NHSN SSI surveillance definition of diabetes indicates that the patient has a diagnosis of diabetes requiring management with insulin or a non-insulin anti-diabetic agent. This includes patients with: • "Insulin resistance" who are on management with anti-diabetic agents. • A diagnosis of diabetes who are noncompliant with their diabetes medications. • Gestational diabetes. ICD-10-CM diagnosis codes (that reflect a diagnosis of diabetes) documented during the admission when the procedure is performed maybe used to determine diabetes. Acceptable codes are found in the "Operative Procedure Code Documents" section of the OPC SSI webpage. Some patients may receive diabetic medications for indications other than diabetes. For purposes of NHSN reporting, the Diabetes field = NO, if there is no diagnosis of diabetes. •
Duration of operative procedure	The interval in hours and minutes between the Procedure/Surgery Start Time, and the Procedure/Surgery Finish Time, as defined by the Association of Anesthesia Clinical Directors (AACD)[9]: • Procedure/Surgery Start Time (PST): Time when the procedure is begun (*for example,* incision for a surgical procedure). • Procedure/Surgery Finish (PF): Time when all instrument and sponge counts are completed and verified as correct, all postoperative radiologic studies to be done in the OR are completed, all dressings and drains are secured, and the physicians/surgeons have completed all procedure-related activities on the patient.

<table>
<tr><td>General anesthesia</td><td>The administration of drugs or gases that enter the general circulation and affect the central nervous system to render the patient pain free, amnesic, unconscious, and often paralyzed with relaxed muscles. This does not include conscious sedation.</td></tr>
<tr><td>Height</td><td>The patient’s most recent height documented in the medical record in feet (ft.) and inches (in.) or meters (m).</td></tr>
<tr><td>Scope</td><td>An instrument used to reach and visualize the site of the operative procedure. In the context of an NHSN operative procedure, use of a scope involves creation of several small incisions to perform or assist in the performance of an operation rather than use of a traditional larger incision (specifically, open approach).
For CPT codes, the scope question can be answered based on the procedure code description. Using HYST code 58570 as an example, the procedure code description indicates Laparoscopy, surgical, with total hysterectomy. Laparoscopy is Scope = YES.

<table><tr><td>HYST</td><td>58570</td><td>Laparoscopy, surgical, with total hysterectomy, for uterus 250 g or less</td></tr></table>
NOTE:
If a procedure is coded as open and scope, then the procedure should be reported to NHSN as Scope = NO. The open designation is considered a higher risk procedure.

Also see Instructions for Completion of Outpatient Procedure Component (OPC) Denominator for Procedure Form (CDC 57.404) and reporting instructions for Numerator Data and Denominator Data within this chapter.</td></tr>
<tr><td>Weight</td><td>The patient’s most recent weight documented in the medical record in pounds (lbs.) or kilograms (kg) prior to or otherwise closest to the procedure.</td></tr>
<tr><td>Wound class</td><td>An assessment of the degree of contamination of a surgical wound at the time of the surgical procedure. Wound class is assigned by a person involved in the surgical procedure (for example, surgeon, circulating nurse, etc.) based on the wound class schema as stated in the facility’s policies and procedures for clinical practice. The four wound classes available within the NHSN application are Clean (C), Clean-Contaminated (CC), Contaminated (CO), and Dirty/Infected (D).

NOTE:
The following NHSN surgical procedure categories APPY, BILI, CHOL, COLO, REC, SB and VHYS cannot be recorded as clean (C) wound class within the application. If a clean (C) wound class was assigned to a procedure in one of these procedure categories, the procedure cannot be included in the denominator for procedure data. The Infection Preventionist should not modify the wound class.</td></tr>
</table>

NOTE:

Incisional closure method is NOT a part of the NHSN OPC-SSI Surveillance definition; therefore, all eligible procedures should be included in SSI surveillance regardless of closure method. Both primarily closed procedures and those that are not closed primarily should be included in the denominator data for procedures in the facility’s NHSN Monthly Reporting Plan. Any SSI attributable to either primarily closed or non-primarily closed procedures should be reported.

Surgical Site Infection (SSI) Criteria

Table 4A. General OPC-SSI Criteria

Apply to all operative procedure categories except Breast Surgery (BRST). Use Breast Surgery (BRST) - Surgical Site Infection Criteria for SSIs attributable to BRST.

OPC General – Superficial Incisional SSI Must meet the following criteria:
Date of event for infection occurs within 30 days following the NHSN operative procedure (where day 1 = the procedure date) **AND** involves only skin and subcutaneous tissue of the incision **AND** patient has at least ***one*** of the following: a. purulent drainage from the superficial incision. b. organisms identified from an aseptically-obtained specimen from the superficial incision or subcutaneous tissue by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (for example, not Active Surveillance Culture/Testing [ASC/AST]). c. a superficial incision that is deliberately opened or re-accessed by a surgeon, physician or physician designee and culture or non-culture based testing of the superficial incision or subcutaneous tissue is not performed. **And** patient has at least one of the following signs or symptoms: localized pain or tenderness; localized swelling; erythema; or heat. d. diagnosis of a superficial incisional SSI by a physician or physician designee. **Comments:** The two specific types of superficial incisional SSIs are: 1. Superficial incisional primary (SIP) – a superficial incisional SSI that is identified in the primary incision in a patient that has had an operation with one or more incisions (for example, the knee incision for KPRO procedure). 2. Superficial incisional secondary (SIS) – a superficial incisional SSI that is identified in the secondary incision in a patient that has had an operation with more than one incision (for example, abdominal incision site for VSHN). **Note:** Refer to Event Reporting Instruction #5 for NHSN operative procedure categories with secondary incision sites available for SSI attribution.

Reporting Instructions for OPC General - Superficial Incisional SSI

The following do not qualify as criteria for meeting the NHSN definition of superficial SSI:

- Diagnosis/treatment of cellulitis does not meet superficial incisional SSI criterion 'd'.
- A stitch abscess alone (minimal inflammation and discharge confined to the points of suture penetration). Determination of a 'stitch abscess' is not based on a physician diagnosis of 'stitch abscess'.
- A localized stab wound, or pin site infection is not an SSI.

NOTE:

- For an NHSN operative procedure, a laparoscopic trocar site is considered a surgical incision and not a stab wound. If a surgeon uses a laparoscopic trocar site to place a drain at the end of a procedure this is considered a surgical incision.

- For the purpose of NHSN surveillance, the term "incision" refers to the incision made for the primary surgical procedure and the term "stab wound" refers to an incision made at another site, generally to accommodate a drain.

OPC General - Deep Incisional SSI

Must meet the following criteria:

The date of event for infection occurs within 30 or 90 days following the NHSN operative procedure (where day 1 = the procedure date) according to the list in Table 2

AND

involves deep soft tissues of the incision (for example, fascial and muscle layers)

AND

patient has at least ***one*** of the following:

a. purulent drainage from the deep incision.

b. a deep incision that spontaneously dehisces, or is deliberately opened*, re-accessed or aspirated by a surgeon, physician or physician designee or spontaneously dehisces.

AND

Organism(s) identified from the deep soft tissues of the incision by a culture or non-culture based microbiologic testing method from the deep soft tissues which is performed for purposes of clinical diagnosis or treatment (for example, not Active Surveillance Culture/Testing [ASC/AST]) or culture or non-culture based microbiologic testing method is not performed. *A culture or non-culture based test from the deep soft tissues of the incision that has a negative finding does not meet this criterion.*

AND

patient has at least ***one*** of the following signs or symptoms: fever (>38°C); localized pain or tenderness.

c. an abscess or other evidence of infection involving the deep incision detected on gross anatomical or histopathologic exam, or imaging test.

*Excludes any known multi-part/multi-phase procedures that occur over more than one operative episode [during the same admission] that is documented in the medical record by a surgeon prior to first phase of the procedure.

Comments: The two specific types of deep incisional SSIs are:

1. Deep incisional primary (DIP) – a deep incisional SSI that is identified in a primary incision in a patient that has had an operation with one or more incisions (for example, the hip incision for a HPRO procedure).

2. Deep incisional secondary (DIS) – a deep incisional SSI that is identified in the secondary incision in a patient that has had an operation with more than one incision (for example, abdominal incision site for VSHN).

   Note: Refer to Event Reporting Instruction #5 for NHSN operative procedure categories with secondary incision sites available for SSI attribution.

OPC General - Organ/Space SSI

Must meet the following criteria:

Date of event for infection occurs within 30 or 90 days following the NHSN operative procedure (where day 1 = the procedure date) according to the list in Table 2

AND

infection involves the organ/space tissues (deeper than the fascia/muscle).

AND

patient has at least ***one*** of the following:

a. purulent drainage from a drain placed into the organ/space (for example, closed suction drainage system, open drain, T-tube drain, and CT guided drainage).
b. organisms are identified from an aseptically-obtained fluid or tissue in the organ/space by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (for example, not Active Surveillance Culture/Testing [ASC/AST]).
c. an abscess or other evidence of infection involving the organ/space detected on:
   - gross anatomical
   - histopathologic exam
   - imaging test consistent with infection.

NOTE:

Meeting additional infection criteria found in the Patient Safety Component Chapter 17, CDC/NHSN Surveillance Definitions for Specific Types of Infections is ***NOT*** *a part of the OPC General - Organ/Space SSIs reporting criteria.*

Table 4B. Breast Surgery (BRST) Surgical Site Infection Criteria

The Breast Surgery (BRST) Surgical Site Infection instructions apply to surgical site infections (SSIs) during the 30-day (superficial SSI) and 90-day (deep and organ/space SSI) postoperative periods following BRST-Breast Surgery performed in Ambulatory Surgery Centers. *Use General OPC-SSI criteria for all operative procedures except breast operative procedures (BRST).*

OPC BRST - Superficial incisional SSI
Must meet the following criteria**:**

Date of event for infection occurs within 30 days following a BRST operative procedure; where day 1 = the procedure date

AND

involves either the skin, subcutaneous tissue (for example, fatty tissue) or breast parenchyma (for example, milk ducts and glands that produce milk) at the incision

AND

patient has at least one of the following:

a. purulent drainage from the superficial incision.
b. organisms identified from an aseptically-obtained specimen from the superficial incision or subcutaneous tissue by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (for example, not Active Surveillance Culture/Testing [ASC/AST]).
c. a superficial incision that is deliberately opened or re-accessed by a surgeon, physician or physician designee and culture or non-culture based testing of the superficial incision or subcutaneous tissue is not performed.
   And
   patient has at least **one** of the following signs or symptoms: localized pain or tenderness; localized swelling; redness (erythema); or heat. A culture or non-culture based test that has a negative finding does not meet this criterion.
d. diagnosis of a superficial incisional SSI by a physician or physician designee.

Comments for OPC BRST – Superficial Incisional SSI

The two specific types of superficial incisional SSIs are:

1. Superficial incisional primary (SIP) – a superficial incisional SSI that is identified in a primary incision in a patient that has had an operation with one or more incisions (for example, the breast incision for BRST procedure).

2. Superficial incisional secondary (SIS) – a superficial incisional SSI that is identified in the secondary incision in a patient that has had an operation with more than one incision (for example, transverse rectus abdominis myocutaneous [TRAM] flap incision site for BRST).

Reporting Instructions for OPC BRST - Superficial Incisional SSI

The following do not qualify as criteria for meeting the NHSN definition of superficial SSI:

- Diagnosis/treatment of cellulitis (redness/warmth/swelling), by itself, does not meet superficial incisional SSI criterion ‘d’.

- A stitch abscess alone (minimal inflammation and discharge confined to the points of suture penetration).
    - Please note, a stitch abscess is defined as above. Determination of a 'stitch abscess' is not based on a physician diagnosis of 'stitch abscess'.
- A localized stab wound, or pin site infection is not an SSI.

OPC BRST - Deep incisional SSI

Must meet the following criteria:

Date of event for infection occurs within 90 days following a BRST operative procedure; where day 1 = the procedure date

AND

involves deep soft tissues of the incision (for example, fascial and muscle layers)

AND

patient has at least one of the following:

a. purulent drainage from the deep incision.

b. a deep incision that is deliberately opened*, re-accessed, or aspirated by a surgeon, physician or physician designee.

And

organism is identified from the deep soft tissues of the incision by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (for example, not Active Surveillance Culture/Testing [ASC/AST]) or culture or non-culture based microbiologic testing method is not performed. A culture or non-culture based test that has a negative finding does not meet this criterion.

And

patient has at least **one** of the following signs or symptoms: fever (>38°C); localized pain or tenderness.

c. an abscess or other evidence of infection involving the deep incision detected on gross anatomical or histopathologic exam.

****Excludes any known multi-part/multi-phase procedures that occur over more than one operative episode [during the same admission] that is documented in the medical record by a surgeon prior to first phase of the procedure.***

Comments for OPC BRST – Deep Incisional SSI

The two specific types of deep incisional SSIs are:

1. Deep incisional primary (DIP) – a deep incisional SSI that is identified in a primary incision in a patient that has had an operation with one or more incisions (for example, the breast incision for BRST procedure).

2. Deep incisional secondary (DIS) – a deep incisional SSI that is identified in the secondary incision in a patient that has had an operation with more than one incision (for example, transverse rectus abdominis myocutaneous [TRAM] flap incision site for BRST).

OPC BRST - Organ/Space SSI Must meet the following criteria:
Date of event for infection occurs within 90 days following a BRST operative procedure; where day 1 = the procedure date **AND** infection involves any part of the breast deeper than the fascial/muscle layers (subpectoral), that is opened or manipulated during the operative procedure. **AND** patient has at least **one** of the following: a. purulent drainage from a drain placed into the organ/space (for example, closed suction drainage system, open drain, T-tube drain, and CT guided drainage). b. organisms identified from affected breast tissue or fluid obtained by invasive procedure by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (for example, not Active Surveillance Culture/Testing [ASC/AST]). c. breast abscess or other evidence of infection detected on gross anatomic or histopathologic exam or imaging test consistent with breast infection.
NOTE: • *Meeting additional infection criteria found in the Patient Safety Component Chapter 17, CDC/NHSN Surveillance Definitions for Specific Types of Infections is NOT a part of the OPC BRST - Organ/Space SSIs reporting criteria.*

Table 4C. Table 4C. Knee prosthesis (KPRO) Surgical Site Infection Criteria

The Knee prosthesis (KPRO) Surgical Site Infection instructions apply to surgical site infections (SSIs) during the 30-day (superficial SSI) and 90-day (deep and organ/space SSI) surveillance periods following knee prosthesis performed in Ambulatory Surgery Centers (ASC). *Use the General OPC-SSI criteria for all operative procedures except breast surgery (BRST) and knee prothesis (KPRO).*

OPC KPRO - Superficial incisional SSI Must meet the following criteria**:**
Date of event for infection occurs within 30 days after a KPRO; where day 1 = the procedure date **AND** involves the skin or subcutaneous tissue (for example, fatty tissue) of the incision **AND** patient has at least one of the following: a. purulent drainage from the superficial incision. b. organisms identified from an aseptically-obtained specimen from the superficial incision or subcutaneous tissue by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (for example, not Active Surveillance Culture/Testing [ASC/AST]). c. superficial incision that is deliberately opened or re-accessed by a surgeon physician or physician designee and culture or non-culture based testing of the superficial incision or subcutaneous tissue is not performed. and patient has at least one of the following signs or symptoms: localized pain or tenderness; localized swelling; redness (erythema); or heat. A culture or non-culture based test that has a negative finding does not meet this criterion. d. diagnosis of a superficial incisional SSI by a physician or physician designee.
OPC KPRO - Deep incisional SSI Must meet the following criteria:
Date of event for infection occurs within 90 days after a KPRO; where day 1 = the procedure date **AND** involves deep soft tissues of the incision (for example, fascial and muscle layers) **AND** patient has at least one of the following: a. purulent drainage from the deep incision. b. a deep incision that is deliberately opened*, re-accessed or aspirated by a surgeon, physician or physician designee AND organism(s) identified from the deep soft tissues of the incision by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (for example, not Active Surveillance Culture/Testing (ASC/AST)) or culture or nonculture based microbiologic testing method is not performed. A culture or non-culture based test from the deep soft tissues of the incision that has a negative finding does not meet this criterion.

AND
patient has at least one of the following signs or symptoms: fever (>38°C); localized pain or tenderness.

c. An abscess or other evidence of infection involving the deep incision that is detected on gross anatomical or histopathologic exam.

*__*Excludes any known multi-part/multi-phase procedures that occur over more than one operative episode [during the same admission] that is documented in the medical record by a surgeon prior to first phase of the procedure.*__

OPC KPRO - Organ/Space SSI

Must meet the following criteria:

Date of event for infection occurs within 90 days following a KPRO; where day 1 = the procedure date **AND**
involves the organ/space tissues (deeper than the fascia/muscle)
AND
patient has at least one of the following:

a. Two positive periprosthetic (joint) specimens (tissue or fluid) with at least one matching organism, identified by culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis and treatment, for example, not Active Surveillance Culture/Testing (ASC/AST).
b. Patient has organisms identified from bone by culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis and treatment, for example, not Active Surveillance Culture/Testing (ASC/AST).
c. A sinus tract* communicating with the joint identified on gross anatomic exam, abscess, or other gross anatomic evidence of infection at the level of the joint.
d. Patient has evidence of osteomyelitis* on gross anatomic or histopathologic exam.
e. Having three of the following minor criteria:
    i. elevated serum C-reactive protein (CRP; >100 mg/L (1 dL = 10 L) >10 mg/dL -check what standard reporting units for CRP) and erythrocyte sedimentation rate (ESR; >30 mm/hr.)
    ii. elevated synovial fluid white blood cell (WBC; >10,000 cells/µL) count OR "++" (or greater) change on leukocyte esterase test strip of synovial fluid.
    iii. elevated synovial fluid polymorphonuclear neutrophil percentage (PMN% >90%) positive histological analysis of periprosthetic tissue (>5 neutrophils (PMNs) per high power field).
    iv. organism(s) identified from a single positive joint specimen (tissue or fluid) by culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis and treatment, for example, not Active Surveillance Culture/Testing (ASC/AST).

* A sinus tract is defined as a narrow opening or passageway that can extend in any direction through soft tissue and results in dead space with potential for abscess formation.
*Osteomyelitis must be seen and documented during an invasive procedure.

NOTE:

- Organism(s) identified from hip or knee hardware can be used to meet criterion 2.
- A matching organism is defined as:
  - If genus and species are identified in both specimens, they must be the same.
  - If the organism is less definitively identified in one specimen than the other, the lesser identified organism must be identified to at least the genus level and at that level the organisms must be the same.

Examples for Determining Matching Organisms

Identification #1	Identification #2	Matching Organisms Yes or No
Enterococcus faecalis	*Entercoccus*	Yes
Entercoccus faecium	*Entercoccus faecalis*	No
Coagulase-negative *Staphylococcus*	*Staphylococcus aureus*	No
Staphylococcus epidermidis	Coagulase-negative *Staphylococcus*	Yes
Staphylococcus species	Coagulase-positive *Staphylococcus*	No
Streptococcus species	*Streptococcus* Viridans Group	No
Yeast	*Candida* species	Yes
Methicillin Resistant *Staphylococcus aureus*	*Staphylococcus aureus*	Yes

- The NHSN definition of OPC KPRO - Organ/Space SSI is closely adapted from the NHSN Patient Safety Manual definitions for general organ/space, BONE-Osteomyelitis and PJI – Periprosthetic Joint Infection.
- The standard laboratory cutoff values in criteria 'f' are provided by NHSN for KPRO SSI surveillance purposes only. The NHSN laboratory cutoffs are not intended to guide clinicians in the actual clinical diagnosis and management of acute or chronic PJI. Clinicians should refer to the MSIS consensus definition for clinical use.
  Meeting additional infection criteria found in the Patient Safety Component Chapter 17, CDC/NHSN Surveillance Definitions for Specific Types of Infections is NOT a part of the OPC KPRO - Organ/Space SSIs reporting criteria.

OPC-SSI Event (Numerator) Reporting

Numerator Data

a) All patients having any of the procedures included in the selected NHSN operative procedure category(s) are monitored for SSI. The *Outpatient Procedure Component (OPC) Surgical Site Infection (SSI) Event Form (CDC 57.405)* is completed for each SSI.

b) If no SSI events are identified during the surveillance month, check the "Report No Events" field in the Missing OPC Events tab of the Incomplete/Missing List.

c) The *Instructions for the Completion of Outpatient Procedure Component Surgical Site Infection (OPC-SSI) Event Form (CDC 57.405)* form include brief instructions for collection and entry of each

data element on the form. The OPC-SSI data collection form includes patient demographic information and information about the operative procedure, including the date and type of procedure. As well as information about the SSI including the date of SSI, specific criteria met for identifying the SSI and when/how the SSI was detected.

d) See the OPC tables of instructions for detailed information regarding the completion of the *OPC Monthly Reporting Plan Form* (CDC 57.401), *Outpatient Procedure Component (OPC) Denominator for Procedure Form* (CDC 57.404), and SSI information for the *Outpatient Procedure Component (OPC) Surgical Site Infection (SSI) Event Form (CDC 57.405)*.

Table 5. SSI Event Reporting Instructions

SSI Event reporting instructions are guidelines for reporting SSI events. The instructions ensure consistent application of the general and breast surgery reporting criteria.

Topic	Reporting Instruction
1. **Excluded organisms:**	Well-known community associated (organisms belonging to the following genera: *Blastomyces, Histoplasma, Coccidioides, Paracoccidioides, Cryptococcus and Pneumocystis* and/or organisms associated with latent infections (for example, herpes, shingles, syphilis, or tuberculosis) are excluded from meeting SSI criteria.
2. Attributing SSI to an NHSN procedure **when there is evidence of infection** at the time of the primary surgery:	SSI surveillance **does not** take into account infections that are present at the operative site at the time of the operative procedure. When there is evidence of an infection at the operative site at the time of the operative procedure and if during the SSI surveillance period the patient meets NHSN OPC-SSI criteria, an SSI should be attributed to the operative procedure. A procedure with a high wound class is included in denominator reporting and is eligible for SSI surveillance; in many cases, wound class is included as a risk factor for SSI in the NHSN risk modeling.
3. **Multiple tissue levels** are involved in the infection:	The type of SSI (superficial incisional, deep incisional, or organ/space) reported must reflect the deepest tissue level where SSI criteria are met during the surveillance period. The date of event (DOE) assigned is the date of the first element used to meet the SSI criteria at the deepest tissue level that is met. • Report infection meets criteria for organ/space SSI as an organ/space SSI regardless of superficial or deep tissue involvement. • Report infection that meets criteria for deep incisional SSI, regardless of superficial tissue involvement. • If an SSI starts as a deep incisional SSI on day 10 of the SSI surveillance period and a week later, (day 17 of the SSI surveillance period) meets criteria for an organ space SSI.

Topic	Reporting Instruction
4. Attributing SSI to NHSN procedures that involve **multiple primary incision sites**:	When multiple primary incision sites of the same NHSN operative procedure become infected, report as a single SSI, and assign the type of SSI (superficial incisional, deep incisional, or organ/space) that represents the deepest tissue level where SSI criteria are met at any of the infected involved primary incision sites during the surveillance period. For example: • If one laparoscopic incision meets criteria for a superficial incisional SSI and another laparoscopic incision meets criteria for a deep incisional SSI, report one deep incisional SSI. • If one or more laparoscopic incision sites meet criteria for superficial incisional SSI but the patient also has an organ/space SSI related to the procedure, report one organ/space SSI. • If an operative procedure is limited to a single breast and involves multiple incisions in that breast that become infected, report a single SSI. • In a colostomy formation or reversal (take down) procedure, the stoma and other abdominal incision sites are considered primary incisions. If both the stoma and another abdominal incision site develop superficial incisional SSI, report as one SSI (SIP).
5. Attributing SSI to NHSN procedures that have **secondary incision sites**:	Certain procedures can involve a secondary operative incision (specifically BRST, FUSN, PVBY, REC and VSHN). The surveillance period for all secondary operative incisions is 30 days, regardless of the required deep incisional or organ/space SSI surveillance period for the primary incision site(s) (Table 2). Procedures meeting this designation are reported as one (a single) operative procedure. For example: • A tissue harvest site in a BRST procedure with a transverse rectus abdominis myocutaneous (TRAM) flap is considered the secondary operative incision. One BRST procedure is reported, and if the secondary incision becomes infected, report as either SIS or DIS as appropriate.
6. SSI **detected at another facility**:	An SSI event is reported by the facility where the NHSN operative procedure was performed. When a potential SSI is detected at a facility other than the one where the procedure was performed, enough detail is provided to the reporting facility in the event an SSI should be reported to NHSN. When reporting the SSI, the ASC should indicate how the SSI was identified / detected in the "SSI

Topic	Reporting Instruction
	Event Detected" section of the OPC-SSI form. **An SSI event is attributed to the facility in which the NHSN operative procedure was performed.** For example: • A patient had a fusion (FUSN) of the left sacroiliac joint preformed at an ASC. 35 days post-operative the patient was seen in the emergency department of a community hospital with signs and symptoms of infection at the surgical site. The community hospital contacted the ASC to report the patient's signs and symptoms of infection at the left sacroiliac joint. Upon meeting OPC-SSI criteria the ASC should select, "Report from another facility (inpatient, health department, emergency department, etc." in the "SSI Event Detected" section of the OPC-SSI event form. • An ASC has a formal post-discharge surveillance process which includes post-operative phone calls to the patient as well as surveys mailed to the surgeons. A surgeon returns a survey and notes a patient having had a breast surgery (BRST) was seen in his office with a superficial infection and was treated with an oral antibiotic. The ASC should select "Post-discharge surgeon survey" in the "SSI Event Detected" section of the OPC-SSI event form.
7. SSI attribution after **multiple types of NHSN procedures** are performed during a single trip to the OR:	When more than one NHSN operative procedure category is performed through a single incision/laparoscopic site(s) during a single trip to the operating room, attribute the SSI to the procedure associated to the infection. When attribution is not clear, use the NHSN Principal Operative Procedure Category Selection Lists (Table 6) to select the operative procedure to which the SSI should be attributed. For example, when a patient meets criteria for an SSI after a single trip to the OR in which both a COLO and SB were performed, and the source of the SSI is not apparent, assign the SSI to the COLO procedure per Table 6. The final decision for SSI attribution lies with the local facility based on the full details of the case.
8. SSI following **invasive manipulation/accession** of the operative site:	An SSI will **NOT** be attributed when **the following 3 criteria are all met:** • during the post-operative period there is no suspicion or evidence of infection related to the surgical site/space **AND** • an invasive manipulation or accession of the space is performed for diagnostic or therapeutic purposes (for

Topic	Reporting Instruction
	example, needle aspiration, accession of ventricular shunts, accession of breast expanders) **AND** • an infection subsequently develops in a tissue level which was entered during the manipulation/accession. Note: • Tissue levels not manipulated/accessed are still eligible for SSI-for instance, if the deep tissue is accessed infection (SSI) may still cited at the organ/space level. • This reporting instruction does NOT apply to closed manipulation (for example, closed reduction of a dislocated hip after an orthopedic procedure). • Invasive manipulation does not include wound packing or changing of wound packing materials as part of postoperative care. • Routine flushing of catheters as part of the facility's standard care and maintenance is not considered invasive manipulation. • Accessing a breast expander after a breast surgery is considered an invasive procedure and any subsequent infection is <u>not</u> deemed an SSI attributable to the breast surgery. For example: • A debridement of superficial tissue following a COLO procedure, where the muscle/fascia and organ/space are not entered. A subsequent organ/space SSI may be attributed as an SSI to the index COLO procedure, following the debridement of the superficial tissue.
9. SSI following **specific post-operative infection scenarios**:	An SSI should be reported to NHSN without regard to post-operative accidents, falls, inappropriate showering or bathing practices, or other occurrences that may or may not be attributable to patients' intentional or unintentional postoperative actions. An SSI should also be reported regardless of the presence of certain skin conditions (for example, dermatitis, blister, impetigo) noted near an incision, and regardless of the possible occurrence of a "seeding" event from an unrelated procedure (for example, dental work). This intsructionconcerning various postoperative circumstances are necessary to reduce subjectivity and data collection burden associated with the previously exempted scenarios.

Table 6. NHSN Principal Operative Procedure Category Selection List

(The categories with the highest risk of SSI are listed before those with lower risks).

Priority	Procedure Category	Abdominal Operations
1	COLO	Colon surgery
2	BILI	Bile duct, liver or pancreatic surgery
3	SB	Small bowel surgery
4	REC	Rectal surgery
5	GAST	Gastric surgery
6	HYST	Abdominal hysterectomy
7	XLAP	Laparotomy
8	APPY	Appendix surgery
9	HER	Herniorrhaphy
10	NEPH	Kidney surgery
11	VHYS	Vaginal Hysterectomy
12	SPLE	Spleen surgery
13	CHOL	Gall bladder surgery
14	OVRY	Ovarian surgery
Priority	**Procedure Category**	**Neurosurgical (Brain/Spine) Operations**
1	VSHN	Ventricular shunt
2	FUSN	Spinal fusion
3	LAM	Laminectomy
Priority	**Procedure Category**	**Neck Operations**
1	NECK	Neck surgery
2	THYR	Thyroid and or parathyroid surgery

OPC-Denominator for Procedure Reporting

Denominator Data

a) For each patient having at least one of the procedures included in the NHSN Operative Procedure category(s) for which SSI surveillance is being performed during the month, complete the *Outpatient Procedure Component (OPC) Denominator for Procedure Form (CDC 57.404)*. The data are collected individually for each operative procedure category performed during the month specified on the *OPC Monthly Reporting Plan*. The *Instructions for Completion of Outpatient Procedure Component (OPC) Denominator for Procedure Form (CDC 57.404)* include brief instructions for collection and entry of each data element on the form.

b) Conduct post-discharge surveillance according to a formal active surveillance process. See Appendix A for the Post-discharge Surveillance Toolkit.

c) The surveillance period for a superficial SSI is 30 days after the procedure for all procedure categories. The surveillance period for deep and organ/space SSI is either 30 or 90 days, depending on the procedure category, as instructed in Table 2, *Surveillance Periods for SSIs Following Selected NHSN Operative Procedure Categories*.

d) Complete the *Outpatient Procedure Component (OPC) Surgical Site Infection (SSI) Event Form (CDC 57.405)* for each patient meeting the NHSN criteria for SSI, as defined in Surgical Site Infection Criteria, Table 4A for all procedures except breast & Table 4B for breast surgery procedures.

Table 7. Denominator for Procedure Reporting Instructions

Denominator for procedure reporting instructions are guidelines for reporting data of each individual procedure that is to be counted (included) in the denominator of the selected procedure category. The instructions assist with maintaining data quality.

Topic	Reporting Instruction
1. Different operative procedure categories **performed during same trip to the OR**:	If procedures in more than one NHSN operative procedure category are performed during the same trip to the operating room through the same or different incisions, an Outpatient Procedure Component (OPC) Denominator for Procedure Form (CDC 57.404) is reported for each procedure performed in the NHSN operative procedure category being monitored in the Monthly Reporting Plan. For example: If a patient has an open reduction of fracture (FX) and knee arthroplasty (KPRO) performed during the same trip to the operating room and both procedure categories are being monitored and are included in the Monthly Reporting Plan, complete an Outpatient Procedure Component (OPC) Denominator for Procedure Form (CDC 57.404)for each procedure.
2. **Duration** of the operative procedures when procedures from more than one NHSN operative procedure category is performed through the **same incision** on the same trip to the OR:	If more than one NHSN operative procedure category is performed through the same incision during the same trip to the OR, record the combined duration of all procedures, which is the time from procedure/surgery start time to procedure/surgery finish time. For example: If a COLO and CHOL procedures are done through the same incision, the time from start time to finish time is reported for both operative procedures.
3. **Duration** of operative procedures if patient has two different NHSN operative procedures performed via **separate incisions** on the same trip to the OR:	Try to determine the correct duration for each separate procedure (if this is documented), otherwise, take the time for both procedures and split it evenly between the two. For example, if an AMP and SPLE are performed during the same trip to the OR.

Topic	Reporting Instruction
4. Same NHSN operative procedure category via the **same incision /laparoscopic incision**, but different CPT codes during same trip to the OR:	If procedures of different CPT codes from the same NHSN operative procedure category are performed through the **same incision/laparoscopic sites**, record only one procedure for that category. For example: If a facility is performing surveillance for laminectomy procedures (LAM) and a patient undergoes a laminectomy of two *contiguous vertebrae* via one incision during the same trip to the operating room two CPT codes are assigned to the procedure, complete one LAM *Outpatient Procedure Component (OPC) Denominator for Procedure Form (CDC 57.404)* - because both procedures are in the LAM operative procedure category.
5. Same NHSN operative procedure category via **separate incisions** during same trip to the OR:	For operative procedures that can be performed via **separate incisions** during same trip to OR (specifically the following, AMP, BRST, CEA, FUSN, FX, HER, HPRO, KPRO, LAM, NEPH, OVRY, PVBY), separate *Outpatient Procedure Component (OPC) Denominator for Procedure Form (CDC 57.404)* are completed. To document the duration of the procedures, indicate the procedure/surgery start time to procedure/surgery finish time for each procedure separately or, alternatively, take the total time for the procedures and split it evenly between procedures. ***NOTES:*** • *A COLO procedure with a colostomy formation is considered one COLO procedure with multiple primary incision sites.* • *Laparoscopic hernia repairs are considered one procedure, regardless of the number of hernias that are repaired in that trip to the OR. In most cases there will be only one incision time documented for this procedure. If more than one time is documented, total the durations. Open (non-laparoscopic) hernia repairs are reported as one procedure for each hernia repaired via a separate incision, (specifically, if two incisions are made to repair two defects), then two procedures will be reported. It is anticipated that separate incision times will be recorded for these procedures. If not, take the total time for both procedures and split it evenly between the two.*

Topic	Reporting Instruction
6. Patient expires in the OR:	If a patient expires in the operating room, do not complete an *Outpatient Procedure Component (OPC) Denominator for Procedure Form (CDC 57.404)*. This operative procedure is excluded from the denominator.
7. HYST or VHYS:	For the purpose of NHSN OPC-SSI reporting, **hysterectomy procedures that involve an incision made into the abdomen, including trocar insertion, are included in the abdominal hysterectomy (HYST) category.** The correct CPT hysterectomy procedure codes should be assigned by a medical record coder using current coding guidelines and conventions.

Post-discharge Surveillance

When using the OPC-SSI criteria for surveillance, the method for identifying an SSI event is a required element for reporting. NHSN require facilities to use a post-discharge surveillance process which is active and patient-based for identifying and detecting of SSIs events. An active surveillance process ensures that SSI events are associated with the correct NHSN operative procedure and are accurately attributed to the facility in which the procedure was performed. Post-discharge surveillance should include the full surveillance period for the given operative procedure category as listed in Table 2. See Appendix A for the NHSN OPC Post-discharge Surveillance Toolkit.

Active post-discharge surveillance

Active surveillance is a process in which the facility has a formal and routine process of identifying, investigating and detecting infections during the defined surveillance period. Active post-discharge surveillance may include but is not limited to:

- post-discharge letters or phone calls to patients
- inter-facility notification of patient encounters or admission
- review of medical or surgical clinic patient records including electronic medical records
- post-discharge surgeon survey with listing of operative procedures performed

Any combination of these methods (or others identified by the facility) is acceptable for use to identify all SSIs; however, NHSN OPC-SSI criteria must be met in order to cite the SSI event. To minimize the workload of denominator data entry, upload of these data into the NHSN application is available using a comma-separated values (.csv) file. Instruction for .csv upload can be found at https://www.cdc.gov/nhsn/pdfs/opc/importing-opc-procedure-data-508.pdf.

Passive post-discharge surveillance

Passive surveillance is a process that may include incidental or unsolicited post-discharge notifications of infections by surgeons, patients, family members or another facility. While passive surveillance may be an inherent part of post-discharge surveillance at best it provides inconsistent case identification and should not be relied upon as the sole process for SSI detection.

If the facility already has an active standardized SSI surveillance process in place that successfully identifies patients with SSIs post-discharge and is obtaining information from surgeons about potential SSIs, the facility may continue to use that process as long as the requirements of the OPC-SSI criteria are met.

Surveillance Reminders:

- *An SSI event is attributed to the facility in which the NHSN operative procedure was performed.*
- *Facilities that have identified potential SSI events that are attributable to procedures performed at a different facility should provide details of the potential events to the facility where the procedure was performed.*

Data Analyses

Procedure (denominator) and SSI event (numerator) data that has been entered in to NHSN can be analyzed and visualized in a variety of reports.

Types of SSI Analyses Reports

Descriptive Analysis Reports

Descriptive analysis options for numerator and denominator data such as line listings, frequency tables, and bar and pie charts are available in the NHSN application. These analysis options are also available to analyze pathogens data reported for each SSI. NHSN quick reference guides and other references can be found in the "Analysis Resources" section at https://www.cdc.gov/nhsn/ambulatory-surgery/ssi/index.html.

SSI Standardized Infection Ratio (SIR) Reports

The Standardized Infection Ratio (SIR) is calculated by dividing the number of observed infections by the number of predicted infections.

$$\boldsymbol{SIR = \frac{Observed\ (O) HAIs}{Predicted\ (P) HAIs}}$$

The SIR will be calculated only if the number of predicted HAIs ("numPred" in the NHSN application) is ≥ 1 to help enforce a minimum precision criterion.

The number of predicted infections is calculated using SSI probabilities estimated from multivariate logistic regression models constructed from NHSN data during a baseline time period, which represents a standard population's SSI experience[6]. Adult and pediatric procedures/SSIs are modeled separately; pediatric models will be available in the future. SSIs are included in the numerator of an SIR based on the date the procedure is preformed and not the date the event is identified. This is because the procedure carries the risk for the infection/SSI.

Inclusion and Exclusion Criteria

The OPC SSI SIR is calculated for facilities enrolled in NHSN as an Ambulatory Surgery Center (ASC). There is one SIR model available for outpatient adult procedures (and associated SSIs). Below is a summary of the OPC SSI SIR Model.

OPC SSI SIR Model	Inclusion Criteria	Patient Population
All SSI SIR Model	• Include **only** ambulatory surgery center procedures • Include Superficial, Deep & Organ/Space SSIs • Superficial & Deep Incisional SSIs are limited only to primary incisional SSIs • Include SSIs identified on active and passive surveillance	Procedures in adult patients

In addition to the above inclusion criteria, there is also a list of exclusion criteria that applies to the OPC All SSI SIR model. The list of exclusion criteria applies to both procedures and the associated SSI events. Often the reason for excluding procedures and SSI events from the SIR calculation is due to potential data quality issues. It is important that facilities review their data for quality assurance and to determine the reason for exclusion from the SIR calculation.

More detailed information can be found in the NHSN Guide to the SIR: https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nhsn-sir-guide.pdf.

NHSN Group Analysis

https://www.cdc.gov/nhsn/PS-Analysis-resources/reference-guides.htmlNHSN Group Users can perform the same analysis as facility level users in NHSN. Two helpful NHSN User Group reports are the Line Listing - Membership Rights report and the Line Listing - Participation Alerts reports.

- The Line Listing - Membership Rights Report describes the rights conferred by each facility in the group. This report is helpful when determining the level and access to data in NHSN for a group.
- The Line Listing - Participation Alerts Report describes the unresolved NHSN alerts by alert type and facility.. It is important to generate datasets in NHSN after alerts are resolved.

Resources for NHSN Group Users

This NHSN website contains guides that describe how to create a group, set up a confer rights template, and how to analyze group reports along with other group related topics: https://www.cdc.gov/nhsn/group-users/index.html.

The Group User's Guide to the "Line Listing- Participation Alerts" Report Option is important in helping Groups educate facilities about reporting data. .The participation alerts line listing report is a tool that Groups can use to identify unresolved alerts for facilities that they have confer rights for in their group as well as help facilities identify potential data quality issues. The resource guide can be found here: https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/group-alerts.pdf. It is important to generate datasets in NHSN after alerts are resolved to ensure all changes to data are captured in the analytic reports.

References

1. Magill, S.S., et al., "Changes in Prevalence of Health Care-Associated Infection in U.S. Hospitals". New England Journal of Medicine, 379(18): (2018): 1732-44.
2. Medicare Payment Advisory Commission (MEDPAC). (July 2023). Report to the Congress: Medicare Payment Policy. Retrieved from: https://www.medpac.gov/wp-content/uploads/2023/07/July2023_MedPAC_DataBook_SEC.pdf on September 24, 2024.
3. Awad, S.S. (2012). Adherence to surgical care improvement project measures and post-operative surgical site infections. Surgical Infections, 13(4): 234-237.
4. Centers for Disease Control and Prevention (CDC). (2022). National and state healthcare – associated infections progress report. Retrieved from https://www.cdc.gov/hai/data/portal/progress-report.html published April 15, 2024.
5. Condon, R.E., Schulte, W.J., Malangoni, M.A., & Anderson, Teschendorf, M.J. (1983). Effectiveness of a surgical wound surveillance program. Archives of Surgery, 118(3):303-307.
6. Mu, Y., Edwards, J.R., Horan, T.C., Berrios-Torres, S.I, & Fridkin, S.K. (2011). Improving risk-adjusted measures of surgical site infection for the National Health Safety Network. Infection Control and Hospital Epidemiology, 32(10): 970-986. Doi: 10.1086/662016.
7. The Facility Guidelines Institute, Guidelines for design and construction of hospitals. 2018, St. Louis, MO: The Facility Guidelines Institute.
8. American Society of Anesthesiologists. ASA Physical Status Classification System. Available from: http://www.asahq.org/quality-and-practice-management/standards-guidelines-and-related-resources/asa-physical-status-classification-system.
9. Donham, R.T., Mazzei, W.J., & Jones, R.L. (1996). Association of Anesthesia Clinical Directors' Procedure Times Glossary. American Journal of Anesthesiology, 23(5S): S1-S12.

Appendix A: Post-discharge Surveillance Toolkit

This toolkit was developed by NHSN to assist facilities in implementing an effective post-discharge surgical site infection surveillance process.

Contents:
The toolkit contains samples of a: Sample Letter, Post-discharge SSI Worksheet and Procedure Line List by Surgeon, along with instructions and helpful suggestions**.**

NOTE: *If the facility already has an active standardized SSI surveillance process in place that is successfully identifying patients with infections post-discharge and is obtaining information from surgeons about potential SSIs, the facility may continue to use that process as long as the requirements of this Post-Discharge Surveillance Toolkit are met.*

Instructions:
Based on the NHSN OPC-SSI Protocol, operative procedures must be followed for either a 30- or 90-day surveillance period after the operative episode in order to identify a potential SSI (Table 2).

1. **Sample Letter** – introduces the receiving surgeon and office staff to your facility's post-discharge SSI surveillance program. It provides instructions and contact information if questions arise.

2. **Procedure Line List by Surgeon** - a line list that is generated at the end of every month (or 90-day period for select procedures). The line list will provide surgeons with a detailed list of each procedure they performed at the facility during the previous 30 (or 90) days.

3. **SSI Worksheet** – is used to allow surgeons or their designee to document whether any of their patients developed a suspected superficial, deep, or organ/space surgical site infection. This is a generic worksheet that can be used for any surgical procedure monitored by the facility.

The Procedure Line List and the Post-discharge SSI Worksheet can be sent to surgeons' offices at the end of every surveillance period (30 or 90 days). Using the Procedure Line List as a guide, surgeons will complete one Worksheet for each patient who developed an SSI. All completed Worksheets should be sent back to the appropriate ASC staff to confirm that the documented SSI(s) correctly meets NHSN criteria. If the SSI(s) is confirmed, the infections must be entered into NHSN.

Instructions for the office staff on how to complete the Post-discharge SSI Worksheets can be customized based on your facility's preferences.

IMPORTANT POINTS:

- Your facility must include either a Surgeon Code or Surgeon Name for each procedure entered in NHSN in order to generate the Procedure Line List by surgeon.
- The Procedure Line List and the SSI Worksheets should not be mailed until at least 30 or 90 days after the last surgical procedure so that the correct time period following the surgery has lapsed.

SAMPLE: LETTER

[Insert Name Ambulatory Surgery Center] *[Insert Date]*
Post-discharge Surgical Site Infection Surveillance

Dear Office Staff,

Our records show that [Surgeon's Name] performed surgical procedures at our facility during the [Insert Months & Year or surveillance period].

We are requesting your assistance with our post-discharge surgical site infection surveillance. Please review your records for each patient included on the line list.

- If a patient did not develop any surgical site infection check the "No Evidence of SSI" box.
- If a patient developed any signs or symptoms of infection, please complete the enclosed "Post-discharge Surgical Site Infection Worksheet."

NOTE: *Please make enough copies of the blank Post-discharge Surgical Site Infection Worksheet so that one worksheet can be completed for each patient with an SSI.*

- Return this line list and any completed worksheets by [Insert Due Date]

The completed SSI worksheets and line list can be sent back via fax or mail. If you have any questions, please feel free to call.

Thank you for your assistance in ensuring our compliance with post-discharge SSI surveillance.

[Insert Name]
[Facility Name]
[Facility Address]
FAX: 000-000-0000
Phone: 000-000-0000

SAMPLE: LINELIST for [Surgeon's Name]
[Insert Name Ambulatory Surgery Center] *[Insert Date]*
Post-discharge Surgical Site Infection Surveillance

National Healthcare Safety Network
Line Listing of All Procedures

orgID	patID	dob	gender	procID	procDate	procCode	surgeonCode
57258	12345	02/09/2005	F	52766368	05/02/2022	BRST	002
57258	TEST12288	08/11/1970	O	53479986	01/29/2022	BRST	001
57258	20011	11/24/1963	F	53472551	05/03/2022	HER	001
57258	20510	01/05/1963	F	53479985	06/02/2022	HER	003
57258	20791	04/25/1978	F	53479982	02/26/2022	HYST	003
57258	TEST12185	09/05/1979	M	53479984	05/14/2022	KPRO	003
57258	12345	02/09/2005	F	52282038	05/03/2022	KPRO	001
57258	TEST11555	12/20/1968	M	53479983	06/10/2022	LAM	001

To generate a line list from the NHSN application, see analysis resources found at https://www.cdc.gov/nhsn/ambulatory-surgery/ssi/index.html.

SAMPLE: Post-discharge Worksheet for Suspected SSI

[Insert Name Ambulatory Surgery Center] *[Insert Date]*

Post-discharge Surgical Site Infection Surveillance

Patient Demographics:	
Patient Name (Last, First):	
Primary CPT Code of Procedure:	Date of Procedure:
Date SSI Identified:	
Was the SSI identified on admission to a hospital? Y N If Yes, name of facility: _____	

Select the infection type and associated criteria (if known) from the options below:

☐ **A. Superficial Incisional SSI:** Involves only the skin and subcutaneous tissue of the incision

Criteria met (check all that apply):

☐ Purulent drainage from the superficial incision

☐ Organisms identified from an aseptically obtained specimen from the superficial incision or subcutaneous tissue[1]

☐ Superficial incision that is deliberately opened by a surgeon, physician[2] or physician designee and culture or non-culture based[1] microbiologic testing is not performed.

***If checked, please answer the following (check all that apply):**

- ○ Pain or tenderness
- ○ Localized swelling
- ○ Redness (erythema)
- ○ Heat

☐ Diagnosis of a superficial incisional SSI by a physician[2] or physician designee.

☐ **B. Deep Incisional SSI:** Involves deep soft tissues (for example, fascia and muscle layers)

Criteria met (check all that apply):

☐ Purulent drainage from the deep incision

☐ Deep incision spontaneously dehisces, or is deliberately opened or aspirated by a surgeon, physician[2] or physician designee and organism is identified from specimen[1] or microbiologic testing not performed.

***If checked, please answer the following (check all that apply):**

- ○ Fever (>38°C)
- ○ Localized pain or tenderness

☐ Abscess or other evidence of infection involving the deep incision that is detected on gross anatomical or histopathologic exam, or imaging test

☐ **C. Organ/Space:** Involves any part of the body, (excluding skin incision, fascia, and muscle layers), that is opened or manipulated during the operative procedure

Criteria met (check all that apply):

☐ Purulent drainage from a drain that is placed into the organ/space

☐ Organisms isolated from an aseptically-obtained specimen of fluid or tissue in the organ/space[1]

☐ Abscess or other evidence of infection involving the organ/space that is detected on gross anatomical or histopathologic exam, or imaging test evidence consistent with infection

[1]Culture or non-culture based microbiologic testing method.

[2]Should be interpreted to mean surgeon(s), infectious disease physician, emergency physician, other physician on the case, or physician's designee (nurse practitioner or physician's assistant).

Additional comments:

Signature: **Date:**

Outpatient Procedure Component (OPC) Key Terms

Term	Definition
Active Surveillance Culture/Testing (ASC/AST)	Active Surveillance Culture/Testing (ASC/AST) refers to testing that is intended to identify the presence/carriage of microorganisms for the purpose of instituting or discontinuing isolation precautions (for example, nasal swab for MRSA, rectal swab for VRE), or monitoring for eradication of a carrier state/colonization. ASC/AST does NOT include identification of microorganisms with cultures or tests performed for diagnosis and treatment purposes (for example, specimens collected from sterile body sites including blood specimens). Also, see Surveillance cultures.
Ambulatory Surgery Center (ASC)	An Ambulatory Surgical Center (ASC) means any distinct entity that operates exclusively for the purpose of providing surgical services to patients not requiring hospitalization and in which the expected duration of services would not exceed 24 hours following an admission. An ASC must be certified by the Center for Medicare & Medicaid Services, licensed by a state agency or both.
Aseptically obtained	Specimen obtained in a manner to prevent introduction of organisms from the surrounding tissues.
Burn	Any unintended tissue injury that occurs prior to discharge from the outpatient facility and is caused by any of the six recognized mechanisms: scalds, contact, fire, chemical, electrical or radiation. Examples of devices that can cause burns include warming devices, prep solutions, electrosurgical units or laser. [3,4]
Date of event (DOE)	The date when the first element used to meet the OPC-SSI infection criterion occurs for the first time during the SSI surveillance period. The DOE must fall within the SSI surveillance period to meet SSI criteria. The type of SSI (superficial incisional, deep incisional, or organ/space) reported should reflect the deepest tissue layer involved in the infection during the surveillance period. **Synonyms**: infection date, date of infection, event date.
Died	The patient died during the current facility admission.
Discharge	A patient is considered discharged when they leave the confines of the Ambulatory Surgery Center (ASC).

Term	Definition
Encounter	Any patient visit to an Ambulatory Surgery Center (ASC) where the patient completes the registration process upon entry into the facility. Some ASCs may refer to this as admission into the facility.
Equivocal imaging	Findings from medical imaging studies that do not definitively identify an infection or infectious process. Equivocal imaging findings must be clinically correlated specifically physician documentation of antimicrobial therapy treating the infection or infectious process. Example of definitive imaging: abscess visualized in the right lower quadrant. Example of equivocal imaging: fluid collection visualized in the right lower quadrant.
Event contributed to death	The event either directly caused death or exacerbated an existing disease condition that then led to death as evidenced by available documentation (for example, death/discharge note, autopsy report, etc.).
Fall	A sudden, uncontrolled, unintentional, and downward displacement of the body to the ground or other object, excluding falls resulting from violent blows or other purposeful action. This definition also excludes falls that do not occur within the confines of the Ambulatory Surgery Center (ASC), such as in a parking lot. [3,4]
Fever	For NHSN surveillance purposes fever is defined as >38 degrees Celsius (°C), or >100.4 degrees Fahrenheit (°F) documented in the medical record. Conversions for different collection sources or methodologies are not applied.
Gross anatomical exam	Evidence of infection elicited or visualized on physical examination or observed during an invasive procedure. This includes findings elicited on physical examination of a patient during the encounter or subsequent assessments of the patient and may include findings noted during a medical/invasive procedure dependent upon the location of the infection as well as the NHSN infection criterion. Examples: • An intraabdominal abscess will require an invasive procedure to visualize the abscess. • Visualization of pus or purulent drainage (includes from a drain). **Note**: Imaging test evidence of infection cannot be applied to meet gross anatomic evidence of infection. Imaging test evidence has distinct findings in the OPC definitions. (For example, IAB “3b”).
Hospital Outpatient Department (HOPD)	Based on the Code of Federal Regulations 42 CFR 440.20[2] is a location that provides outpatient hospital services, meaning preventive, diagnostic, therapeutic, rehabilitative, or palliative services that:

Term	Definition
	1. Are furnished to outpatients 2. Are furnished by or under the direction of a physician or dentist 3. Are furnished by an institution that— i. Is licensed or formally approved as a hospital by an officially designated authority for State standard-setting ii. Meets the requirements for participation in Medicare as a hospital 4. May be limited by a Medicaid agency in the following manner: A Medicaid agency may exclude from the definition of "outpatient hospital services" those types of items and services that are not generally furnished by most hospitals in the State. HOPDs are not included in OPC reporting.
Hospital Transfer or Admission	Any transfer or admission from an Ambulatory Surgery Center (ASC) directly to an acute care hospital including the hospital emergency room. Directly means upon discharge from the ASC. This measure applies regardless of the reason for the hospital transfer/admission, and no direct hospital transfers/admissions should be excluded based on an assessment about whether the transfer/admission is or is not related to the ASC admission. This measure excludes patients who are discharged from the ASC and then later go to a hospital emergency room or acute care hospital, even if they do so on the same date as the ASC admission. [3,4]
In-plan surveillance	The NHSN surveillance protocol(s) is used, in its entirety for the full month, for that particular HAI, SSI, VAE, PedVAE, or LabID event types as outlined in the NHSN Monthly Reporting Plan (MRP). Only in-plan data are submitted to CMS in accordance with CMS's Quality Reporting Programs and are included in NHSN annual reports or other NHSN publications.
Non-culture based microbiologic testing	Identification of microorganisms using a method of testing other than a culture. Culture based testing require inoculation of a specimen to culture media, incubation and observation for actual growth of microorganisms. Depending on the organism identified, culture-based testing can take several days to weeks for a final report. In contrast, non-culture based testing methods generally provide faster results, which can assist with early diagnosis and tailoring of antimicrobial therapy. Examples of non-culture based testing include but are not limited to PCR (polymerase chain reaction) and ELISA (Enzyme-linked immunosorbent assay). With the exception of Active Surveillance Culture/Testing (ASC/AST), any test methodology (culture or non-culture based) that provides a final laboratory report in the medical record and identifies an organism, is eligible for use in meeting an NHSN infection definition.
Off-plan surveillance	Facility has **not** indicated in their NHSN Monthly Reporting Plan that the NHSN surveillance protocol(s) will be used, in its entirety, for that particular

Term	Definition
	event type. Off-plan data are not submitted to CMS in accordance with CMS's Quality Reporting Programs and are not included in NHSN annual reports or other NHSN publications.
Operative procedure category	A set of surgical procedures grouped together based on the NHSN definition of the procedure performed. Each Operative Procedure Category has been mapped with a list of CPT codes with procedure descriptions that aligns with the procedure category definition.
Physician	For NHSN surveillance purposes, the term physician includes the surgeon(s), infectious disease physician, emergency physician, other physician on the case, or physician's designee (nurse practitioner or physician's assistant).
Standardized Infection Ratio (SIR)	Summary measure used to track HAIs over time. It compares the number of reported HAIs to the number of predicted HAIs, based on NHSN baseline data. The SIR adjusts for several factors that may impact the risk of acquiring an HAI. See the SIR Guide for more information.
Surgical site infection	An infection that meets the NHSN OPC-SSI criteria. The operative procedure must be one that is included in one of the NHSN OPC operative procedure categories and occurs within a defined timeframe. There are three categories of SSI that are defined by CDC. Each SSI definition is related to the tissue depth of the infection, as illustrated below.
Surveillance cultures	Those cultures reported as part of a facility's infection prevention and control surveillance are not used in patient diagnosis and treatment. Surveillance cultures include but are not limited to stool cultures for vancomycin-resistant *Enterococci* (VRE) and/or nasal swabs for methicillin-resistant *Staphylococcus aureus* (MRSA) surveillance. These cultures are also called active surveillance cultures or testing (ASC/AST). **Note:** Positive cultures collected from sterile body sites including blood specimens are not surveillance cultures and are eligible for use in meeting NHSN HAI, LabID, VAE, and SSI event criteria. Also, see Active Surveillance Culture/Testing (ASC/AST).
Surveillance Period for SSI	The timeframe following an NHSN operative procedure for monitoring and identifying an SSI event. The surveillance period is determined by the NHSN operative procedure category (for example, COLO has a 30-day SSI surveillance period and KPRO has a 90-day SSI surveillance period, see Table 2 in OPC-SSI). Superficial incisional SSIs are monitored for a 30-day period for all procedure types. Secondary incisional SSIs are monitored for a 30-day period regardless of the surveillance period for the primary site. If a patient returns to the OR and the same surgical site is entered this ends the surveillance period for the prior NHSN operative procedure and begins a new SSI surveillance period if an NHSN operative procedure is performed.

Term	Definition
Vital signs	Clinical measurements used to assess a patient's essential body functions. If a specific vital sign parameter is **not** stated in a CDC/NHSN HAI definition or criterion (for example, hypotension and temperature instability) the facility should use the vital sign parameter(s) as stated in its policies and procedures for clinical practices.
Wrong (site, side, patient, procedure, or implant)	Procedure is performed in a way that is not consistent with what is documented in the informed consent for a patient - not in accordance with intended site, side, patient, procedure or implant. May also be referred to as Wrong Event. [3,4]

References

1. Code of Federal Regulations. National Archives and Records Administration. Retrieved from https://www.ecfr.gov/current/title-42/chapter-IV/subchapter-B/part-416/subparthttps://www.ecfr.gov/current/title-42/chapter-IV/subchapter-B/part-416/subpart-A/section-416.2 on September 26, 2024.

2. Code of Federal Regulations. National Archives and Records Administration. Retrieved from https://www.ecfr.gov/current/title-42/chapter-IV/subchapter-C/part-440/subpart-A/section-440.20 on September 26, 2024.

3. Centers for Medicare & Medicaid Services (CMS). QualityNet: Ambulatory Surgical Center Quality Reporting Specifications Manual Version 14.0. Retrieved from https://qualitynet.cms.gov/asc/specifications-manuals on September 26, 2024.

4. Ambulatory Surgery Center Quality Collaboration (ASC QC). ASC Quality Collaboration Measures: Implementation Guide Version 11.0. Retrieved from https://www.ascquality.org/home on September 26, 2024.