NHSN Surgical Site Infection Surveillance in 2018

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February 27, 2018
Objectives

Upon completion of the program, participant will be able to...

- Identify SSI 2018 updates
- Describe SSI key terms and definitions
- Complete the SSI Event form and the SSI Denominator for Procedure Form
- Understand how to link an SSI event to a procedure record
- Apply NHSN SSI criteria to case scenarios

All objectives will be reviewed within the context of 2018 NHSN protocols.
SSI – Why they matter

- Estimated SSI infections in United States 157,500 per year \(^{(1)}\)
- Estimated 8,205 deaths associated with SSI each year \(^{(2)}\)
- Estimated 11% of all deaths in intensive care units are associated with SSI \(^{(2)}\)

SSI – Why they matter (cont.)

- SSI are one of the most common healthcare-associated infections and account for $3.2 billion in attributable cost per year in acute care hospitals. (3)

- Estimated additional 11 days of hospitalization for each SSI per patient. (3)

- SSI are the most frequent cause (20%) of unplanned readmissions after surgery. (4)


2018 SSI Updates
2018 SSI Updates

E-mail Updates: PSC Manual Revision documents can be found here.
2018 SSI Updates

Communication Updates

E-mail updates

Informational e-mails are periodically sent to the NHSN community with updates on news and developments. In an effort to keep the growing NHSN community informed, a copy of the sent e-mails are posted on this page.

December 2017

- **Subject**: Posting of the 2018 Patient Safety Component Protocols and Related Documents [PDF - 350 KB]
  Attached Document: 2018 NHSN PSC Manual Summary of Revisions [PDF - 946 KB]

- **Subject**: Updates to the NHSN Training Website [PDF - 65 KB]
  Attached Document: Summary of NHSN Training Website Changes [PDF - 1 MB]

- **Subject**: NHSN Version 8.8 now available [PDF - 163 KB]
  Attached Document: NHSN v8.8 Release Notes [PDF - 747 KB]

November 2017

- **Subject**: Important NHSN Announcements - November 2017 [PDF - 313 KB]
  Attached Document: Reporting Height and Weight for Procedures [PDF - 571 KB]

June 2017

- **Subject**: Updated...
2018 SSI Updates
SSI Chapter 9

- Definition for Date of Event (DOE): added additional guidance surrounding DOE and tissue level as well as timeframe for elements.

- Trauma definition updated to include verbiage surrounding cases requiring multiple trips to the OR.

- SSI Event Reporting Instruction #11 is updated to provide clarification surrounding invasive manipulation/accession of operative site.
2018 SSI Updates

2018 NHSN Operative Procedure Codes

- The updated 2018 NHSN ICD-10-PCS and CPT operative procedure codes became available recently.

- 2017 ICD-10-PCS and CPT codes lists will remain on the NHSN SSI website until May 15, 2018 under the header "2017 Operative Procedure Code Documents." These lists should only be used for surgical procedures occurring between Jan 1-Dec 31, 2017.

- The updated 2018 ICD-10-PCS and CPT codes lists should be used for all surgical procedures performed in 2018.
2018 SSI Updates
Chapter 17

- GIT: Updated GIT criterion 1 to allow blood as an element when there is evidence of gastrointestinal tract infection. This update allows the same limited blood pathogens that are already in place for GIT criterion 2c.

- IAB: “Retroperitoneal space” has been added to IAB as an intraabdominal space and removed from USI.

- IAB: Criterion 3 now includes hypotension and elevated transaminase levels.

- IAB: Reporting instruction added that states biliary ductal dilatation is considered an equivocal finding for cholangitis.
2018 SSI Updates

CDC NHSN HAI Checklists

- Some state health departments have developed checklists adapted from the NHSN protocols.

- NHSN is currently developing HAI checklists that can be used as a tool to assist with case determinations.

- Stay tuned!
NHSN SSI Website

National Healthcare Safety Network (NHSN)

Surveillance for Surgical Site Infection (SSI) Events

Resources for NHSN Users Already Enrolled

- Training
- Protocols
- Frequently Asked Questions
- Data Collection Forms
- CMS Supporting Materials
- Supporting Materials
- Analysis Resources

Resources to Help Prevent Infections

- Resources for Patients and Healthcare Providers
- HHS Action Plan to Prevent Healthcare-associated Infections
- Guideline for the Prevention of Surgical Site Infection, 2017
- Guideline for Hand Hygiene in Healthcare Settings
SSI – Training

Training

- Surgical Site Infections (SSI) Training [CBT - 60 min]
  - YouTube Link [Video – 83 min]
  - Slideset [PDF – 8 MB]

- SSI Surveillance and Case Studies – March 2017
  - YouTube Link [Video – 74 min]
  - Slideset [PDF – 8 MB]

- SSI Surveillance with Case Studies (cont’d.) – March 2017
  - YouTube Link [Video – 74 min]
  - Slideset [PDF – 8 MB]

- ICD-10 PCS and CPT Transition – January 2016 [Video – 8 min]
  - YouTube link – ICD-10 PCS and CPT Transition
  - CDC Streaming Video – ICD-10 PCS and CPT Transition

- Patient Safety Component (PSC) Annual Survey – January 2016 [Video – 6 min]
  - YouTube Link – Completing the 2015 Facility Survey
  - CDC Streaming Video – Completing the 2015 Facility Survey

- Surgical Site Infections (SSI) Event form for PATOS – June 2017
  - YouTube Link [Video – 6 min]

Additional Training

- Introduction to Procedure-associated Module Training

- General NHSN Definitions for 2017 – March 2017
  - YouTube Link [Video – 54 min]
  - Slideset [PDF – 2M]

- Determining Healthcare Association or Present on Admission Infections and Other Rules – July 2017
  - YouTube Link [Video – 16 min]

Analysis Training

- Advanced Analysis: Focus on SSI – March 2017
  - YouTube Link [Video – 61 min]
  - Slideset [PDF – 3 MB]

- Data Entry and Analysis Training

Continuing Education

- Obtaining Continuing Education for NHSN Training Events
SSI – Protocols

National Healthcare Safety Network (NHSN)

Surveillance for Surgical Site Infection (SSI) Events

Resources for NHSN Users Already Enrolled

> Training

> Protocols

- Surgical Site Infection (SSI) Event, January 2018 [PDF - 1M]
- NHSN Overview January, 2018 [PDF - 250K]
- Identifying Healthcare-associated Infections (HAIs) in NHSN, January 2018 [PDF - 1M]
- Patient Safety Monthly Reporting Plan, January 2018 [PDF - 65K]

> Frequently Asked Questions

> Data Collection Forms

> CMS Supporting Materials

> Supporting Materials

> Analogous Resources
SSI – FAQs

FAQs: Surgical Site Infections (SSI) Events

On This Page
- NHSSSI Case Review
- Surveillance Periods for SSI
- Non-NHSN Operative Procedure
- Pathogen Assignment
- Broth Only Cultures
- Timeframe for SSI elements
- Clarification of SSI criterion
- Procedure — Contaminated Procedure
- PATOS
- Denominator — Wound class
- Denominator — Scope
- Event Details — Gross Anatomical Exam
- Clarification of IAB Criterion
- Event Detail — Aesthetic Technique
- Surgical Site — Infection at Another Site
- Surgical Site — Invasive Manipulation
- Denominator — Height & Weight
- Surgical Site — post op complications
- Surgical Site — Hematomas and seromas
- Denominator — Trauma
- Clinical Correlation
- Event Detail — Level of SSI
- Level of SSI after BRST procedures
- Level of SSI after cardiac procedures

NHSN SSI Case Review

Q1: What can the user provide to NHSN for a complete case review request?

Please let NHSN know what your question(s) are and what your thoughts are regarding the case.

Ex: This is a complicated case and our team is trying to figure out whether it meets criteria for a Deep Incisional SSI. Can you help us confirm?

What NHSN needs from the user:
- OR procedures and dates of all procedures including reoperations
- Whether operative procedures are coded as NHSN operative procedures or not
- If return to OR via same incision, was it within 24 hours of finish time of prior operative procedure?

Signs and symptoms:
SSI – Data Collection Forms

All Data Collection Forms are Print-only

- **57.120 Surgical Site Infection (SSI) January 2010**
  - Customizable form
  - [PDF - 102K]
  - Table of Instructions for SSI Event form 57.120
  - [PDF - 73K]

- **57.121 Denominator for Procedure January 2018**
  - Customizable form
  - [DOCX - 31K]
  - Table of Instructions for Denominator for Procedure form 57.121
  - [PDF - 227K]

- **57.122 Denominator for Custom Procedure January 2016**
  - Customizable form
  - [DOCX - 27K]

- **57.103 Patient Safety Component—Annual Facility Survey form January 2018**
  - Table of Instructions for Patient Safety Component – Annual Hospital Survey 57.103
  - [PDF - 412K]

- **57.106 Patient Safety Monthly Reporting Plan form January 2018**
  - Customizable form
  - [DOCX - 31K]
  - Table of Instructions for Monthly Reporting Plan form 57.106
  - [PDF - 61K]

- **57.115 HAI Custom Event form January 2018**
  - Customizable form
  - [DOCX - 50K]
  - "Not to be used for CLABSI, CAUTI, SSI, VAE, pediatric VAP, or LabID events."

TOI forms can be found here!
SSI – CMS Supporting Materials

- Healthcare Facility HAI Reporting Requirements to CMS via NHSN Current and Proposed Requirements September 2015 [PDF - 102K]
- Reporting Requirements and Deadlines in NHSN per CMS Current Rules September 2015 [PDF - 157K]
- Centers for Medicare and Medicaid Services (CMS) Hospital Inpatient Quality Reporting Program
- CMS’ Hospital Compare tool
- Operational Guidance for Reporting Surgical Site Infection Data to CDC’s NHSN for the Purpose of Fulfilling CMS’s Hospital Inpatient Quality Reporting (IQR) Program Requirements December 2017 [PDF - 600K]
- How to Report No Procedure or SSI Events for the CMS Inpatient Quality Reporting Program February 2017 [PDF - 247K]
- Helpful Tips for SSI Reporting for the Centers for Medicare and Medicaid Services’ Hospital Inpatient Quality Reporting Program (CMS Reporting Program) December 2014 [PDF - 28K]
- Using the “SIR- Complex 30-Day SSI Data for CMS IPPS” Output Option January 2017 [PDF - 350K]
- Operational Guidance for PPS-Exempt Cancer Hospitals to Report Surgical Site Infection (SSI) Data to CDC’s NHSN for the Purpose of Fulfilling CMS’s PPS-Exempt Cancer Hospital Quality Reporting (PCHQR) Program Requirements November 2014 [PDF - 121K]
- Changing a CCN within NHSN (updated July 2015) [PDF - 290K]
2018 Operative Procedure Code Documents

The documents listed below should be used for procedures performed in 2018.

- **Update! ICD-10-PCS Procedure Code Mapping to NHSN Operative Procedure Codes** [XLSX - 611K]

Additional Guidance for use with NHSN Operative Procedure Codes

- **Update! ICD-10-PCS & CPT Codes – Guidance for HPRO & KPRO Procedure Details** [XLSX - 46K]
  
  This guidance document may be used for completing the NHSN procedure details for HPRO - hip arthroplasty and/or KPRO - Knee arthroplasty operative procedures.

- **FUSN ICD-10-PCS Codes – Guidance for Spinal Level and Approach** [XLSX - 30K]
  
  This supplemental guidance may be used to complete the spinal level and approach fields in the Operative Procedure Details section for FUSN procedures.

- **ICD-10 CM Diabetes Diagnostic Codes** [XLSX - 15K]
  
  ICD-10-CM codes included in this spreadsheet are acceptable for use to answer “YES” to "Diabetes Mellitus" for completing the NHSN Operative Procedure Details.

- **ICD-10-CM/PCS Codes for ‘prior infection at hip or knee joint’ denominator form question** [XLSX - 20K]
  
  Use ICD-10-PCS/CM diagnosis or procedure codes included in this spreadsheet to determine if patient meets criteria for ‘prior infection at index joint’.

- **Document detailing changes made to the 2017-2018 operative procedure codes**

- **Update! Summary of 2017-2018 Code Changes** [XLSX - 343K]
  
  This document identifies changes made to the codes 2017-2018 operative procedure codes. It should not be used for identifying NHSN operative procedures or SSI events.
SSI – Monthly Reporting Plan

- Must have one for every month of the year.
- Only data included “in-plan” will be used by CDC in aggregate data analysis.
- Must fully follow the definitions. Report superficial, deep and organ space SSIs.
SSI – Surveillance Forms

Surgical Site Infection (SSI)

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<td>Medicare #:</td>
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<tr>
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<td>*Date of Birth:</td>
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<td>Race (Specify):</td>
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<td>ICD-10-PCS or CPT Procedure Code:</td>
</tr>
<tr>
<td>*Date of Procedure:</td>
<td>*Outpatient Procedure: Yes No</td>
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Denominator for Procedure

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</tr>
</tbody>
</table>
SSI – Active Surveillance Methods

Review of medical records or surgery clinic patient records

- Admission, readmission, ED, and OR logs
- Patient charts for signs and symptoms of SSI
- Lab, X-ray, other diagnostic test reports
- Nurses and physician notes
- Visit the ICU and wards – talk to primary care staff
SSI – Post-discharge Surveillance Methods

- Surgeon and/or patient surveys by mail or phone
- Review of postoperative clinic records
- Line list of all readmission with diagnosis
- Line list of ED admissions with diagnosis
- ICD-10-CM diagnosis codes for infection
- Notification between facilities

SSI criteria must be met regardless of where the infection is detected!
Key Terms and Definitions
SSI – Procedure-associated Module

The SSI surveillance protocol has its own definitions for classifying infections. Refer to the SSI chapter for specific guidance for SSI event determination.
NHSN Operative Procedure

An NHSN operative procedure is a procedure

- that is included in the ICD-10-PCS or CPT NHSN operative procedure code mapping

*and*

- takes place during an operation where at least one incision (including laparoscopic approach and cranial Burr holes) is made through the skin or mucous membrane, or reoperation via an incision that was left open during a prior operative procedure

*and*

- takes place in an operating room [OR], defined as a patient care area that met the Facilities Guidelines Institute’s (FGI) or American Institute of Architects’ (AIA) criteria for an operating room when it was constructed or renovated [9]. This may include an operating room, C-section room, interventional radiology room, or a cardiac catheterization lab.
NHSN Inpatient and Outpatient Operative Procedures

**NHSN Inpatient Operative Procedure:** An NHSN operative procedure performed on a patient whose date of admission to the healthcare facility and the date of discharge are **different** calendar days.

**NHSN Outpatient Operative Procedure:** An NHSN operative procedure performed on a patient whose date of admission to the healthcare facility and date of discharge are the **same** calendar day.
Date of Event

Date of event (DOE): For an SSI the date of event is the date when the first element used to meet the SSI infection criterion occurs for the first time during the surveillance period.
Date of Event

- All symptoms required to meet an SSI criteria usually occur within a 7-10 day timeframe and have no more than 2-3 days between elements.

- The elements must be relational to each other, meaning you should ensure the elements all associate to the SSI and this can only happen if elements occur in a relatively tight timeframe.

- Each case differs based on the individual elements occurring and the type of SSI.
Date of Event

SSIs that progress to a deeper level during surveillance period

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.

For example:
Day 1 – COLO procedure
Day 6 – DOE for meeting a superficial incisional SSI
Day 25 – DOE for the meeting an organ space IAB SSI

Only report one SSI with the DOE for the organ space IAB.
Event Detail – Aseptic Technique

- Aseptic technique: refers to specimens “obtained in a manner to prevent introduction of organisms from the surrounding tissues into the specimen being collected”.

- Culture results of “Mixed flora” or “Mixed cutaneous flora” *alone* cannot be reported to NHSN.
Event Detail – Pathogen Assignment

- The **only** organisms excluded from SSI criteria:
  - *Blastomyces*
  - *Histoplasma*
  - *Coccidioides*
  - *Paracoccidioides*
  - *Cryptococcus*
  - *Pneumocystis*
  - Organisms associated with latent infections

- Organisms identified from “broth only” are not excluded
- Common-commensal organisms are not excluded
Case 1

Four days following his COLO procedure, prior to discharge, a 35-year-old male developed redness and serous drainage from his superficial incision site. A culture of the drainage from the superficial incision was obtained at the bedside and *Staphylococcus epidermidis* was isolated.
Can this culture be used to meet SSI criteria?

1. Yes

2. No
Case 1 – Rationale

Swabs collected at the bedside or in the OR can be aseptically obtained. There is a misconception by some that only cultures obtained in the OR are aseptic.

Common-commensal organisms are not excluded from SSI surveillance.
Secondary BSI Scenarios

Scenario 1: At least one organism from the blood specimen matches an organism identified from the site-specific infection that is used as an element to meet the NHSN site-specific infection criterion.

Scenario 2: An organism identified in the blood specimen is an element that is used to meet the NHSN site-specific infection criterion.
<table>
<thead>
<tr>
<th>Post-Op Day</th>
<th>SSI Secondary BSI Attribution Period</th>
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<tr>
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<td>DOE for an SSI</td>
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SSI Secondary BSI Attribution Period

(3 days before Date of Event + Date of Event + 13 days after Date of Event)
Infection Present at Time of Surgery (PATOS)

- Infection Present at Time of Surgery (PATOS) denotes that there is evidence of an infection or abscess at the start of or during the index surgical procedure (in other words, it is present preoperatively).

- The evidence of infection or abscess must be noted/documentated intraoperatively in an intraoperative note (immediate postoperative note).
PATOS

- Only select PATOS = YES if it applies to the depth of SSI that is being attributed to the procedure
  - For example, if a patient had evidence of an intraabdominal infection at the time of surgery and then later returns with an organ space SSI, the PATOS field would be selected as a YES.
  - If the patient returned with a superficial or deep incisional SSI, the PATOS field would be selected as a NO.
PATOS

- PATOS is a required data field on the numerator form and is not a data field on the denominator for procedure form.
- PATOS is only considered if an SSI is determined within the surveillance period following that operative procedure.
PATOS Quick Learn

- **Surgical Site Infections (SSI) Training (CBT - 60 min)**
- **New! SSI Surveillance and Case Studies – March 2017**
  - YouTube Link [Video - 83 min]
  - Slideset 📄 [PDF - 8 MB]
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- **New! Surgical Site Infections (SSI) Event form for PATOS – June 2017**
  - YouTube Link [Video – 6 min]
Example

2/1 – Patient presents to ED with acute abdomen and goes directly to the OR for colon resection (COLO). A peritoneal abscess is documented intraoperatively and drained and a thorough abdominal washout is performed. Incision is loosely closed with some packing between staples and a JP drain is placed in an adjacent stab wound.

2/4 – Patient is discharged with wounds healing well.

2/8 – Patient presents to ED with fever, abdominal pain and an abdominal CT is performed. The abdominal CT identifies a left lower quadrant abscess with a subsequent CT-guided drainage of the abscess which identifies (+) for \textit{E.coli}.

This is reported as an SSI-IAB (meets IAB criterion 1).

The PATOS field would be entered as a YES.
Example - Rationale

2/1 – Patient presents to ED with acute abdomen and goes directly to the OR for colon resection (COLO). A peritoneal abscess is documented intraoperatively and drained and a thorough abdominal washout is performed. Incision is loosely closed with some packing between staples and a JP drain is placed in an adjacent stab wound.

2/4 – Patient is discharged with wounds healing well.

2/8 – Patient presents to ED with fever, abdominal pain and an abdominal CT is performed. The abdominal CT identifies a left lower quadrant abscess with a subsequent CT-guided drainage of the abscess which identifies (+) for E.coli.

This is reported as an SSI-IAB (meets IAB criterion 1).

The PATOS field would be entered as a YES.
Case 2

Patient was admitted for a sigmoid resection (COLO) and during the procedure the surgeon documented within the intraoperative note: “abscess material in various pockets throughout the abdomen.”

Five days post-op the patient had a sudden onset of nausea, vomiting, and abdominal pain and a CT of the abdomen revealed multiple fluid collections within the intraabdominal space. On post-op day six a CT-guided drainage was performed where 150 cc purulent material was drained from the abdomen. This case meets criteria for an Organ/Space IAB SSI.
Does this patient meet the criteria for PATOS?

1. PATOS = Yes
2. PATOS = No
Because this SSI event meets PATOS, the facility would not report the COLO procedure or subsequent SSI event to NHSN.

1. True  
2. False
Case 2 – Rationale

The PATOS field would be selected as YES on the SSI event form since there was evidence of infection documented at the time of surgery and the subsequent SSI developed at the same level.

SSI events that are PATOS = YES and their associated NHSN operative procedures are reported to NHSN if you are following that procedure category in your monthly reporting plan.
Completing the Denominator for Procedure Information Form
Denominator Data

- The collection period is one month.
- Complete a Denominator for Procedure record for every operation meeting the NHSN operative procedure definition that was done during that month if it is in your Monthly Reporting Plan.
- Submit data within a month of the end of a 30 day surveillance period or one month from the 90 day surveillance period.
Denominator Reporting Instruction

More Than One NHSN Operative Procedure Category Through Same Incision

If procedures in more than one NHSN operative procedure category are done *through the same incision* during the same trip to the OR, create a record for each procedure that you are monitoring in the Monthly Reporting Plan, and use the total time for the duration for each record.

Example: Patient had a colon resection (COLO) and also an abdominal hysterectomy (HYST). The time from PST to PF was 3 hours and 30 minutes. A *Denominator for Procedure* form is completed for the COLO and another for the HYST, indicating the duration as 3 hours and 30 minutes on each form.
Denominator Reporting Instruction

24-Hour Rule

If a patient goes to the operating room more than once during the same admission, and another procedure is performed through the same incision, and if the start time of the second procedure is within 24 hours of the finish time of the original operative procedure, report only one Denominator for Procedure form for the original procedure, combining the durations for both procedures based on the procedure start times and finish times for both procedures.

Example: Patient had colon surgery (COLO) performed on Tuesday morning which had a duration of 3 hours and 10 minutes. On Tuesday evening, he was returned to the OR where the COLO incision was opened and a XLAP was performed to repair a bleeding vessel. The duration of the second procedure was 1 hour and 10 minutes.

Report only one COLO with a combined duration of 4 hours and 20 minutes. Do not report the XLAP procedure.
Denominator Reporting Instruction

24-Hour Rule

If the wound class has changed, report the higher wound class. If the ASA class has changed, report the higher ASA class.

Note: When the patient returns to the OR within 24 hours of the end of the first procedure, assign the surgical wound closure technique that applies when the patient leaves the OR from the first operative procedure.
Denominator Reporting Instruction
Same NHSN Operative Procedure Via Separate Incisions

For operative procedures that can be performed via separate incisions during same trip to operating room (AMP, BRST, CEA, FUSN, FX, HER, HPRO, KPRO, LAM, NEPH, OVRY, PVBY) separate Denominator for Procedure forms 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.
ICD-10-PCS or CPT Codes

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<thead>
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<th>Denominator for Procedure</th>
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Procedure code entry is an optional field.
### National Healthcare Safety Network (NHSN)

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<th>Acute Care Hospitals/Facilities</th>
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</table>

#### Surveillance for Surgical Site Infection (SSI) Events

- **Resources for NHSN Users Already Enrolled**
  - Training
  - Protocols
  - Frequently Asked Questions
  - Data Collection Forms
  - CMS Supporting Materials
  - Supporting Materials
  - Analysis Resources

#### Resources to Help Prevent Infections
- Resources for Patients and Healthcare Providers
- HHS Action Plan to Prevent Healthcare-associated Infections

**New Users - Start Enrollment Here**
- Step 1: Enroll into NHSN
- Step 2: Set up NHSN
- Step 3: Report

**Click here for more**
NHSN Operative Procedure Code Mapping

2018 Operative Procedure Code Documents

The documents listed below should be used for procedures performed in 2018.

- **Update! [ICD-10-PCS Procedure Code Mapping to NHSN Operative Procedure Codes](#)** [XLSX - 611K]

- Additional Guidance for use with NHSN Operative Procedure Codes
  - **Update! [ICD-10-PCS & CPT Codes – Guidance for HPRO & KPRO Procedure Details](#)** [XLSX - 46K]
    
    This guidance document may be used for completing the NHSN procedure details for HPRO – hip arthroplasty and/or KPRO – Knee arthroplasty operative procedures.
  
  - **[FUSN ICD-10-PCS Codes – Guidance for Spinal Level and Approach](#)** [XLSX - 30K]
    
    This supplemental guidance may be used to complete the spinal level and approach fields in the Operative Procedure Details section for FUSN procedures.
  
  - **[ICD-10 CM Diabetes Diagnostic Codes](#)** [XLSX - 15K]
    
    ICD-10-CM codes included in this spreadsheet are acceptable for use to answer “YES” to “Diabetes Mellitus” for completing the NHSN Operative Procedure Details.
NHSN Operative Procedure Codes

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2018 NHSN Operative Procedure Code Mappings (updated 08-2018)
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This document replaces prior documents listing operative procedure codes associated with the NHSN Surgical Site Infection (SSI) Procedure-associated Protocol.

Codes have been validated using current procedure code references in consultation with a trained coding professional. Codes are accurate at the time of posting.

ICD-10-PCS procedure codes included in this code mapping document may be entered instead of (or in addition to) the NHSN procedure category name (such as COLO, HYST or XLAP).

Procedure codes may be entered in the following manner:
- If the ICD-10-PCS procedure code is entered first, the NHSN procedure code name (such as COLO) will be auto-filled by the application.
- If the ICD-10-PCS procedure code name is entered first, the user will need to manually enter the correct ICD-10-PCS procedure code.
- If there is a mismatch between the NHSN procedure code name and the ICD-10-PCS procedure code, the application will produce an error message.

NOTES:
- Although the procedure code field is optional, procedure codes may be used when entering NHSN procedures and SSI events.

Layout of this procedure code document
- Procedure categories are listed in alphabetical order along the bottom tabs of the workbook (see purple outline and arrow below), starting with AAA and ending with XLAP.
- There is a worksheet for each procedure category.
- The ICD-10-PCS procedure codes are listed in numerical order (see block outline below) for each procedure category.
- Columns within each worksheet may be sorted and filtered.

Example:
- Procedure description is listed with each procedure code.
- Code Status: Add (bold) = Codes that were newly added to the procedure category.
- Moved (underlined) = Codes that were moved from one procedure category to another.
- Revised description (italic) = Code descriptions that were revised.
- Codes may have more than one status.
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```

"New" Legend for Code Status

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### NHSN Operative Procedure Codes

<table>
<thead>
<tr>
<th>Procedure Code Description</th>
<th>Code Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision of Transverse Colon, Via Natural or Artificial Opening With Percutaneous Endoscopic Assistance</td>
<td>Add</td>
</tr>
<tr>
<td>Decision of Descending Colon, Via Natural or Artificial Opening With Percutaneous Endoscopic Assistance</td>
<td>Add</td>
</tr>
<tr>
<td>Decision of Sigmoid Colon, Via Natural or Artificial Opening With Percutaneous Endoscopic Assistance</td>
<td>Add</td>
</tr>
<tr>
<td>Bypass stomach to Transverse Colon with Autologous Tissue Substitute, Open Approach</td>
<td>No Change</td>
</tr>
<tr>
<td>Bypass stomach to Transverse Colon with Synthetic Substitue, Open Approach</td>
<td>No Change</td>
</tr>
<tr>
<td>Bypass stomach to Transverse Colon with Nonautologous Tissue Substitute, Open Approach</td>
<td>No Change</td>
</tr>
<tr>
<td>Bypass stomach to Transverse Colon with Autologous Tissue Substitute, Percutaneous Endoscopic Approach</td>
<td>No Change</td>
</tr>
<tr>
<td>Bypass stomach to Transverse Colon with Synthetic Substitute, Percutaneous Endoscopic Approach</td>
<td>No Change</td>
</tr>
<tr>
<td>Bypass stomach to Transverse Colon with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach</td>
<td>No Change</td>
</tr>
<tr>
<td>Bypass stomach to Transverse Colon, Percutaneous Endoscopic Approach</td>
<td>No Change</td>
</tr>
<tr>
<td>Bypass Duodenum to Transverse Colon with Autologous Tissue Substitute, Open Approach</td>
<td>Add</td>
</tr>
<tr>
<td>Bypass Duodenum to Transverse Colon with Synthetic Substitute, Open Approach</td>
<td>Add</td>
</tr>
<tr>
<td>Bypass Duodenum to Transverse Colon with Nonautologous Tissue Substitute, Open Approach</td>
<td>Add</td>
</tr>
<tr>
<td>Bypass Duodenum to Transverse Colon with Autologous Tissue Substitute, Percutaneous Endoscopic Approach</td>
<td>Add</td>
</tr>
<tr>
<td>Bypass Duodenum to Transverse Colon with Synthetic Substitute, Percutaneous Endoscopic Approach</td>
<td>Add</td>
</tr>
<tr>
<td>Bypass Duodenum to Transverse Colon with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach</td>
<td>Add</td>
</tr>
</tbody>
</table>
Entering Codes into the application

Procedure Information

NHSN Procedure Code: COLO - Colon surgery

Select button for system used
- ICD-10 PCS: 0DBE0ZZ
- CPT Code

Procedure Date: [9]  
Link/Unlink to Event

Procedure is not Linked
Entering Codes into the application
Example of a code entry error
Example of a code entry error
Procedure Details – Wound Class

- Wound class is an assessment of the likelihood and degree of contamination of a surgical wound at the time of the operation.
- It should be assigned by a person directly involved in performing the operation; rarely by the IP.
- NHSN does not make wound class determinations for specific scenarios.

<table>
<thead>
<tr>
<th>Denominator for Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility ID</td>
</tr>
<tr>
<td>Procedure #:</td>
</tr>
<tr>
<td>*Patient ID:</td>
</tr>
<tr>
<td>Social Security #:</td>
</tr>
<tr>
<td>Secondary ID:</td>
</tr>
<tr>
<td>Medicare #:</td>
</tr>
<tr>
<td>Patient Name, Last:</td>
</tr>
<tr>
<td>First:</td>
</tr>
<tr>
<td>*Gender: F M Other</td>
</tr>
<tr>
<td>*Date of Birth:</td>
</tr>
<tr>
<td>Ethnicity (Specify):</td>
</tr>
<tr>
<td>Race (Specify):</td>
</tr>
<tr>
<td>Event Type: PROC</td>
</tr>
<tr>
<td>*NHSN Procedure Code:</td>
</tr>
<tr>
<td>*Date of Procedure:</td>
</tr>
<tr>
<td>ICD-10-PCS or CPT Procedure Code:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Procedure Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Outpatient: Yes No</td>
</tr>
<tr>
<td>*Wound Class: C CC CO D</td>
</tr>
<tr>
<td>ASA Score: 1 2 3 4 5</td>
</tr>
<tr>
<td>*Trauma: Yes</td>
</tr>
<tr>
<td>*Height: _______</td>
</tr>
</tbody>
</table>

C = Clean
CC = Clean – Contaminated
CO = Contaminated
D = Dirty or Infected
Procedure Details - Wound Class
Procedures that can never be coded as Clean wound class

The procedures that can never be entered as clean are: APPY, BILI, CHOL, COLO, REC, SB and VHYS. In the application clean is not on the drop down menu.

A CSEC, HYST, or OVRY can be a clean wound class based on the particular events and findings of an individual case.

Wound class should be set by someone who is part of the surgical team based on the findings of each specific case.
**Procedure Details - Trauma**

<table>
<thead>
<tr>
<th>Procedure Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Outpatient: Yes  No</td>
</tr>
<tr>
<td>*Wound Class: C CC CO D</td>
</tr>
<tr>
<td>ASA Score: 1 2 3 4 5</td>
</tr>
<tr>
<td>*Trauma: Yes  No</td>
</tr>
<tr>
<td>*Height: _____ feet _____ inches</td>
</tr>
<tr>
<td>(choose one)</td>
</tr>
<tr>
<td>*Weight: _____ lbs/kg</td>
</tr>
<tr>
<td>CSEC:</td>
</tr>
</tbody>
</table>

**Trauma: Required.** If this operation was done because of a recent blunt or penetrating trauma, select Yes. If the bowel is nicked or perforated during an operative procedure this should not be listed as a trauma case. Note: Complex trauma cases may require multiple trips to the OR during the same admission to repair the initial trauma. In such cases, trauma = yes.
Procedure Details – Emergency Definition

Emergency Procedure:
A procedure that is documented per the facility protocol to be an Emergency or Urgent procedure.
Procedure Details – Wound Closure

Primary Closure

Closure other than primary
Packing and Wound VACs

Closure other than primary
Case 3

A 48-year-old male undergoes a colostomy takedown (COLO) procedure. The patient has multiple trocar sites, all closed primarily, and a low-midline incision that was left open and packed.
Is this procedure primarily closed?

1. Yes
2. No
Case 3 – Rationale

The skin is closed at some points along the skin incision.

Thus, if any portion of the incision is closed at the skin level, by any manner, a designation of primary closure should be assigned to the surgery.

If a procedure has multiple incision/laparoscopic trocar sites and any of the incisions are closed primarily then the procedure technique is recorded as primarily closed.
**Procedure Details - Scope**

<table>
<thead>
<tr>
<th>Procedure Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Outpatient: Yes  No</td>
</tr>
<tr>
<td>*Wound Class: C   CC  CO  D</td>
</tr>
<tr>
<td>ASA Score: 1 2 3 4 5</td>
</tr>
<tr>
<td>*Trauma: Yes  No  *Scope: Yes  No</td>
</tr>
<tr>
<td>*Height: _____ feet  _____ inches (choose one)  _____ meters</td>
</tr>
<tr>
<td>*Weight: ______ lbs/kg (circle one)</td>
</tr>
<tr>
<td>CSEC:  *Duration of Labor: _____ hours</td>
</tr>
<tr>
<td>*Diabetes Mellitus: Yes  No</td>
</tr>
<tr>
<td>*Closure Technique: Primary  Other than primary</td>
</tr>
</tbody>
</table>

**Scope: Required.**
Check Y if the NHSN operative procedure was a laparoscopic procedure performed using a laparoscope/robotic assist method, otherwise check N.

Select Yes if scope used to harvest donor vessel during a CBGB.
Procedure Details – Scope

ICD-10-PCS codes can be helpful in answering this scope question. The fifth character indicates the approach to reach the procedure site:

- Value of zero (0) = an open approach.
- Value of four (4) = percutaneous endoscopic approach.
- Value of F = via natural or artificial opening with endoscopic assistance approach.

If the fifth character of the ICD-10-PCS code is a four (4) or F then the field for scope should be YES.

Note: If a procedure is coded as open and scope then the procedure should be entered into NHSN as Scope = NO. The open designation is considered a higher risk procedure.
Procedure Details – Scope Denominator Entry

Procedure Information
- NHSN Procedure Code: HYST - Abdominal hysterectomy
- Select button for system used: ICD-10 PCS
- Procedure Date: 
- CPT Code
- Procedure is not Linked

Procedure Details
- Outpatient
- Duration (Hrs:Mins)
- Wound Class
- General Anesthesia
- ASA Score
- Emergency
- Trauma
- Scope: Y - Yes
- Diabetes Mellitus
- Closure Technique
- Surgeon Code
- Height: __________ or __________ m
- Weight: __________ lbs or __________ kg
- BMI
Procedure Details – Scope
Denominator Entry

Procedure Information
- NHSN Procedure Code: HYST - Abdominal hysterectomy
- ICD-10 PCS: 0UT90ZZ
- Procedure Date
- Link/Unlink to Event: Procedure is not Linked

Procedure Details
- Outpatient
- Duration (Hrs:Mins)
- Wound Class
- ASA Score
- Emergency
- Trauma
- Scope: N - No
- Diabetes Mellitus
- Closure Technique
- Surgeon Code
- Height
- Weight
- BMI
Additional Fields Required for Specific Procedures
Additional Fields for Specific Procedures

There are 4 procedures for which additional risk factors are collected:

– Cesarean Section – CSEC
– Spinal Fusion – FUSN
– Hip Arthroplasty – HPRO
– Knee Arthroplasty – KPRO

When any of these procedures are included in the *Monthly Reporting Plan*, the corresponding additional fields must be completed.
CSEC: Duration of Labor

If operative procedure is CSEC, enter number of hours the patient labored in the hospital from beginning of active labor to delivery of the infant, expressed in hours.

<table>
<thead>
<tr>
<th>Procedure Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Outpatient: Yes  No</td>
</tr>
<tr>
<td>*Wound Class: C  CC  CO  D</td>
</tr>
<tr>
<td>ASA Score: 1  2  3  4  5</td>
</tr>
<tr>
<td>*Trauma: Yes  No</td>
</tr>
<tr>
<td>*Scope: Yes  No</td>
</tr>
<tr>
<td>*Height: ______feet _______inches</td>
</tr>
<tr>
<td>(choose one) _______meters</td>
</tr>
<tr>
<td>*Weight: ______lbs/kg (circle one)</td>
</tr>
<tr>
<td>CSEC: *Duration of Labor: ______hours</td>
</tr>
<tr>
<td>Surgeon Code: ____________</td>
</tr>
</tbody>
</table>
FUSN: Spinal Level and Approach

<table>
<thead>
<tr>
<th>Circle one: FUSN</th>
<th>*Spinal Level (check one)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>□ Atlas-axis</td>
</tr>
<tr>
<td></td>
<td>□ Atlas-axis/Cervical</td>
</tr>
<tr>
<td></td>
<td>□ Cervical</td>
</tr>
<tr>
<td></td>
<td>□ Cervical/Dorsal/Dorsolumbar</td>
</tr>
<tr>
<td></td>
<td>□ Dorsal/Dorsolumbar</td>
</tr>
<tr>
<td></td>
<td>□ Lumbar/Lumbosacral</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>*Approach/Technique (check one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Anterior</td>
</tr>
<tr>
<td>□ Posterior</td>
</tr>
<tr>
<td>□ Anterior and Posterior</td>
</tr>
<tr>
<td>□ Transoral</td>
</tr>
</tbody>
</table>

**Additional Guidance for use with NHSN Operative Procedure Codes**

- Update! ICD-10-PCS & CPT Codes - Guidance for HPRO & KPRO Procedure Details
  - [XLSX - 46K]
  - This guidance document may be used for completing the NHSN procedure details for HPRO - hip arthroplasty and/or KPRO - Knee arthroplasty operative procedures.

- FUSN ICD-10-PCS Codes - Guidance for Spinal Level and Approach
  - [XLSX - 30K]
  - This supplemental guidance may be used to complete the spinal level and approach fields in the Operative Procedure Details section for FUSN procedures.

- ICD-10 CM Diabetes Diagnostic Codes
  - [XLSX - 15K]
  - ICD-10-CM codes included in this spreadsheet are acceptable for use to answer "YES" to "Diabetes Mellitus" for completing the NHSN Operative Procedure Details.

- ICD-10-CM/PCS Codes for "prior infection at hip or knee joint" denominator form question
  - [XLSX - 20K]
  - Use ICD-10-PCS/CM diagnosis or procedure codes included in this spreadsheet to determine if patient meets criteria for "prior infection at index joint".
**HPRO & KPRO: Procedure Details**

If the procedure is an HPRO or KPRO, indicate here which type of HPRO or KPRO was performed.

<table>
<thead>
<tr>
<th>Circle one: HPRO</th>
<th>KPRO</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICD-10-PCS Supplemental Procedure Code for HPRO/KPRO: ____________</td>
<td></td>
</tr>
</tbody>
</table>

*Check one:*
- [ ] Total
- [ ] Hemi
- [ ] Resurfacing (HPRO only)

If Total:
- [ ] Total Primary
- [ ] Total Revision

If Hemi:
- [ ] Partial Primary
- [ ] Partial Revision

If Resurfacing (HPRO only):
- [ ] Total Primary
- [ ] Partial Primary

*If total or partial revision, was the revision associated with prior infection at index joint?*
- [ ] Yes
- [ ] No
2018 Operative Procedure Code Documents

The documents listed below should be used for procedures performed in 2018.

- **Update! ICD-10-PCS Procedure Code Mapping to NHSN Operative Procedure Codes**
  - [XLSX - 611K]

  - [XLSX - 331K]

- **Additional Guidance for use with NHSN Operative Procedure Codes**

  - **Update! ICD-10-PCS & CPT Codes - Guidance for HPRO & KPRO Procedure Details**
    - [XLSX - 84K]
    - This guidance document may be used for completing the NHSN procedure details for HPRO - hip arthroplasty and/or KPRO - Knee arthroplasty operative procedures.

- **FUSN ICD-10-PCS Codes - Guidance for Spinal Level and Approach**
  - [XLSX - 30K]
  - This supplemental guidance may be used to complete the spinal level and approach fields in the Operative Procedure Details section for FUSN procedures.

- **ICD-10-CM Diabetes Diagnostic Codes**
  - [XLSX - 10K]
  - ICD-10-CM codes included in this spreadsheet are acceptable for use to answer "YES" to "Diabetes Mellitus" for completing the NHSN Operative Procedure Details.

- **ICD-10-CM/PCS Codes for 'prior infection at hip or knee joint' denominator form question**
  - [XLSX - 20K]
  - Use ICD-10-PCS/CM diagnosis or procedure codes included in this spreadsheet to determine if patient meets criteria for 'prior infection at index joint'.

- **Document detailing changes made to the 2017-2018 operative procedure codes**

  - **Update! Summary of 2017-2018 Code Changes**
    - [XLSX - 343K]
    - This document identifies changes made to the codes 2017-2018 operative procedure codes. It should not be used for identifying NHSN operative procedures or SSI events.
Definitions of Surgical Site Infections

Sample of Complete NHSN Case Review Request

Please let NHSN know what your question(s) are and what your thoughts are regarding the case

Ex: *This is a complicated case and our team is trying to figure out whether it meets criteria for a Deep Incisional SSI- can you help us confirm?*

What NHSN needs from the user:

OR procedures and dates of all procedures including reoperations
  – Whether operative procedures are coded as NHSN operative procedures or not
  – If return to OR via same incision, was it within 24 hours of finish time of prior operative procedure?

Signs and symptoms?
Tissue levels involved- Superficial, Deep and/or Organ/Space?
Was any imaging testing performed and described?
Fluid collections or drainage?
  – CT guided drainage performed? Drainage from JP drain? Drainage from wound?
  – Purulent? How was the drainage described?

Culture Results
  – What site was the specimen collected from?
  – What tissue level (depth) was the specimen collected from? If you are unsure NHSN recommends consulting with the surgeon/physician to make that determination.

Other evidence of infection?
Superficial Incisional SSI

Must meet the following criteria:
Infection occurs within 30 days after any 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)).

(CONTINUED)
Superficial Incisional SSI

c. superficial incision that is deliberately opened by a surgeon, attending physician** or other designee and culture or non-culture based testing is not performed

AND

patient has at least one of the following signs or symptoms: pain or tenderness; localized swelling; erythema; or heat.

d. diagnosis of a superficial incisional SSI by the surgeon or attending physician** or other designee.

** The term attending physician for the purposes of application of the NHSN SSI criteria may be interpreted to mean the surgeon(s), infectious disease, other physician on the case, emergency physician or physician’s designee (nurse practitioner or physician’s assistant).
Superficial Incisional SSI

- Diagnosis/treatment of cellulitis (redness/warmth/swelling), by itself, does not meet criterion “d” for superficial incisional SSI. Conversely, an incision that is draining or that has organisms identified by culture or non-culture based testing is not considered a cellulitis.

- A stitch abscess alone (minimal inflammation and discharge confined to the points of suture penetration) is not considered an SSI.

- A localized stab wound or pin site infection is not considered an SSI.

- **Note:** a laparoscopic trocar site for an NHSN operative procedure is not considered a stab wound.
Superficial Incisional SSI

Multiple tissue levels are involved in the infection:

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.
<table>
<thead>
<tr>
<th>Code</th>
<th>Operative Procedure</th>
<th>Code</th>
<th>Operative Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA</td>
<td>Abdominal aortic aneurysm repair</td>
<td>LAM</td>
<td>Laminectomy</td>
</tr>
<tr>
<td>AMP</td>
<td>Limb amputation</td>
<td>LTP</td>
<td>Liver transplant</td>
</tr>
<tr>
<td>APPY</td>
<td>Appendix surgery</td>
<td>NECK</td>
<td>Neck surgery</td>
</tr>
<tr>
<td>AVSD</td>
<td>Shunt for dialysis</td>
<td>NEPH</td>
<td>Kidney surgery</td>
</tr>
<tr>
<td>BILI</td>
<td>Bile duct, liver or pancreatic surgery</td>
<td>OVRY</td>
<td>Ovarian surgery</td>
</tr>
<tr>
<td>CEA</td>
<td>Carotid endarterectomy</td>
<td>PRST</td>
<td>Prostate surgery</td>
</tr>
<tr>
<td>CHOL</td>
<td>Gallbladder surgery</td>
<td>REC</td>
<td>Rectal surgery</td>
</tr>
<tr>
<td>COLO</td>
<td>Colon surgery</td>
<td>SB</td>
<td>Small bowel surgery</td>
</tr>
<tr>
<td>CSEC</td>
<td>Cesarean section</td>
<td>SPLE</td>
<td>Spleen surgery</td>
</tr>
<tr>
<td>GAST</td>
<td>Gastric surgery</td>
<td>THOR</td>
<td>Thoracic surgery</td>
</tr>
<tr>
<td>HTP</td>
<td>Heart transplant</td>
<td>THYR</td>
<td>Thyroid and/or parathyroid surgery</td>
</tr>
<tr>
<td>HYST</td>
<td>Abdominal hysterectomy</td>
<td>VHYS</td>
<td>Vaginal hysterectomy</td>
</tr>
<tr>
<td>KTP</td>
<td>Kidney transplant</td>
<td>XLAP</td>
<td>Exploratory Laparotomy</td>
</tr>
</tbody>
</table>

**30-day Surveillance**

<table>
<thead>
<tr>
<th>Code</th>
<th>Operative Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRST</td>
<td>Breast surgery</td>
</tr>
<tr>
<td>CARD</td>
<td>Cardiac surgery</td>
</tr>
<tr>
<td>CBGB</td>
<td>Coronary artery bypass graft with both chest and donor site incisions</td>
</tr>
<tr>
<td>CBGC</td>
<td>Coronary artery bypass graft with chest incision only</td>
</tr>
<tr>
<td>CRAN</td>
<td>Craniotomy</td>
</tr>
<tr>
<td>FUSN</td>
<td>Spinal fusion</td>
</tr>
<tr>
<td>FX</td>
<td>Open reduction of fracture</td>
</tr>
<tr>
<td>HER</td>
<td>Hemiorrhaphy</td>
</tr>
<tr>
<td>HPRO</td>
<td>Hip prosthesis</td>
</tr>
<tr>
<td>KPRO</td>
<td>Knee prosthesis</td>
</tr>
<tr>
<td>PACE</td>
<td>Pacemaker surgery</td>
</tr>
<tr>
<td>PVBY</td>
<td>Peripheral vascular bypass</td>
</tr>
<tr>
<td>VSHN</td>
<td>Ventricular shunt</td>
</tr>
</tbody>
</table>

**90-day Surveillance**

<table>
<thead>
<tr>
<th>Code</th>
<th>Operative Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note: Superficial incisional SSIs are only followed for a 30-day period for all procedure types.</td>
<td></td>
</tr>
<tr>
<td>Secondary incisional SSIs are only followed for a 30-day period regardless of the surveillance period for the primary site.</td>
<td></td>
</tr>
</tbody>
</table>
SIP and SIS

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, C-section incision or chest incision for CBGB)

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, donor site incision for CBGB)
Case 4

6/7 – 57-year-old female had an abdominal hysterectomy (HYST)

6/12 – The patient noted tenderness and purulent drainage from her incision site and is seen in her provider’s office on 6/13. The surgeon removed some staples and inspected the site. The surgeon noted the fascia was intact without disruption. A culture of the purulent drainage was performed that resulted no growth.
Does this case meet criteria for a Superficial Incisional SSI?

1. No. The culture was no growth.

2. Yes. The patient meets SIP criteria.

3. No. The patient meets DIP criteria.

4. No. The fascia was intact.
What Superficial Incisional SSI criterion is met?

1. SIP criterion a
2. SIP criterion b
3. SIP criterion c
4. SIP criterion d
Case 4 – Rationale

Superficial incisional SSI

Must meet the following criteria:

- Infection occurs within 30 days after any NHSN operative procedure (where day 1 = the procedure date)
- involves only skin and subcutaneous tissue of the incision
- 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 by a surgeon, attending physician** or other designee and culture or non-culture based testing is not performed.
  d. diagnosis of a superficial incisional SSI by the surgeon or attending physician** or other designee.
Purulence

- NHSN does not define purulent drainage as there is no standard, clinically agreed upon definition.

- Generally, thick/viscous, creamy/opaque fluid discharge with or without blood seen at the site or documentation of pus/purulence by a medical professional would be accepted evidence of purulent drainage.

- At this time NHSN does not use any gram stain results such as WBCs or Poly’s to define purulence for the SSI protocol.
Case 5

8/31 – 51-year-old male underwent coronary artery bypass graft x 4 with endoscopic vein harvesting from right leg (CBGB).

9/6 – Patient discharged home.

9/30 – Patient had follow-up appointment with his cardiologist and MD noted clear yellow drainage from superficial endoscopic harvest site and cultured the drainage. The sternal incision site was noted C/D/I.

10/2 – Superficial incision wound culture from endoscopic harvest site resulted with *Staphylococcus epidermidis*.
What would be reported?

1. SSI – SIP attributable to the CBGB
2. Nothing. The infection at the vein harvest site is outside the SIS surveillance period
3. SSI – SIS attributable to the CBGB
4. Nothing. The culture resulted with a common skin commensal
Case 5 – Rationale

Secondary incisional SSIs are only followed for a 30-day period regardless of the surveillance period for the primary site.

Common commensals are not excluded from SSI determination.
Alert in place to note SIS and DIS DOE cannot occur beyond 30 days
Deep Incisional SSI
Deep Incisional SSI

Must meet the following criteria:
Infection occurs within 30 or 90 days after 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 or aspirated by a surgeon, attending physician** or other designee

AND

organism is identified 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

AND

patient has at least one of the following signs or symptoms: fever (>38°C); localized pain or tenderness. A culture or non-culture based test that has a negative finding does not meet this criterion.

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

Deep incisional primary (DIP)

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, C-section incision or chest incision for CBGB)

Deep incisional secondary (DIS)

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, donor site incision for CBGB)
Case 6

4/15 – 67-year-old male underwent right HPRO due to severe end-stage osteoarthritis.

4/18 – Patient discharged.

5/13 – Patient presented to ED due to a traumatic wound dehiscence after a fall while walking his dog. The patient was noted with new pain at his incision site after the fall.

5/14 – Due to this dehiscence, the patient returned to OR for washout and re-closure of what the surgeon noted as a fascial dehiscence. No evidence of infection was seen and no cultures were collected.
Is this an SSI?

1. Yes

✓ 2. No
Case 6 - Rationale

Deep Incisional SSI - Must meet the following criteria:
Infection occurs within 30 or 90 days after 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 or aspirated by a surgeon, attending physician** or other designee
      AND
      organism is identified 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
      AND
      patient has at least one of the following signs or symptoms: fever (>38°C); localized pain or tenderness. A culture or non-culture based test that has a negative finding does not meet this criterion.
   c. an abscess or other evidence of infection involving the deep incision that is detected on gross anatomical or histopathologic exam, or imaging test.
Case 7

2/27 – A 39-year-old patient underwent a right colectomy (COLO).

3/7 – Patient reported abdominal incision pain and had a recorded T-max of 37.7°C.

3/10 – Patient returned to OR where the incision was re-opened down into the deep tissue level. Although purulence was not seen, cultures were collected from both the superficial and deep tissue levels.

3/13 – The superficial and deep tissue wound cultures resulted positive for *Candida albicans*. 
What infection should be reported?

1. SSI – SIP
2. SSI – DIP
3. SSI – Organ/Space IAB
4. No SSI
What DIP criterion is met?

1. DIP criterion a
2. DIP criterion b
3. DIP criterion c
Case 7 - Rationale

Deep Incisional SSI - Must meet the following criteria:

- Infection occurs within 30 or 90 days after 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 or aspirated by a surgeon, attending physician** or other designee
    - AND
    - organism is identified 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
    - AND
    - patient has at least one of the following signs or symptoms: fever (>38°C); localized pain or tenderness. A culture or non-culture based test that has a negative finding does not meet this criterion.
  - c. an abscess or other evidence of infection involving the deep incision that is detected on gross anatomical or histopathologic exam, or imaging test.
Why is this not reported as a Superficial Incisional SSI?

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.

Since both SIP and DIP criteria are met, you report the SSI - DIP.
Organ/Space SSI
Organ/Space SSI

Must meet the following criteria:

Infection occurs within 30 or 90 days after the NHSN operative procedure (where day 1 = the procedure date) according to the list in Table 2

AND

infection involves any part of the body deeper than the fascial/muscle layers, that is opened or manipulated during the operative procedure

AND

patient has at least one of the following:

a. purulent drainage from a drain that is placed into the organ/space (for example, closed suction drainage system, open drain, T-tube drain, 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 that is detected on gross anatomical or histopathologic exam, or imaging test evidence suggestive of infection

AND

meets at least one criterion for a specific organ/space infection site listed in Table 3. These criteria are found in the Surveillance Definitions for Specific Types of Infections chapter 17.
Organ/Space SSI

Two different criteria must be met for Organ/Space SSI:

- SSI organ/space criteria (chapter 9)

- Site-specific criteria (chapter 17)
Organ/Space SSI

Table 3. Specific Sites of an Organ/Space SSI.

<table>
<thead>
<tr>
<th>Code</th>
<th>Site</th>
<th>Code</th>
<th>Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>BONE</td>
<td>Osteomyelitis</td>
<td>MED</td>
<td>Mediastinitis</td>
</tr>
<tr>
<td>BRST</td>
<td>Breast abscess or mastitis</td>
<td>MEN</td>
<td>Meningitis or ventriculitis</td>
</tr>
<tr>
<td>CARD</td>
<td>Myocarditis or pericarditis</td>
<td>ORAL</td>
<td>Oral cavity (mouth, tongue, or gums)</td>
</tr>
<tr>
<td>DISC</td>
<td>Disc space</td>
<td>OREP</td>
<td>Other infections of the male or female reproductive tract</td>
</tr>
<tr>
<td>EAR</td>
<td>Ear, mastoid</td>
<td>PJI</td>
<td>Periprosthetic Joint Infection</td>
</tr>
<tr>
<td>EMET</td>
<td>Endometritis</td>
<td>SA</td>
<td>Spinal abscess without meningitis</td>
</tr>
<tr>
<td>ENDO</td>
<td>Endocarditis</td>
<td>SINU</td>
<td>Sinusitis</td>
</tr>
<tr>
<td>GIT</td>
<td>GI tract</td>
<td>UR</td>
<td>Upper respiratory tract</td>
</tr>
<tr>
<td>IAB</td>
<td>Intraabdominal, not specified</td>
<td>USI</td>
<td>Urinary System Infection</td>
</tr>
<tr>
<td>IC</td>
<td>Intracranial, brain abscess or dura</td>
<td>VASC</td>
<td>Arterial or venous infection</td>
</tr>
<tr>
<td>JNT</td>
<td>Joint or Bursa</td>
<td>VCUF</td>
<td>Vaginal cuff</td>
</tr>
<tr>
<td>LUNG</td>
<td>Other infections of the lower respiratory tract</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Specific sites of infection must be used to differentiate organ/space SSI and their criteria must also be met. Use HAI definitions (Chapter 17).

(Criteria for these sites can be found in the Surveillance Definitions for Specific Types of Infections chapter).

Note: Appendix contains a list of all NHSN operative procedure groups and the site specific SSI that that may be attributable for each group.
## SSI specific event types attributed to each NHSN procedure category

**APPENDIX.** SSI specific event types attributed to each NHSN procedure category.

<table>
<thead>
<tr>
<th>Procedure code</th>
<th>Specific Event Code</th>
</tr>
</thead>
</table>
| AAA - Abdominal aortic aneurysm repair | DIP - Deep Incisional Primary  
ENDO - Endocarditis  
GIT - Gastrointestinal tract  
IAB - Intraabdominal, not specified elsewhere  
SIP - Superficial Incisional Primary  
VASC - Arterial or venous infection |
| AMP - Limb amputation  | BONE - Osteomyelitis  
DIP - Deep Incisional Primary  
JNT - Joint or bursa  
SIP - Superficial Incisional Primary |
| APPY - Appendix surgery | DIP - Deep Incisional Primary  
GIT - Gastrointestinal tract  
IAB - Intraabdominal, not specified elsewhere  
SIP - Superficial Incisional Primary |
| AVSD - AV shunt for dialysis | DIP - Deep Incisional Primary  
SIP - Superficial Incisional Primary  
VASC - Arterial or venous infection |
**Organ/Space SSI**

<table>
<thead>
<tr>
<th>Signs &amp; Symptoms</th>
<th>Laboratory</th>
<th>Clinical Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drainage or material†</td>
<td>Organism(s) identified</td>
<td>Physician diagnosis of this event type</td>
</tr>
<tr>
<td>Pain or tenderness</td>
<td>Sinus tract</td>
<td>Physician institutes appropriate antimicrobial therapy†</td>
</tr>
<tr>
<td>Swelling or inflammation</td>
<td>Hypothermia</td>
<td></td>
</tr>
<tr>
<td>Erythema or redness</td>
<td>Apnea</td>
<td></td>
</tr>
<tr>
<td>Heat</td>
<td>Bradycardia</td>
<td></td>
</tr>
<tr>
<td>Fever</td>
<td>Lethargy</td>
<td></td>
</tr>
<tr>
<td>Incision deliberately opened/drained</td>
<td>Cough</td>
<td></td>
</tr>
<tr>
<td>Wound spontaneously dehisces</td>
<td>Nausea</td>
<td></td>
</tr>
<tr>
<td>Abscess</td>
<td>Vomiting</td>
<td></td>
</tr>
<tr>
<td>Other evidence of infection found on invasive procedure, gross anatomic exam, or histopathologic exam†</td>
<td>Imaging test evidence of infection</td>
<td></td>
</tr>
<tr>
<td>Other signs &amp; symptoms†</td>
<td>Other positive laboratory tests†</td>
<td></td>
</tr>
</tbody>
</table>

†per specific site criteria
SSI Event Reporting Instruction:
SSI following invasive manipulation/accession of the operative site

An SSI will not be attributed if the following 3 criteria are ALL met:

▪ During the post-operative period the surgical site is without evidence of infection

▪ An invasive manipulation/accession of the site is performed for diagnostic or therapeutic purposes (for example, needle aspiration, accession of ventricular shunts, accession of breast expanders)

▪ An infection subsequently develops in a tissue level which was entered during the manipulation/accession
SSI Event Reporting Instruction:
SSI following invasive manipulation/accession of the operative site

Tissue levels that are BELOW the deepest entered level will be eligible for SSI.

- For example, a superficial debridement following a COLO procedure, where the muscle/fascia and organ/space was not entered, a subsequent organ/space SSI following the debridement may be an SSI attributable to the index COLO procedure.

- 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.
SSI Event Reporting Instruction:
Attributing SSI to a NHSN procedure when several are performed on different dates

If a patient has several NHSN operative procedures performed on different dates prior to an infection, attribute the SSI to the operative procedure that was performed most closely in time prior to the infection date, unless there is evidence that the infection was associated with a different operation.

Example: Patient underwent a COLO on 10/02/18. Two weeks later on 10/18/18, he returns to OR for an XLAP via the same incision. He developed an incisional SSI on 10/30/18. This SSI is attributed to the second procedure the XLAP, not the COLO.
SSI Surveillance Period

- Each return trip to the OR via the same site ends the surveillance period from prior infection and resets the new surveillance period.

- SSIs are normally attributed to the most recent trip to the OR.
SSI Event Reporting Instruction:
SSI Attribution after Multiple types of NHSN procedures are performed during a single trip to the OR

1. First, attempt to determine the procedure that is thought to be associated with the infection.

2. If it’s not clear (as in the case of a superficial incisional SSI), use the NHSN Principal Operative Procedure Selection Lists (*Table 4) to select which operative procedure to which the SSI should be attributed.

*Table 4: Categories with the highest risk of SSI are listed before those with lower risks
Patient had both a COLO procedure and HYST procedure via the same incision.

Within 30 days the patient developed purulent drainage at the incision site.

Documentation stated that the muscle/fascia and organ/space tissue layers were intact.

The patient met criteria for a Superficial Incisional SSI attributable to the COLO procedure.
Table 4. NHSN Principal Operative Procedure Category Selection Lists

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

<table>
<thead>
<tr>
<th>Priority</th>
<th>Code</th>
<th>Abdominal Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LTP</td>
<td>Liver transplant</td>
</tr>
<tr>
<td>2</td>
<td>COLO</td>
<td>Colon surgery</td>
</tr>
<tr>
<td>3</td>
<td>BILI</td>
<td>Bile duct, liver or pancreatic surgery</td>
</tr>
<tr>
<td>4</td>
<td>SB</td>
<td>Small bowel surgery</td>
</tr>
<tr>
<td>5</td>
<td>REC</td>
<td>Rectal surgery</td>
</tr>
<tr>
<td>6</td>
<td>KTP</td>
<td>Kidney transplant</td>
</tr>
<tr>
<td>7</td>
<td>GAST</td>
<td>Gastric surgery</td>
</tr>
<tr>
<td>8</td>
<td>AAA</td>
<td>Abdominal aortic aneurysm repair</td>
</tr>
<tr>
<td>9</td>
<td>HYST</td>
<td>Abdominal hysterectomy</td>
</tr>
<tr>
<td>10</td>
<td>CSEC</td>
<td>Cesarean section</td>
</tr>
<tr>
<td>11</td>
<td>XLAP</td>
<td>Laparotomy</td>
</tr>
<tr>
<td>12</td>
<td>APPY</td>
<td>Appendix surgery</td>
</tr>
<tr>
<td>13</td>
<td>HER</td>
<td>Herniorrhaphy</td>
</tr>
<tr>
<td>14</td>
<td>NEPH</td>
<td>Kidney surgery</td>
</tr>
<tr>
<td>15</td>
<td>VHYS</td>
<td>Vaginal Hysterectomy</td>
</tr>
<tr>
<td>16</td>
<td>SPLE</td>
<td>Spleen surgery</td>
</tr>
<tr>
<td>17</td>
<td>CHOL</td>
<td>Gall bladder surgery</td>
</tr>
</tbody>
</table>
Case 8

7/9 – Patient admitted and underwent laparoscopic hysterectomy (HYST). Wound class 2.

7/11 – Patient did well and was discharged home.

7/20 – Readmitted with abdominal tenderness. CT of abdomen/pelvis revealed a large pelvic fluid collection. CT-guided drainage of pelvic fluid collection revealed 75 cc of purulent material.
Does this patient meet criteria for an Organ/Space SSI?

1. Yes
2. No
Case 8 – Rationale

Organ/Space SSI

Must meet the following criteria:

- Infection occurs within 30 or 90 days after the NHSN operative procedure (where day 1 = the procedure date) according to the list in Table 2

- AND

- infection involves any part of the body deeper than the fascial/muscle layers, that is opened or manipulated during the operative procedure

- AND

- patient has at least one of the following:
  - a. purulent drainage from a drain that is placed into the organ/space (for example, closed suction drainage system, open drain, T-tube drain, 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 that is detected on gross anatomical or histopathologic exam, or imaging test evidence suggestive of infection

- AND

- meets at least one criterion for a specific organ/space infection site listed in Table 3. These criteria are found in the Surveillance Definitions for Specific Types of Infections chapter 17.
What site specific SSI does this patient have?

1. SSI – DIP
2. SSI – IAB
3. SSI – OREP
4. SSI – GIT
OREP - Deep pelvic tissue infection or other infection of the male or female reproductive tract (epididymis, testes, prostate, vagina, ovaries, uterus) including chorioamnionitis, but excluding vaginitis, endometritis or vaginal cuff infections

OREP Criterion 2:
Patient has an abscess or other evidence of infection of affected site on gross anatomic or histopathologic exam.
Why isn’t this an SSI – IAB?

IAB - *Intraabdominal infection*, not specified elsewhere, including gallbladder, bile ducts, liver (excluding viral hepatitis), spleen, pancreas, peritoneum, retroperitoneal, subphrenic or subdiaphragmatic space, or other intraabdominal tissue or area not specified elsewhere
Why isn’t this an SSI – GIT?

GIT- **Gastrointestinal tract infection** (esophagus, stomach, small and large bowel, and rectum) excluding gastroenteritis, appendicitis, and C. difficile infection.
Case 8 – different scenario

7/9 – Patient admitted and underwent laparoscopic hysterectomy (HYST).
While in recovery the patient’s vitals declined. Within two hours of the finish of the HYST procedure, the patient went back to the OR for an exploratory laparotomy (XLAP) through previous HYST incision site. XLAP findings revealed an excessive bleed.

7/16 – Patient did well and was discharged home.

7/20 – Readmitted with abdominal tenderness. CT of abdomen/pelvis revealed a large pelvic fluid collection. CT-guided drainage of pelvic fluid collection revealed 75 cc of purulent material.
What should be reported?

1. SSI – OREP attributed to the 7/9 HYST
2. SSI – OREP attributed to the 7/9 XLAP
3. No SSI – the XLAP was an invasive manipulation.
Case 8 – Rationale

- The SSI is attributed to the HYST procedure.
- XLAP procedure start time was within 24 hours of the HYST procedure finish time and through the same incision. **Therefore, report only one Denominator for Procedure form (for the HYST procedure), combining the durations for both procedures (HYST and XLAP) based on the procedure start times and finish times for both procedures.**
- Follow 24-hour rule reporting instructions for designation of wound class, ASA, and surgical wound closure technique.
Event Detail – Gross Anatomical Exam

Definition is found in key terms:

- Evidence of infection elicited or visualized on physical examination or observed during an invasive procedure. Includes physical examination of a patient during admission or subsequent assessments of the patient, 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 actually visualize the abscess.
  - Visualization of pus or purulent drainage from drains within an abscess is acceptable.
  - Abdominal pain elicited on physical exam post CSEC or hysterectomy, is sufficient evidence of infection detected without an invasive procedure for the general Organ Space SSI criteria.
Case 9

10/5 – 76-year-old underwent CARD procedure.

10/18 – While home, the patient began to cough excessively and complained of pain at the sternal incision site. Patient re-admitted.

10/19 – Surgeon noted distal end of sternal wound had spontaneously dehisced down to the level of the sternum. No cultures were performed.

10/20 – Patient to OR for debridement of sternum (non-NHSN operative procedure). The surgeon performed debridement down into the sternal bone due to necrosis but no evidence of purulence was noted. No cultures were performed.

10/24 – Patient was noted with purulent drainage from sternal incision and returned to OR for repeat I & D. Two cultures were collected of sternal bone and both subsequently returned positive for MRSA.
Is there an SSI attributed to the CARD procedure?

1. Yes – DIP SSI criterion B
2. Yes – Organ/Space SSI - BONE
3. Yes – Organ/Space SSI - MED
4. No
Case 9 – Rationale

Deep Incisional SSI

Must meet the following criteria:

Infection occurs within 30 or 90 days after 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 or aspirated by a surgeon, attending physician** or other designee

AND

organism is identified 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

AND

patient has at least one of the following signs or symptoms: fever (>38°C); localized pain or tenderness. A culture or non-culture based test that has a negative finding does not meet this criterion.

c. an abscess or other evidence of infection involving the deep incision that is detected on gross anatomical or histopathologic exam, or imaging test.
What is the date of event for this SSI?

1. October 18
2. October 19
3. October 24
Why Doesn’t this Case meet Organ/Space SSI?

- Invasive manipulation to the organ/space tissue level occurred during the 10/20 non-NHSN operative procedure.

- Non-NHSN operative procedure on 10/20 ended the surveillance period for the 10/5 CARD.

- Bone infection on 10/24 cannot be attributed as an SSI.
Non-NHSN Operative Procedures

- Always determine the ICD-10 PCS or CPT codes assigned to a procedure to determine if the procedure qualifies for SSI surveillance.

- You cannot apply SSI criteria to a non-NHSN operative procedure.
How do I determine the level of infection for the sternal site after cardiac procedures?

- Apply the superficial incisional SSI criteria if the infection involves the skin or subcutaneous tissue.
- If the infection goes to the sternum but does not involve the bone apply the deep incisional criteria.
- If the infection is of the sternal bone apply the organ/space BONE criteria.
- If the infection is below the sternum in the mediastinal space apply the MED – Mediastinitis criteria. These cultures are often named mediastinal fluid or tissue.

**NOTE:** If a patient meets both BONE and MED you call it an organ/space MED – Mediastinitis infection.
Case 10

2/11 – 71-year-old patient underwent right HPRO.

2/26 – Patient presented to MD office with hip pain and t-max 37.9°C. The superficial incision was noted with purulent drainage. Patient re-admitted to hospital.

2/27 – Patient returned to OR where the wound was probed and a small 1 cm gap was noted along the subcutaneous tissues where purulent material tracked laterally down to the prosthesis.
What type of SSI should be reported?

1. Superficial Incisional Primary (SIP)
2. Deep Incisional Primary (DIP)
3. Organ/Space SSI
Which site specific organ space definition should be reviewed for this case?

1. PJI – Periprosthetic Joint Infection

2. JNT – Joint
What is the date of event for this Organ/Space SSI?

1. February 26

2. February 27

2. February 27
Case 10 – Rationale

Organ/Space SSI

Must meet the following criteria:

- Infection occurs within 30 or 90 days after the NHSN operative procedure (where day 1 = the procedure date) according to the list in Table 2

- Infection involves any part of the body deeper than the fascial/muscle layers, that is opened or manipulated during the operative procedure

- Patient has at least one of the following:
  
  a. Purulent drainage from a drain that is placed into the organ/space (for example, closed suction drainage system, open drain, T-tube drain, 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 that is detected on **gross anatomical** or histopathologic exam, or imaging test evidence suggestive of infection

- Meets at least one criterion for a specific organ/space infection site listed in Table 3. These criteria are found in the Surveillance Definitions for Specific Types of Infections chapter 17.
Case 10 – Rationale

PII – Periprosthetic Joint Infection (for use as Organ/Space SSI following HPRO and KPRO only)

Joint or bursa infections must meet at least one of the following criteria:

1. Two positive periprosthetic 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)).

2. A sinus tract communicating with the joint.

3. Having three of the following minor criteria:
   a. elevated serum C-reactive protein (CRP; >100 mg/L) and erythrocyte sedimentation rate (ESR; >30 mm/hr.)
   b. elevated synovial fluid white blood cell (WBC; >10,000 cells/μL) count OR ++ (or greater) change on leukocyte esterase test strip of synovial fluid
   c. elevated synovial fluid polymorphonuclear neutrophil percentage (PMN% >90%)
   d. positive histological analysis of periprosthetic tissue (>5 neutrophils (PMNs) per high power field)
   e. organisms identified from a single positive periprosthetic 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)).
Case 10 – Rationale

- This patient met criteria for Organ/Space PJI on February 27th.

- You report the SSI that represents the deepest tissue level involved in the SSI. Therefore, you do not cite a superficial incisional SSI.
Case 11

11/23 – 59-year-old female was admitted for sudden onset of severe abdominal pain. A COLO was performed that revealed purulent material in the intraabdominal space.

12/11 – Patient was re-admitted to the hospital with new abdominal pain and nausea. Blood cultures obtained. A CT of the abdomen revealed small fluid collection in the right lower quadrant that was too small to drain. Attending physician documented antimicrobial treatment for an intraabdominal infection.

12/13 – Blood cultures returned (+) for *B. fragilis*
Does this patient meet criteria for an SSI?

1. Yes – SSI Organ/Space IAB, secondary BSI
2. Yes – SSI Organ/Space GIT, secondary BSI
3. Yes – SSI Organ/Space IAB, no secondary BSI
4. Yes – SSI Organ/Space GIT, no secondary BSI
5. No – there is not enough evidence to cite an SSI
Does this patient meet the criteria for PATOS?

1. PATOS = Yes
2. PATOS = No
Case 11 – Rationale

Organ/Space SSI

Must meet the following criteria:

- Infection occurs within 30 or 90 days after the NHSN operative procedure (where day 1 = the procedure date) according to the list in Table 2

- infection involves any part of the body deeper than the fascial/muscle layers, that is opened or manipulated during the operative procedure

- patient has at least one of the following:
  - c. an abscess or other evidence of infection involving the organ/space that is detected on gross anatomical or histopathologic exam, or imaging test evidence suggestive of infection

- meets at least one criterion for a specific organ/space infection site listed in Table 3. These criteria are found in the Surveillance Definitions for Specific Types of Infections chapter 17.
Case 11 – Rationale

IAB 3b: Patient has at least two of the following: fever (>38.0°C), hypotension, nausea*, vomiting*, abdominal pain or tenderness*, elevated transaminase level(s), or jaundice* And at least one of the following:

b. organism(s) identified from blood 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). The organism(s) identified in the blood must contain at least one MBI organism (See Appendix A of the BSI protocol)

AND

imaging test evidence suggestive of infection (for example, ultrasound, CT scan, MRI, ERCP, radiolabel scans [gallium, technetium, etc.] or on abdominal x-ray), which if equivocal is supported by clinical correlation, specifically, physician documentation of antimicrobial treatment for intraabdominal infection

* With no other recognized cause
Case 11 – Rationale

Organ/Space SSI criteria IAB 3b met.

PATOS = YES due to evidence of an organ/space documented in the operative procedure report for the index operative procedure.
Clinical Correlation

From Key Terms:

Physician documentation of antimicrobial treatment for site-specific infection.
### Appendix A: Partial List of Criterion 1 MBI-LCBI Eligible Enterobacteriaceae Genera

<table>
<thead>
<tr>
<th>Enterobacteriaceae Genus</th>
<th>Enterobacteriaceae Genus</th>
<th>Enterobacteriaceae Genus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abiotrophia</td>
<td>Escherichia (E)</td>
<td>Pantoaea (+E)</td>
</tr>
<tr>
<td>Alistipes</td>
<td>Eubacterium</td>
<td>Parabacteroides</td>
</tr>
<tr>
<td>Alloascardovia</td>
<td>Ewingella (E)</td>
<td>Peptostreptococcus</td>
</tr>
<tr>
<td>Anaerobiospirillum</td>
<td>Faecalibacterium</td>
<td>Pichia</td>
</tr>
<tr>
<td>Anaerococcus</td>
<td>Filifactor</td>
<td>Porphyromonas</td>
</tr>
<tr>
<td>Anaerohabdas</td>
<td>Finegoldia</td>
<td>Prevotella</td>
</tr>
<tr>
<td>Arceobacter</td>
<td>Flavonifractor</td>
<td>Proteus (E)</td>
</tr>
<tr>
<td>Atopobium</td>
<td>Fusobacterium</td>
<td>Providencia (E)</td>
</tr>
<tr>
<td>Averyella (+E)</td>
<td>Gemella</td>
<td>Pseudoflavonifractor</td>
</tr>
<tr>
<td>Bacteroides</td>
<td>Geotrichum</td>
<td>Pseudoramibacter</td>
</tr>
<tr>
<td>Bifidobacterium</td>
<td>Granulicatella</td>
<td>Rahmella (E)</td>
</tr>
<tr>
<td>Bilophila</td>
<td>Hafnia (E)</td>
<td>Raoultella (+E)</td>
</tr>
<tr>
<td>Blautia</td>
<td>Helcococcus</td>
<td>Rothia</td>
</tr>
<tr>
<td>Butiaxella (E)</td>
<td>Helicobacter</td>
<td>Ruminococcus</td>
</tr>
<tr>
<td>Campylobacter</td>
<td>Klebsiella (E)</td>
<td>Saccharomyces</td>
</tr>
<tr>
<td>Candida</td>
<td>Kluyvera (E)</td>
<td>Sarcina</td>
</tr>
<tr>
<td>Capanocytophaga</td>
<td>Kluyveromyces</td>
<td>Serratia (E)</td>
</tr>
<tr>
<td>CDC Enteric Group 58 (+E)</td>
<td>Lactobacillus</td>
<td>Shigella (E)</td>
</tr>
<tr>
<td>Cedeeea (E)</td>
<td>Leucicria (E)</td>
<td>Slackia</td>
</tr>
<tr>
<td>Citrobacter (E)</td>
<td>Leminorella (E)</td>
<td>Streptococcus (VGS subset)</td>
</tr>
<tr>
<td>Clostridium</td>
<td>Leptotrichia</td>
<td>Tamarella</td>
</tr>
<tr>
<td>Collinella</td>
<td>Leuconostoc</td>
<td>Tatumella (E)</td>
</tr>
<tr>
<td>Cronobacter (+E)</td>
<td>Megamonas</td>
<td>Terragenococcus</td>
</tr>
<tr>
<td>Dialister</td>
<td>Megasphaera</td>
<td>Tiszarella</td>
</tr>
<tr>
<td>Dichellobacter</td>
<td>Mitsuokella</td>
<td>Traubisella (E)</td>
</tr>
<tr>
<td>Edwardsellia (E)</td>
<td>Moellerella (E)</td>
<td>Vaillonella</td>
</tr>
<tr>
<td>Eggerthella</td>
<td>Mogibacterium</td>
<td>Weissella</td>
</tr>
<tr>
<td>Eggerthia</td>
<td>Morganella (E)</td>
<td>Yersinia (E)</td>
</tr>
<tr>
<td>Enterobacter (E)</td>
<td>Obsamibacterium (+E)</td>
<td>Yokenella (E)</td>
</tr>
<tr>
<td>Enterococcus</td>
<td>Odoribacter</td>
<td></td>
</tr>
</tbody>
</table>

E = Family Enterobacteriaceae

---

**Note:** See complete list of MBI Pathogens including species by selecting the MBI Organisms tab at the bottom of the [NHSN Organism List](#)
### MBI Organism List – SSI Supporting Materials

- **NHSN Organism List (All Organisms, Common Commensals, MBI Organisms, and UTI Bacteria)**
  - **January 2018** [XLSX – 296K]

<table>
<thead>
<tr>
<th>NHSN Organism Code</th>
<th>NHSN Organism Name</th>
<th>SNOMED Fully Specified Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>2BISP</td>
<td>Abiotrophia</td>
<td>Genus Abiotrophia (organism)</td>
</tr>
<tr>
<td>3BADIE</td>
<td>Abiotrophia adiacens</td>
<td>Granulicatella adiacens (organism)</td>
</tr>
<tr>
<td>4BADDE</td>
<td>Abiotrophia adiacens</td>
<td>Granulicatella elegans (organism)</td>
</tr>
<tr>
<td>5BADOE</td>
<td>Abiotrophia adiacens</td>
<td>Granulicatella adiacens (organism)</td>
</tr>
<tr>
<td>6GRANELEG</td>
<td>Abiotrophia elegans</td>
<td>Granulicatella elegans (organism)</td>
</tr>
<tr>
<td>7ROTEDE</td>
<td>Actinomyces dentocariosus</td>
<td>Rothia dentocariosa (organism)</td>
</tr>
<tr>
<td>8FICOS</td>
<td>Actinomyces gondiiformis</td>
<td>Fuscobacterium gondiiformans (organism)</td>
</tr>
<tr>
<td>9FICOSG</td>
<td>Actinomyces necrophorus</td>
<td>Fuscobacterium neoformans (organism)</td>
</tr>
<tr>
<td>10CUGRA</td>
<td>Actinomyces ramosum (organism)</td>
<td></td>
</tr>
<tr>
<td>11ESP</td>
<td>Aerobacter</td>
<td>Genus Enterobacter (organism)</td>
</tr>
<tr>
<td>12EA</td>
<td>Aerobacter aerogenes</td>
<td>Enterobacter aerogenes (organism)</td>
</tr>
<tr>
<td>13FMC</td>
<td>Aerobacter cloacae</td>
<td>Enterobacter cloacae (organism)</td>
</tr>
<tr>
<td>14ALSTSP</td>
<td>Allistipes</td>
<td>Genus Allistipes (organism)</td>
</tr>
<tr>
<td>15ALSTSE</td>
<td>Allistipes putredinis</td>
<td>Allistipes putredinis (organism)</td>
</tr>
<tr>
<td>16ALLOSDSS</td>
<td>Alloscardovia</td>
<td>Genus Alloscardovia (organism)</td>
</tr>
<tr>
<td>17ALLODOMNI</td>
<td>Alloscardovia ommicolenos</td>
<td>Alloscardovia ommicolenos (organism)</td>
</tr>
</tbody>
</table>
Sample of Complete NHSN Case Review Request

Please let NHSN know what your question(s) are and what your thoughts are regarding the case

Ex: *This is a complicated case and our team is trying to figure out whether it meets criteria for a Deep Incisional SSI- can you help us confirm?*

What NHSN needs from the user:

OR procedures and dates of all procedures including reoperations
  – Whether operative procedures are coded as NHSN operative procedures or not
  – If return to OR via same incision, was it within 24 hours of finish time of prior operative procedure?

Signs and symptoms?
Tissue levels involved- Superficial, Deep and/or Organ/Space?
Was any imaging testing performed and described?
Fluid collections or drainage?
  – CT guided drainage performed? Drainage from JP drain? Drainage from wound?
  – Purulent? How was the drainage described?

Culture Results
  – What site was the specimen collected from?
  – What tissue level (depth) was the specimen collected from? If you are unsure NHSN recommends consulting with the surgeon/physician to make that determination.

Other evidence of infection?
Completing the SSI Event Form (Numerator)
Complete a Surgical Site Infection (SSI) form for each patient found to have an SSI using the definitions.

* Fields are required fields
## Surgical Site Infection (SSI)

<table>
<thead>
<tr>
<th><strong>required for saving</strong></th>
<th><strong>required for completion</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Event #:</td>
<td></td>
</tr>
<tr>
<td>Facility ID:</td>
<td></td>
</tr>
<tr>
<td><em>Patient ID:</em></td>
<td>Social Security #:</td>
</tr>
<tr>
<td>Secondary ID:</td>
<td>Medicare #:</td>
</tr>
<tr>
<td>Patient Name, Last:</td>
<td>First:</td>
</tr>
<tr>
<td></td>
<td>Middle:</td>
</tr>
<tr>
<td>*Gender: F M Other</td>
<td>*Date of Birth:</td>
</tr>
<tr>
<td>Ethnicity (Specify):</td>
<td>Race (Specify):</td>
</tr>
<tr>
<td>*Event Type: SSI</td>
<td>*Date of Event:</td>
</tr>
<tr>
<td>*NHSN Procedure Code:</td>
<td>ICD-10-PCS or CPT Procedure Code:</td>
</tr>
</tbody>
</table>
**SSI Event Form – Basic SSI Information**

<table>
<thead>
<tr>
<th>Event Type: SSI</th>
<th>Date of Event:</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHSN Procedure Code:</td>
<td>ICD-10-PCS or CPT Procedure Code:</td>
</tr>
<tr>
<td>Date of Procedure:</td>
<td>*Outpatient Procedure: Yes *No</td>
</tr>
<tr>
<td>MDRO Infection Surveillance:</td>
<td></td>
</tr>
<tr>
<td>☐ Yes, this infection’s pathogen &amp; location are in-plan for Infection Surveillance in the MDRO/CDI Module</td>
<td></td>
</tr>
<tr>
<td>☐ No, this infection’s pathogen &amp; location are not in-plan for Infection Surveillance in the MDRO/CDI Module</td>
<td></td>
</tr>
<tr>
<td>Date Admitted to Facility:</td>
<td>Location:</td>
</tr>
</tbody>
</table>

Enter the date the patient was admitted to the hospital when the operation was performed (not the date of readmission).

**Note:** Location and ICD/CPT code fields are optional fields.
## SSI Event Form – Event Details

<table>
<thead>
<tr>
<th>Event Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Specific Event:</td>
</tr>
<tr>
<td>□ Superficial Incisional Primary (SIP)</td>
</tr>
<tr>
<td>□ Superficial Incisional Secondary (SIS)</td>
</tr>
<tr>
<td>✓ Organ/Space (specify site): PJI</td>
</tr>
</tbody>
</table>

*Infection present at the time of surgery (PATOS): □ Yes □ No

**PATOS** is a field on the SSI Event Form Only
Select the specific elements of the criterion that were used to identify this infection.
SSI Event Form – Event Details

 Detected: Required. Check the box to indicate when/how the SSI was identified.

- **A** SSI was identified before the patient was discharged from the facility following the operation
- **P** SSI was identified only as part of post-discharge surveillance, including ED visit without readmission. If readmitted, use RF or RO as appropriate.
- **RF** SSI was identified due to patient readmission to the facility where the operation was performed.
- **RO** SSI was identified due to patient admission to a facility other than where the operation was performed.
### SSI Event Form – Event Details

<table>
<thead>
<tr>
<th>Secondary Bloodstream Infection:</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Died:</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>SSI Contributed to Death:</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Pathogens Identified:</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

**Discharge Date:**

*Assurance of Confidentiality: The voluntarily provided information obtained in this surveillance system that would permit identification of any individual or institution is collected with a guarantee that it will be held in confidence, used only for the purposes stated, and will not be disseminated without the consent of the individual or the institution in accordance with Sections.*

SSI Contributed to Death: Required only if the patient died. If patient died, check Y if such evidence is available (for example, death/discharge note, autopsy report, etc.), otherwise check N.
Linking Procedures
Denominator for Procedure and SSI records must be linked so that the correct risk factor data are matched to the SSI for a given patient.
Linking Procedure and SSI Event

When SSI is selected from the Event Type field, click on the “Link to Procedure” button. The application finds the patient data and links the SSI event to the Denominator for Procedure Record.
## Linking Procedure and SSI Event

A new screen appears listing all the operative procedures this patient has had.

### Link to Procedure

<table>
<thead>
<tr>
<th>Procedure #</th>
<th>NHSN Procedure Code</th>
<th>ICD-9-CM Code</th>
<th>ICD-10 PCS</th>
<th>CPT Code</th>
<th>Procedure Date</th>
<th>Linked Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>28358710</td>
<td>COLO</td>
<td></td>
<td></td>
<td></td>
<td>01/25/2017</td>
<td></td>
</tr>
<tr>
<td>28872710</td>
<td>COLO</td>
<td></td>
<td></td>
<td></td>
<td>02/04/2017</td>
<td></td>
</tr>
<tr>
<td>29418390</td>
<td>COLO</td>
<td></td>
<td></td>
<td></td>
<td>10/01/2017</td>
<td></td>
</tr>
<tr>
<td>30067735</td>
<td>COLO</td>
<td></td>
<td></td>
<td></td>
<td>01/07/2018</td>
<td></td>
</tr>
</tbody>
</table>

Check the box next to the appropriate procedure, and click on the “Link/Unlink” button.
After linking an SSI to its corresponding procedure, the remainder of the SSI form must still be completed and the record saved for linking to occur.
After clicking SAVE...

All data are linked together
American Journal of Infection Control
NHSN Case – Study Series

- Additional educational tool
  - Perfect for reliability testing of ICP teams, APIC chapters, etc.
- Target: quarterly publication
- Address common surveillance scenarios
  - CLABSI, CAUTI, VAE, SSI, MDRO/CDI
- Test your knowledge
- Quiz and answers via web link
- Pursuing other access opportunities
Case Study - SSI

Protocol and Validation Team
National Healthcare Safety Network
February 27, 2018
1/5: 45-year-old woman undergoes an abdominal hysterectomy (HYST).

1/12: At her post-op follow-up visit, the surgeon notes purulence from the surgical incision site. The surgeon prescribes antibiotics and tells the patient to check back in a week if not improved.

1/17: Patient calls MD and says that the purulent drainage has increased and now she has lower abdominal pain not controlled with pain medication. Patient is re-admitted to hospital. CT scan of abdomen/pelvis shows free air in the abdomen and a fluid collection in the pelvis that is suspicious for abscess.

1/18: Patient returns to the OR for an XLAP. Op note documentation is a large abscess within the deep pelvic cavity. The deep pelvic cavity is irrigated and the surgeon performs lysis of adhesions. JP drain is placed within the pelvis.
Knowledge Check –
What SSI criteria is met?

1. Superficial Incisional SSI Criteria
2. Deep Incisional SSI Criteria
3. Organ/Space SSI Criteria – OREP
4. Organ/Space SSI Criteria – IAB
5. SSI criteria is not met
Knowledge Check –
What is the Date of Event (DOE) for this SSI?

1. 1/12
2. 1/17
3. 1/18
4. SSI criteria is not met
Rationale

CT scan of abdomen/pelvis notes free air in the abdomen and a fluid collection in the pelvis (evidence suggestive of infection). This meets general organ/space SSI criterion C.

OREP is the site-specific infection criteria to apply based on gross anatomic evidence of large abscess within the deep pelvic cavity (OREP criterion 2).

SSI DOE is 1/17 – date of first element used to meet Organ/Space SSI criteria. (on 1/17 patient met criteria for the deepest level of infection during the SSI surveillance period - O/S SSI).
1/22: Patient remains in hospital with complaints of intense abdominal pain and vomiting. A CT is performed that shows a possible post-op ileus.

1/23: Patient returns to OR for XLAP. Operative findings reveal two perforations in the ascending colon, a right hemicolecctomy is performed (COLO), and liquid stool is noted in the abdominal cavity. No cultures collected. The surgical incision is closed to the fascial level, skin is left open, and a wound vac is placed.
Knowledge Check – What SSI criteria is met?

1. Superficial Incisional SSI Criteria
2. Deep Incisional SSI Criteria
3. Organ/Space SSI Criteria – GIT
4. Organ/Space SSI Criteria – IAB

5. SSI criteria is not met
Knowledge Check –
What is the DOE for this SSI?

1. 1/18
2. 1/22
3. 1/23
4. SSI criteria is not met
Rationale

Liquid stool is contamination but is not evidence of infection. There is no evidence of infection noted on 1/23 in the operative procedure report.
1/25: Patient spikes a temperature (T-max 39.8°C); blood cultures collected. Wound care RN visits and documents yellow drainage from midline wound with a fascial dehiscence at time of wound vac change. Patient returns to the OR for laparotomy with abdominal wall closure (XLAP). Surgeon notes “cloudy fluid collection near anastomosis.” Pathology of colon is collected.

1/26: 10 hours after the conclusion of the 1/25 XLAP, the patient returns to the OR for a non-NHSN operative procedure via the same incision for control of a post-operative bleed.

1/28: The 1/25 blood cultures result = 2/2 Klebsiella oxytoca.

1/30: The 1/25 pathology result = mucosal abscess of the colon.
Knowledge Check –
What SSI criteria is met?

1. SSI Organ/Space, specific site GIT, with a secondary BSI
2. SSI Organ/Space, specific site IAB, with a secondary BSI
3. SSI Organ/Space, specific site GIT without secondary BSI
4. Does not meet SSI criteria
Knowledge Check –
What is the DOE for this SSI?

1. 1/23

2. 1/25 ✔

3. 1/26

4. SSI criteria is not met
Knowledge Check –
What operative procedure gets the SSI attribution?

1. 1/23 XLAP
2. **1/23 COLO**
3. 1/25 XLAP
Knowledge Check –
Does PATOS = Yes?

1. Yes

✓ 2. No
Rationale

1/25 histopathology report indicates mucosal abscess of the colon - this meets general organ/space SSI criterion C.

GIT focuses on infections of the GI tract and therefore you would apply GIT and not IAB (general intraabdominal space) criteria. GIT criterion 1b is met with evidence of abscess on histopathologic exam and positive blood cultures with MBI organism.

SSI attribution is to COLO based on Table 4 (level of SSI risk by procedure category).

PATOS = no - liquid stool is evidence of contamination but not evidence of infection.
2/3: Patient remains in hospital. MD notes patient has clear yellow drainage from her surgical site and new intermittent nausea. A culture of the drainage is collected from the superficial incision and is positive for *Enterococcus faecalis*.

2/4: CT of abdomen is performed and shows a fluid collection in RUQ that’s questionable for infection. Patient returns to OR for XLAP, debridement of necrotic tissue, and abdominal washout. There is no documentation of purulence or abscess noted. Cultures of peritoneal fluid collected are positive with *Enterococcus faecalis* identified.
Knowledge Check –
What SSI criteria is met?

1. Superficial Incisional SSI Criteria
2. Deep Incisional SSI Criteria
3. Organ/Space SSI Criteria – GIT
4. Organ/Space SSI Criteria – IAB
5. SSI criteria is not met
Knowledge Check –
What is the DOE for this SSI?

1. 2/3
2. 2/4
3. SSI criteria is not met
Knowledge Check –
What operative procedure gets the SSI attribution?

1. 1/25 XLAP

2. 1/26 Non-NHSN operative procedure
Rationale

Must meet both general O/S and site-specific criteria to attribute an Organ/Space SSI.

- O/S criterion B and C met
- IAB criterion 3a **not met** - only one symptom documented

You report a SIP (deepest tissue level where SSI criteria is met) with DOE 2/3.

Why not the non-NHSN operative procedure? You apply the 24-hour rule and therefore the XLAP gets the SSI attribution.