

Form Approved
OMB No. 0920-0666
Exp. Date: 12/31/2027
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NHSN
NATIONAL HEALTHCARE
SAFETY NETWORK

Denominator for Procedure

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*required for saving

Facility ID	Procedure #
*Patient ID	Social Security #
Secondary ID	Medicare #
Patient Name, Last	First Middle
*Sex: F M	*Date of Birth
Ethnicity (Specify): Hispanic or Latino Not Hispanic or Latino Unknown Declined to respond	Race (Specify): American Indian or Alaska Native Asian Black or African American Middle Eastern or North African Native Hawaiian or Pacific Islander White Unknown Declined to respond
Language: (Select all that apply)	Interpreter Needed: Yes No Declined to Respond Unknown
Event Type: PROC	*NHSN Procedure Code
*Date of Procedure:	ICD-10-PCS or CPT Procedure Code:
Procedure Details	
*Outpatient: Yes No	*Duration: _____ Hours _____ Minutes
*Wound Class: C CC CO D	*General Anesthesia: Yes No
ASA Score: 1 2 3 4 5	*Emergency: Yes No
*Trauma: Yes No	*Diabetes Mellitus: Yes No
*Height: _____ feet _____ inches	*Closure Technique: Primary Other than primary
(choose one) _____ meters	Surgeon Code: _____
*Weight: _____ lbs/kg (circle one)	

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NHSN INPATIENT OPERATIVE PROCEDURE VS. NHSN OUTPATIENT OPERATIVE PROCEDURE

► 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.

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DENOMINATOR REPORTING INSTRUCTIONS

- Denominator data is submitted for each individual NHSN operative procedure performed assigned to the procedure category selected for monitoring on the facility MRP.
- Depending on scenario, Denominator Reporting Instructions provide guidance related to:
 - Number of procedure forms to complete
 - Duration of procedure(s)
 - More than one operative procedure through same incision/surgical space within 24 hours
 - HYST/VHYS reporting
 - Patient expires in the Operating Room

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APPENDIX B: GUIDANCE FOR MULTIPLE PROCEDURE REPORTING

January 2023

Procedure associated Multiple SSI Events

APPENDIX B

Guidance for Multiple Procedure Reporting

This table addresses the 12 NHSN operative procedure categories that are included in [Denominator Reporting Instruction #6](#). Same NHSN operative procedure category via separate incision: AMP, BRST, CEA, FUSN, FX, HER, HPRO, KPRO, LAM, NEPH, OVRY, PVBY. The instruction provides guidance on correct procedure reporting when multiple procedures from one of these categories (procedures from the same category and performed at separate incisions) are performed on the same patient on the same day. The table includes the maximum number of procedures per day per patient and an explanation.

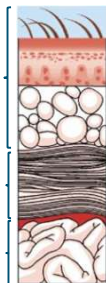
Operative Procedure Category	Maximum # of Procedures per Day	Explanation
AMP - Limb amputation	4	Corresponds to the four (4) extremities (left arm, left leg, right arm, right leg). In instances where multiple AMP procedures are performed on the same extremity, only one AMP procedure should be reported for that extremity.
BRST - Breast surgery	2	Corresponds to the left breast and right breast.
CEA - Cerebral aneurysm repair	2	Corresponds to the left artery and right artery.
FUSN - Spinal Fusion	4	Corresponds to the four (4) anatomical spinal levels (cervical, thoracic, lumbar, sacral). When more than one anatomical spinal level is fused, report the highest spinal level and approach to which the most vertebrae were fused. The number of FUSN procedures reported depends on various factors: • When a spinal fusion procedure is performed on one spinal level (unifocal spinal fusion), this is considered

- Addresses the 12 NHSN operative procedure categories that are in **Denominator for Reporting Instruction #6**- Same NHSN operative procedure category via separate incision: AMP, BRST, CEA, FUSN, FX, HER, HPRO, KPRO, LAM, NEPH, OVRY, PVBY.
- Correct procedure reporting when multiple procedures form one of these categories (procedures from the same category) are performed via separate incision per patient per calendar day.
- The table includes the maximum # of procedures per day per patient and an explanation.

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SSI: THREE TISSUE LEVELS SURGICAL SITE INFECTION CRITERIA

- Superficial Incisional
 - Skin and subcutaneous tissues of the incision
- Deep Incisional
 - Deep soft tissues of the incision
 - For example, muscle and fascia
- Organ/Space
 - Any part of the body deeper than the fascial/muscle layers



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DEFINITIONS

► Superficial Incisional SSI Criteria:

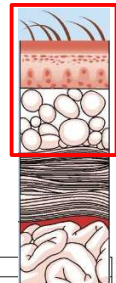


Table 1. Surgical Site Infection Criteria

Criterion	Surgical Site Infection (SSI)
	Superficial incisional SSI
	Must meet the following criteria:
	Date of event occurs within 30 days following the NHSN operative procedure (where day 1 = the procedure date)
	AND
	involves only skin and subcutaneous tissue of the incision

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DEFINITIONS

► Superficial Incisional SSI Criteria cont.:

AND

patient has at least one of the following:

- purulent drainage from the superficial incision.
- organism(s) 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])
- a superficial incision that is deliberately opened or re-accessed by a surgeon, physician* or physician designee and culture or non-culture based testing of the superficial incision or subcutaneous tissue is not performed

AND

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

- diagnosis of a superficial incisional SSI by a physician* or physician designee

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DEFINITIONS

► Superficial Incisional SSI Criteria Notes:

► Two specific types of superficial incisions SSIs

► 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 (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 one or more incisions (e.g., donor site for CBGB)

Note: Refer to SSI Event Reporting Instruction #7 for NHSN operative procedure categories with secondary incision sites available for SSI attribution.

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KEY CONCEPT

► Reporting Instructions for Superficial SSI

- A stitch abscess (minimal inflammation and discharge contained to the points of suture penetration) is not considered an SSI
- A localized stab wound, or pin site infection is not considered an SSI
 - may be SKIN/ST infection
 - A laparoscopic trocar site is considered a surgical incision and not a stab wound. If the surgeon uses the trocar site to place a drain at the end of the procedure this is considered a surgical incision.
- Diagnosis of cellulitis (redness/warmth/swelling), by itself, does not meet the criteria for incision SSI criterion 'd'.

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KNOWLEDGE CHECK

► Locate your Superficial SSI criteria.

► Ready

► Set

► GO!

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- 11/1 – Mr. Wall is admitted for a spinal fusion.
- 11/4 - discharged
- 11/20 – on post-op visit patient noted to have redness and swelling of the superficial incision. The wound is not cultured nor probed. The patient is given antibiotics and sent home.

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KNOWLEDGE CHECK... CONTINUED

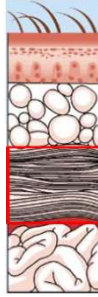
- 11/1 – Mr. Wall is admitted for a spinal fusion.
- 11/4 - discharged
- 11/20 – on post-op visit patient noted to have redness and swelling of the superficial incision. The wound is not cultured nor probed. The patient is given antibiotics and sent home.
- 11/29 Mr. Wall presents to the Emergency room with purulent drainage from the superficial incision. The wound is cultured and grows MRSA. Patient is given antibiotics and discharged home.

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DEFINITIONS

► Deep Incisional SSI Criteria:

Deep incisional SSI
Must meet the following criteria:
Date of event occurs within 30 or 90 days following the NHSN operative procedure (where day 1 = the procedure date) according to the list in Table 2
AND
involves deep soft tissues of the incision (for example, fascial and muscle layers)



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DEFINITIONS

► Deep Incisional SSI Criteria continued:

- AND**
patient has at least one of the following:
- purulent drainage from the deep incision
 - a deep incision that is deliberately opened*, re-accessed, or aspirated by a surgeon, physician** or physician designee or spontaneously dehisces
- AND**
organism(s) identified from the deep soft tissues of the incision by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (for example, not Active Surveillance Culture/Testing [ASC/AST]) or culture or non-culture based microbiologic testing method is not performed. A culture or non-culture based test from the deep soft tissues of the incision that has a negative finding does not meet this criterion.
- AND**
patient has at least one of the following signs or symptoms: fever (>38°C); localized pain or tenderness
- an abscess or other evidence of infection involving the deep incision detected on gross anatomical exam, histopathologic exam, or imaging test

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DEFINITIONS

► Deep Incisional SSI Criteria Notes:

- Deep incisional SSI**
- There are two specific types of deep incisional SSIs:
- 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) – 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)

Note: Refer to SSI Event Reporting Instruction #7 for NHSN operative procedure categories with secondary incision sites available for SSI attribution.

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DEFINITIONS

► Organ/Space SSI Criteria:

- Organ/Space SSI**
- Must meet the following criteria:
- Date of event occurs within 30 or 90 days following the NHSN operative procedure (where day 1 = the procedure date) according to the list in [Table 2](#)
- AND**
involves the organ/space tissues (deeper than the fascia/muscle)



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What surgeries count as NHSN Operative Procedures?

Procedure Category	ICD-10-PCS Codes	Procedure
AAA	04B00ZZ	Excision of Abdominal Aorta, Open
AAA	04B04ZZ	Excision of Abdominal Aorta, Percutaneous
AAA	04R00ZZ	Replacement of Abdominal Aorta, Open
AAA	04R04ZZ	Replacement of Abdominal Aorta, Percutaneous
AAA	04R00KZ	Replacement of Abdominal Aorta, Open Approach

Procedure Category	CPT Codes	Procedure
AAA	34830	Open repair of infrarenal aortic aneurysm, following unsuccessful endovascular repair
AAA	34831	Open repair of infrarenal aortic aneurysm, following unsuccessful endovascular repair
AAA	34832	Open repair of infrarenal aortic aneurysm, following unsuccessful endovascular repair
AAA	35081	Direct repair of aneurysm, pseudoaneurysm, or dissection of abdominal aorta

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

Category	Operative Procedure	Category	Operative Procedure
AAA	Abdominal aortic aneurysm repair	LAM	Laminectomy
AMP	Amputation	LTP	Liver transplant
APPY	Appendix surgery	NECK	Neck surgery
AVSD	Shunt for dialysis	NEPH	Kidney surgery
BLU	Bile duct, liver or pancreatic surgery	OVRY	Ovarian surgery
CEA	Carotid endarterectomy	PRST	Prostate surgery
CHOL	Gallbladder surgery	REC	Rectal surgery
COLO	Colon surgery	SB	Small bowel surgery
CSEC	Cesarean section	SPLE	Spleen surgery
GAST	Gastric surgery	THOR	Thoracic surgery
HFT	Heart transplant	THYR	Thyroid and/or parathyroid surgery
HYST	Abdominal hysterectomy	VHVS	Vaginal hysterectomy
KTP	Kidney transplant	XLAP	Exploratory laparoscopy

Notes:

- Superficial incisional SIs are monitored for a 30-day period for all procedure categories.
- Secondary incisional SIs are monitored for a 30-day period regardless of the surveillance period for the primary incision.

SPICE

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DEFINITIONS

► Organ/Space SSI Criteria cont.:

- AND**
patient has at least one of the following:
- purulent drainage from a drain placed into the organ/space (for example, closed suction drainage system, open drain, T-tube drain, CT-guided drainage)
 - organism(s) identified from 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])
 - an abscess or other evidence of infection involving the organ/space detected on:
 - gross anatomical exam or
 - histopathologic exam or
 - imaging test evidence definitive or equivocal for 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](#)).

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ORGAN SPACE SSI

- General Organ space SSI criterion AND applicable Chapter 17 site-specific criterion must be met to fully meet Organ Space SSI criteria.

AND

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Table 3. Specific Sites of an Organ/Space SSI

Category	Specific Site	Category	Specific Site
BONE	Osteomyelitis	MED	Mediastinitis
BRST	Breast abscess or mastitis	MEN	Meningitis or ventriculitis
CARD	Mycocarditis or pericarditis	ORAL	Oral cavity infection (mouth, tongue, or gums)
DISC	Disc space infection	OREP	Deep pelvic tissue infection or other infection of the male or female reproductive tract
EAR	Ear, mastoid infection	PJI	Periprosthetic joint infection
EMET	Endometritis	SA	Spinal abscess/infection
ENDO	Endocarditis	SINU	Sinusitis
GIT	Gastrointestinal (GI) tract infection	UR	Upper respiratory tract, pharyngitis, laryngitis, epiglottitis
IAB	Intraabdominal infection, not specified elsewhere	USI	Urinary System Infection
IC	Intracranial infection	VASC	Arterial or venous infection
JNT	Joint or bursa infection	VCUF	Vaginal cuff infection
LUNG	Other infection of the lower respiratory tract		

(Criteria for these sites can be found in Chapter 17 (Surveillance Definitions for Specific Types of Infections))

Note: Appendix contains a list of all NHSN operative procedure categories and the site-specific SSIs that may be attributable to each category.

SPICE

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Criteria can be found in the Surveillance Definitions for Specific Types of Infections, Chapter 17

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► Appendix A: Specific event types available for SSI attribution by NHSN procedure category.

- SSI events are limited to the specific site types outlined in Appendix A for each procedure category.
- Starts pg. 9-33 SSI Protocol
- If an eligible event type occurs within the surveillance period following an NHSN operative procedure the event is attributed to that procedure.

APPENDIX A

Specific event types available for SSI attribution by NHSN procedure category

Procedure Category	Specific Event Types
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 GIT - Gastrointestinal tract SIP - Superficial Incisional Primary VASC - Arterial or venous infection
BILI - Bile duct, liver or pancreatic surgery	DIP - Deep Incisional Primary GIT - Gastrointestinal tract SIP - Superficial Incisional Primary VASC - Arterial or venous infection
BRST - Breast surgery	BRST - Breast abscess or mastitis DIP - Deep Incisional Primary DIS - Deep Incisional Secondary SIP - Superficial Incisional Primary SIS - Superficial Incisional Secondary
CARD - Cardiac surgery	BONE - Osteomyelitis CARD - Myocarditis or pericarditis IAB - Intraabdominal, not specified elsewhere LUNG - Other infections of the lower respiratory tract MED - Mediastinitis SIP - Superficial Incisional Primary VASC - Arterial or venous infection

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SSI-PROCEDURE-ASSOCIATED MODULE

- Chapter 2 terms **not** applicable to SSI:

- Infection window period (IWP)
- Present on admission (POA)
- Healthcare-associated infection
- (HAI)
- Repeat infection timeframe (RIT)

- SSI protocol uses terms:

- Date of Event (DOE)
- Secondary BSI Attribution Period

SURVEILLANCE PERIOD

- The timeframe following an NHSN operative procedure for monitoring and identifying an SSI event.

- The surveillance period is determined by the NHSN operative procedure category (Table 2).
- Superficial incisional SSI: 30-day surveillance period for all procedure categories.
- Secondary incisional SSI: 30-day surveillance period for all procedure categories.
- Deep Incisional or Organ space have 30-90-day surveillance period.

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

Category	Operative Procedure	Category	Operative Procedure
AAA	Abdominal aortic aneurysm repair	LANI	Laminectomy
AMP	Limb amputation	LTP	Liver transplant
APPY	Appendix surgery	NECK	Neck surgery
AVSD	Shunt for dialysis	NOH	Nephrectomy
BILI	Bile duct, liver or pancreatic surgery	OVRY	Ovarian surgery
CASA	Carotid endarterectomy	PRST	Prostate surgery
CHOL	Gallbladder surgery	REC	Rectal surgery
COLD	Colon surgery	SB	Small bowel surgery
COSC	Cesarean section	SPLI	Spleen surgery
GAST	Gastric surgery	THOR	Thoracic surgery
HTP	Heart transplant	THYR	Thyroid and/or parathyroid surgery
HYST	Abdominal hysterectomy	VHVS	Vaginal hysterectomy
KTP	Kidney transplant	KLAP	Explanatory laparotomy

Notes:

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

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PURULENCE

- NHSN does not define purulence, as there is no standard, clinically agreed upon definition
 - The descriptors "pus" or "purulence" are sufficient evidence
- Drainage using a color descriptor **AND** a consistency descriptor (if combined) are acceptable to indicate purulence:
 - Color:** green, yellow
 - Consistency:** milky, thick, creamy, opaque, viscous
 - Example: 'thick yellow' drainage is acceptable to indicate purulence but 'thick' alone or 'yellow' alone is not.
- Gram stain results (WBCs or PMNs) cannot be used to define purulence

Note: The following descriptors cannot be used to define purulence/infection: 'Cloudy', 'turbid', 'murky', or the odor of the wound.

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SSI EVENT REPORTING INSTRUCTIONS

- SSI Event Reporting Instructions starting on page 9-18 of the SSI module, provides guidance on accurate SSI even reporting including:
 - Excluded organisms
 - Infection Present at the time of surgery (PATOS)
 - SSI attribution
 - SSI even detected at another facility
 - SSI following invasive manipulation or accessions of the operative site

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INFECTION PRESENT AT TIME OF SURGERY(PATOS)

- Denotes that there is evidence of an infection visualized (seen) during the operative procedure to which the SSI is attributed.
- The evidence of infection must be noted intraoperatively and documented within the **narrative portion** of the operative note or report of surgery (commonly labeled the 'procedure in detail' or 'description of procedure's section')
 - Pre/post op diagnoses, 'indication for surgery' NOT surgical narrative.
 - A "Findings" section, if a reflection of what the surgeon 'sees' present at the time of surgery, can be considered a surgical narrative.
- PATOS is tissue level specific meaning the documented infection must be at the same tissue level of the subsequent SSI.
- Pathology findings, culture results, wound classification, trauma status, and imaging test findings cannot be used for PATOS determination.
- Traumas resulting in a contaminated case does not necessarily meet PATOS.

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INFECTION PRESENT AT TIME OF SURGERY(PATOS)

- Examples that indicate evidence of infection may include:
 - Abscess, infection, purulence, phlegmon, or "feculent peritonitis".
 - A ruptured/perforated appendix is evidence of infection at the organ/space level
- Examples of verbiage that is not considered evidence of infection include but are not limited to:
 - colon perforation, contamination, necrosis, gangrene, fecal spillage, nicked bowel during procedure, or a note of inflammation.
- The use of the ending "itis" in an operative note does not automatically meet PATOS, as it may only reflect inflammation.
 - Examples: diverticulitis, peritonitis, appendicitis.

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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 related to the surgical site/space.
 - An invasive manipulation/accesion of the site is performed for diagnostic or therapeutic purposes (for example, needle aspiration, accessions of ventricular shunts, accessions of breast expanders)
 - An infection subsequently develops in a tissue level which was entered during the manipulation/accesion
- Notes:**
 - Suspicion or evidence of infection may include signs and symptoms of infection (e.g. fever, abdominal pain) depending on the site of the procedure.
 - Tissue levels not manipulated/accesion are still eligible for SSI.
 - Does not include closed manipulation, wound packing or changing of wound packing materials, or routine flushing of catheters as part of standard care and maintenance.

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SSI ATTRIBUTION

- SSI attribution after multiple categories of NHSN procedures are performed during a single trip to the OR:
 - Attribute the SSI to the procedure that is thought to be associated with the infection.
 - When attribution is not clear, use the NHSN Principal Operative Procedure Category Selection Lists (Table 4) to select the operative procedure to which to attribute the SSI.

Table 4. NHSN Principal Operative Procedure Category Selection List
(The categories with the highest risk of SSI are listed before those with lower risks.)

Priority	Category	Abdominal Operative Procedures
1	LTSP	Liver transplant
2	COLD	Colon surgery
3	BSLT	Bile duct, liver or pancreatic surgery
4	SB	Small bowel surgery
5	RSC	Rectal surgery
6	KSTP	Kidney transplant
7	GAAT	Gastric surgery
8	AAL	Abdominal aortic aneurysm repair
9	HYST	Abdominal hysterectomy
10	CSIC	Cesarean section
11	PLAP	Laparoscopy
12	APPW	Appendix surgery
13	HBR	Hernia surgery
14	NEPH	Kidney surgery
15	WVHS	Vaginal hysterectomy
16	SPLE	Spleen surgery
17	CHOL	Gall bladder surgery
18	OVARY	Ovarian surgery
Priority	Category	Thoracic Operative Procedures
1	HTSP	Heart transplant
2	CSGB	Coronary artery bypass graft with donor incision(s)
3	CSIC	Coronary artery bypass graft, chest incision only
4	CARD	Cardiac surgery
5	THOR	Thoracic surgery
Priority	Category	Neurological (Brain/Spine) Operative Procedures
1	VSHN	Ventricular shunt
2	CRAN	Cranectomy
3	SPIN	Spinal fusion
4	LAMP	Laminectomy
Priority	Category	Neck Operative Procedures
1	NECK	Neck surgery
2	TRKH	Thyroid and/or parathyroid surgery

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RESOURCES

- ▶ NHSN Surgical Site Infection (SSI) Events webpage
 - ▶ <https://www.cdc.gov/nhsn/pssc/ssi/index.html>
- ▶ Patient Safety Component Manual Chapter 9: SSI Protocol
 - ▶ <https://www.cdc.gov/nhsn/pdfs/pscmanual/9pssccurrent.pdf>
- ▶ Patient Safety Component Manual Chapter 17: CDC/NHSN Surveillance Definitions for Specific Types of Infections
 - ▶ https://www.cdc.gov/nhsn/pdfs/pscmanual/17pscnoisinfdef_current.pdf
- ▶ FAQs: Surgical Site Infections (SSI) Events:
 - ▶ <https://www.cdc.gov/nhsn/faqs/faq-ssi.html>
- ▶ Surgical Site Procedure Codes
 - ▶ [FAQs: Surgical Site Procedure Codes | NHSN | CDC](#)

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QUESTIONS



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