



**TENNESSEE DEPARTMENT OF HEALTH**  
**HEALTHCARE-ASSOCIATED INFECTIONS AND ANTIMICROBIAL RESISTANCE PROGRAM**  
**HAI Surveillance Definitions**  
**SURGICAL SITE INFECTION (SSI)**



*(Last updated January 1, 2015)*

**An NHSN operative procedure is a procedure:**

- That is included in the table titled “NHSN Operative Procedure Category Mappings to ICD-9-CM and CPT Codes”

**AND**

- Takes place during an operation where at least **ONE** **△** of the following:

- △** incision (including laparoscopic approach) is made through the skin or mucous membrane

- △** reoperation via an incision that was left open during a prior operative procedure

**AND**

- Takes place in an operation 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. This may include an operating room, C-section room, interventional radiology room, or a cardiac catheterization lab.

**ASA physical status:** Assessment by the anesthesiologist of the patient's preoperative physical condition using the American Society of Anesthesiologists' (ASA) Classification of Physical Status. Patient is assigned one of the following:

1. A normally healthy patient
2. A patient with mild systemic disease
3. A patient with severe systemic disease
4. A patient with severe systemic disease that is a constant threat to life
5. A moribund patient who is not expected to survive without the operation.

**NOTE:** Do NOT report procedures with an ASA physical status of 6 (a declared brain-dead patient whose organs are being removed for donor purposes) to NHSN.

**Date of Event:** 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. Synonym: infection date.

**Diabetes:** The NHSN SSI surveillance definition of diabetes indicates that the patient has a diagnosis of diabetes requiring management with insulin or a non-insulin anti-diabetic agent. This includes patients with “insulin resistance” who are on management with anti-diabetic agents. This also includes patients with a diagnosis of diabetes who are noncompliant with their diabetes medications. The discharge ICD-9-CM codes in the 250 to 250.93 range are also acceptable for use to answer YES to the diabetes field question. The NHSN definition excludes patients with no diagnosis of diabetes. The definition excludes patients who receive insulin for perioperative control of hyperglycemia but have no diagnosis of diabetes.



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Duration of operative procedure: The interval in hours and minutes between the Procedure/Surgery Start Time, and the Procedure/Surgery Finish Time, as defined by the Association of Anesthesia Clinical Directors (AACD):

- Procedure/Surgery Start Time (PST): Time when the procedure is begun (e.g., incision for a surgical procedure).
- Procedure/Surgery Finish (PF): Time when all instrument and sponge counts are completed and verified as correct, all postoperative radiologic studies to be done in the OR are completed, all dressings and drains are secured, and the physicians/surgeons have completed all procedure-related activities on the patient.

Emergency operative procedure: A nonelective, unscheduled operative procedure. Emergency operative procedures are those that do not allow for the standard immediate preoperative preparation normally done within the facility for a scheduled operation (e.g., stable vital signs, adequate antiseptic skin preparation, colon decontamination in advance of colon surgery, etc.).

General Anesthesia: The administration of drugs or gases that enter the general circulation and affect central nervous system to render the patient pain free, amnesic, unconscious, and often paralyzed with relaxed muscles.

Height: The patient's most recent height documented in the medical record in feet (ft) and inches (in), or meters (m).

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 the same calendar days.

NHSN Outpatient 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.

Non-Primary Closure: is defined as closure that is other than primary and includes surgeries in which the skin level is left completely open during the original surgery and therefore cannot be classified as having primary closure. For surgeries with non-primary closure, the deep tissue layers may be closed by some means (with the skin level left open), or the deep and superficial layers may both be left completely open. An example of a surgery with non-primary closure would be a laparotomy in which the incision was closed to the level of the deep tissue layers, sometimes called "fascial layers" or "deep fascia," but the skin level was left open. Another example would be an "open abdomen" case in which the abdomen is left completely open after the surgery. Wounds with non-primary closure may or may not be described as "packed" with gauze or other material, and may or may not be covered with plastic, "wound vacs," or other synthetic devices or materials.

\*Primary closure is defined as closure of the skin level during the original surgery, regardless of the presence of wires, wicks, drains, or other devices or objects extruding through the incision. This category includes surgeries where the skin is closed by some means. 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

**NOTE:** If a procedure has multiple incision/laparoscopic trocar sites and any of the incisions are closed primarily then the procedure technique is recorded as primary closed.



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**Scope:** An instrument used to visualize the interior of a body cavity or organ. In the context of an NHSN operative procedure, use of a scope involves creation of several small incisions to perform or assist in the performance of an operation rather than use of a traditional larger incision (i.e., open approach). Robotic assistance is considered equivalent to use of a scope for NHSN SSI surveillance. See also [Instructions for Completion of Denominator for Procedure](#) Form and both Numerator Data and Denominator Data reporting instructions in the [NHSN Patient Safety Manual](#).

**NOTE:** If a scope site has to be extended for hand assist or removal of specimen this will still meet scope = Yes. If the procedure is converted to an open procedure it will be scope = No.

**Secondary BSI Attribution Period:** The secondary BSI attribution period for SSI is a 17-day period that includes the date of event, 3 days prior and 13 days after.

**Trauma:** Blunt or penetrating injury occurring prior to the start of the procedure.

**Weight:** The patient's most recent weight documented in the medical record in pounds (lbs) or kilograms (kg) prior to or otherwise closest to the procedure.

**Wound class:** An assessment of the degree of contamination of a surgical wound at the time of the operation. Wound class should be assigned by a person involved in the surgical procedure, e.g., surgeon, circulating nurse, etc. The wound class system used in NHSN is an adaptation of the American College of Surgeons wound classification schema. Wounds are divided into four classes:

**Clean:** An uninfected operative wound in which no inflammation is encountered and the respiratory, alimentary, genital, or uninfected urinary tracts are not entered. In addition, clean wounds are primarily closed and, if necessary, drained with closed drainage. Operative incisional wounds that follow nonpenetrating (blunt) trauma should be included in this category if they meet the criteria.

**NOTE:** The clean wound classification level will not be available for denominator data entry for the following NHSN operative procedure categories: APPY, BILI, CHOL, COLO, REC, SB, and VHYS.

**Clean-Contaminated:** Operative wounds in which the respiratory, alimentary, genital, or urinary tracts are entered under controlled conditions and without unusual contamination. Specifically, operations involving the biliary tract, appendix, vagina, and oropharynx are included in this category, provided no evidence of infection or major break in technique is encountered

**Contaminated:** Open, fresh, accidental wounds. In addition, operations with major breaks in sterile technique (e.g., open cardiac massage) or gross spillage from the gastrointestinal tract, and incisions in which acute, nonpurulent inflammation is encountered including necrotic tissue without evidence of purulent drainage (e.g., dry gangrene) are included in this category.

**Dirty or Infected:** Includes old traumatic wounds with retained devitalized tissue and those that involve existing clinical infection or perforated viscera. This definition suggests that the organisms causing postoperative infection were present in the operative field before the operation.



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**Superficial Incisional Surgical Site Infection**  
(Last updated January 1, 2015)

**DEFINITION:** A superficial incisional SSI must meet the following criterion:

**□ Criterion 1:**

- Infection occurs within 30 days after any NHSN operative procedure (where day 1 = the procedure day), including those coded as 'OTH'\*

**AND**

- Infection involves only skin and subcutaneous tissue of the incision

**AND**

- Patient has at least **ONE** **△** of the following:

- △** purulent drainage from the superficial incision

- △** organisms isolated from an aseptically-obtained culture of **ONE** **□** of the following:

- superficial incision

- subcutaneous tissue

- △** must meet **THREE** **□** occurrences:

- superficial incision is deliberately opened by surgeon, attending physician\*\* or other designee

- must meet **ONE** **○** of the following:

- is culture positive

- not cultured

**NOTE:** A culture-negative finding does not meet this criterion

- patient has at least **ONE** **○** of the following signs or symptoms of infection:

- pain or tenderness

- localized swelling

- erythema

- heat

- △** diagnosis of superficial incisional SSI by the surgeon or attending physician\*\* or other designee (see reporting instructions)

\*<http://www.cdc.gov/nhsn/XLS/ICD-9-cmCODEScurrent.xlsx>

\*\* The term attending physician for the purposes of application of the NHSN SSI criteria maybe 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).



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**COMMENTS:**

There are two specific types of superficial incisional SSIs:

1. Superficial Incisional Primary (SIP) – a superficial incisional SSI that is identified in the primary incision in a patient that has had an operation with one or more incisions (e.g., C-section incision or chest incision for CBGB)
2. Superficial Incisional Secondary (SIS) – a superficial incisional SSI that is identified in the secondary incision in a patient that has had an operation with more than one incision (e.g., donor site incision for CBGB)

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**REPORTING INSTRUCTIONS:** (Last updated January 1, 2015)

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

- Diagnosis of cellulitis (redness/warmth/swelling), by itself, does not meet the **LAST** **△** criteria for Superficial Incisional SSI. An incision that is draining or culture (+) is not considered a cellulitis.
- A stitch abscess alone (minimal inflammation and discharge confined to the points of suture penetration)
- A localized stab wound or pin site infection. While it would be considered either a skin (SKIN) or soft tissue (ST) infection, depending on its depth, it is not reportable under this module.  
**Note:** a laparoscopic trocar site for an NHSN operative procedure is not considered a stab wound
- Circumcision is not an NHSN operative procedure. An infected circumcision site in newborns is classified as CIRC and is not reportable under this module.
- An infected burn wound is classified as a BURN and is not reportable under this module.

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**Deep incisional surgical site infection**  
(Last updated January 1, 2015)

**DEFINITION:** A deep incisional SSI must meet the following criteria:

**□ Criterion 1:**

- Infection occurs within **30 or 90 days** after the NHSN operative procedure (where day 1 = the procedure day) according to the “30-day Surveillance” portion of the table below titled “Surveillance Period for Deep Incisional or Organ/Space SSI Following Selected NHSN Operative Procedure Categories”

**AND**

- Infection involves deep soft tissues of the incision (e.g. fascial and muscle layers)

**AND**

- Patient has at least **ONE** **△** of the following:

- △** purulent drainage from the deep incision

- △** must meet **ALL** **□** of the following:

- ☐ choose **ONE** ☐ of the following:
  - ☐ a deep incision spontaneously dehisces
  - ☐ a deep incision deliberately opened by a surgeon, attending physician\*\* or other designee
- ☐ choose **ONE** ☐ of the following:
  - ☐ is culture-positive
  - ☐ not cultured

**NOTE:** *A culture-negative finding does not meet this criterion*

- ☐ patient has at least **ONE** ☐ of the following signs or symptoms:
  - ☐ fever ( $>38^{\circ}\text{C}$ )
  - ☐ localized pain or tenderness
- ☐ choose **ONE** ☐ of the following:
  - ☐ an abscess involving the deep incision that is detected during **ONE** ☐ of the following:
    - ☐ gross anatomical exam
    - ☐ histopathologic examination
    - ☐ imaging test
  - ☐ other evidence of infection involving the deep incision that is found during **ONE** ☐ of the following:
    - ☐ gross anatomical exam
    - ☐ histopathologic examination
    - ☐ imaging test

\*\* The term attending physician for the purposes of application of the NHSN SSI criteria maybe 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).

### **COMMENTS:**

There are two specific types of deep incisional SSIs:

1. Deep Incisional Primary (DIP) – a deep incisional SSI that is identified in a primary incision in a patient that has had an operation with one or more incisions (e.g., C-section incision or chest incision for CBGB)



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2. Deep Incisional Secondary (DIS) – a deep incisional SSI that is identified in the secondary incision in a patient that has had an operation with more than one incision (e.g., donor site incision for CBGB)

**ORGAN/SPACE – Organ/Space Surgical Site Infection**  
(Last updated January 1, 2015)

**DEFINITION:** An organ/space SSI must meet the following criteria:

**□ Criterion 1:**

- Patient has **ONE** **△** of the following:

- △** infection occurs within **30 days** after the NHSN operative procedure (where day 1 = the procedure date) according to the “30-day Surveillance” portion of the table below titled “Surveillance Period for Deep Incisional or Organ/Space SSI Following selected NHSN Operative Procedure Categories”

- △** infection occurs within **90 days** after the NHSN operative procedure (where day 1 = the procedure date) according to the “90-day Surveillance” portion of the table below titled “Surveillance Period for Deep Incisional or Organ/Space SSI Following selected NHSN Operative Procedure Categories”

**AND**

- Patient has an infection that 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:

- △** purulent drainage from a drain that is placed into the organ/space (e.g., closed suction drainage system, open drain, T-tube drain, CT guided drainage)

- △** organisms isolated from an aseptically obtained culture of **ONE** **□** of the following:

- fluid in the organ/space
    - tissue in the organ/space

- △** choose **ONE** **□** of the following:

- an abscess detected during **ONE** **○** of the following:

- gross anatomical exam
      - histopathologic examination
      - imaging test

- other evidence of infection involving the organ/space detected during **ONE** **○** of the following:

- gross anatomical exam





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- histopathologic examination
- imaging test

**AND**

- Patient meets at least one of the criterion for a specific organ/space infection site listed in the table *titled “Specific Sites of an Organ/Space SSI”* (found towards the end of this checklist). These criteria are in the [Surveillance Definitions for Specific types of Infections](#) chapter of the NHSN protocol and corresponding checklist.





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***Surveillance Period for Deep Incisional or Organ/Space SSI Following Selected NHSN Operative Procedure Categories. Day 1= the date of the procedure. (Last updated January 1, 2015)***

**NOTE:** *Superficial incisional SSIs are only followed for a 30-day period for all procedure types.*

30-day Surveillance			
Code	Operative Procedure	Code	Operative Procedure
AAA	Abdominal aortic aneurysm repair	LAM	Laminectomy
AMP	Limb amputation	LTP	Liver transplant
APPY	Appendix surgery	NECK	Neck surgery
AVSD	Shunt for dialysis	NEPH	Kidney surgery
BILI	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
HTP	Heart transplant	THYR	Thyroid and/or parathyroid surgery
HYST	Abdominal hysterectomy	VHYS	Vaginal hysterectomy
KTP	Kidney transplant	XLAP	Exploratory Laparotomy
		OTH	Other operative procedures not included in the NHSN categories
90-day Surveillance			
Code	Operative Procedure		
BRST	Breast surgery		
CARD	Cardiac surgery		
CBGB	Coronary artery bypass graft with both chest and donor site incisions		
CBGC	Coronary artery bypass graft with chest incision only		
CRAN	Craniotomy		
FUSN	Spinal fusion		
FX	Open reduction of fracture		
HER	Herniorrhaphy		
HPRO	Hip prosthesis		
KPRO	Knee prosthesis		
PACE	Pacemaker surgery		
PVBY	Peripheral vascular bypass surgery		
RFUSN	Refusion of spine		
VSHN	Ventricular shunt		



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**Specific sites of an organ/space SSI. (Last updated July 1, 2014)**

Criteria for these sites can be found in the NHSN Help System (must be logged in to NHSN), in the [Surveillance Definitions](#) chapter of the 2014 NHSN Patient Safety Manual, or corresponding checklist.

Code	Site
BONE	Osteomyelitis
BRST	Breast abscess or mastitis
CARD	Myocarditis or pericarditis
DISC	Disc space
EAR	Ear, mastoid
EMET	Endometritis
ENDO	Endocarditis
EYE	Eye, other than conjunctivitis
GIT	GI tract
HEP	Hepatitis
IAB	Intraabdominal, not specified elsewhere
IC	Intracranial, brain abscess or dura
JNT	Joint or bursa

Code	Site
LUNG	Other infections of the respiratory tract
MED	Mediastinitis
MEN	Meningitis or ventriculitis
ORAL	Oral cavity (mouth, tongue, or gums)
OREP	Other infections of the male or female reproductive tract
OUTI	Other infections of the urinary tract
PJI	Periprosthetic Joint Infection
SA	Spinal abscess without meningitis
SINU	Sinusitis
UR	Upper respiratory tract
VASC	Arterial or venous infection
VCUF	Vaginal cuff

**SSI EVENT REPORTING INSTRUCTIONS: (Last updated January 1, 2015)**

- Attributing SSI to an NHSN procedure when there is evidence of infection at the time of the primary surgery:** POA definition does not apply to the SSI protocol. If there was evidence of infection at the time of the procedure and then later in the surveillance period the patient develops an infection that meets the NHSN SSI criteria it is attributed to the procedure (see PATOS below). A high wound class is not exclusion for a patient later meeting criteria for an SSI.
- Infection present at time of surgery (PATOS):** 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). PATOS is a YES/NO field on the SSI Event form. PATOS does not apply if there is a period of wellness between the time of a preoperative condition and surgery. The evidence of infection or abscess must be noted/documented preoperatively or found intraoperatively in a pre-operative or intraoperative note. Only select PATOS = YES if it applies to the depth of SSI that is being attributed to the procedures (e.g., if a patient had evidence of an intraabdominal infection at the time of surgery and then later return 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). The patient does not have to meet the NHSN definition of an SSI at the time of the primary procedure but there must be notation that there is evidence of an infection or abscess present at the time of surgery.
  - Example:** Patient admitted with an acute abdomen. Sent to OR for an XLAP where there is a finding of an abscess due to ruptured appendix and an APPY is performed.



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Patient returns two weeks later and meets criteria for an organ space IAB SSI. The PATOS field would be selected as YES on the SSI event.

- b) **Example:** Patient is admitted with a ruptured diverticulum. In the OR note the surgeon documents that there are multiple abscesses in the intraabdominal cavity. Patient returns three weeks later and meets criteria for a superficial SSI. The PATOS field would be selected as NO since there was no documentation of evidence of infection or abscess of the superficial area at the time of the procedure.
- c) **Example:** During an unplanned cesarean section (CSEC) the surgeon nicks the bowel and there is contamination of the intraabdominal cavity. One week later the patient returns and meets criteria for an organ space OREP (other reproductive) SSI. The PATOS field would be selected as NO since there was no documentation of evidence of infection or abscess at the time of the CSEC. The colon nick was a complication but there was no infection present at the time of surgery.

- 3. **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:
  - a) Report infection that involves the organ/space as an organ/space SSI, whether or not it also involves the superficial or deep incision sites.
  - b) Report infection that involves the superficial and deep incisional sites as a deep incisional SSI.
  - c) If an SSI started as a superficial SSI on day 10 of the SSI surveillance period and then a week later, (day 17 of the SSI surveillance period) meets criteria for a deep incisional SSI the date of event would be the date the of deep incisional SSI.
- 4. **Reporting of SSI after a non-primary closure:** If a patient develops an SSI after a nonprimary closure it should be reported as attributable to that procedure if it meets criteria for an SSI within the surveillance period.
- 5. **Attributing SSI to a procedure when several are performed on different dates:** If a patient has several NHSN operative procedures performed on different dates prior to an infection, report the operative procedure code of the operation 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.

**NOTE:** for multiple NHSN operative procedures performed within a 24 hour period, see the "Denominator Reporting Instruction" #9

- 6. **Attributing SSI NHSN procedures that involve multiple primary incision sites:** If multiple primary incision sites of the same NHSN operative procedure become infected, only report as a single SSI, and assign the type of SSI (superficial incisional, deep incisional, or organ/space) that represents the deepest tissue level involved at any of the infected sites. For example:
  - a) If one laparoscopic incision meets criteria for a superficial incisional SSI and another meets the criteria for a deep incisional SSI, only report one deep incisional SSI.
  - b) If one or more laparoscopic incision sites meets criteria for superficial incisional SSI but the patient also has an organ/space SSI related to the laparoscopic procedure, only report one organ/space SSI.



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- c) If an operative procedure is limited to a single breast and involves multiple incisions in that breast that become infected, only report a single SSI.
  - d) In a colostomy formation or removal (take down) procedure, the stoma and other abdominal incision sites are considered primary incisions. If both the stoma and another abdominal incision develop superficial incisional SSI, report only as one SSI (SIP).
7. **Attributing SSI to NHSN procedures that have secondary incision sites:** Certain procedures can involve secondary incisions, when applicable including BRST, CBGB, CEA, FUSN, REC, PVBY, RFUSN. The superficial incisional and deep incisional SSI surveillance periods for any secondary incision site are 30 days, regardless of the required deep incisional or organ/space SSI surveillance period for the primary incision site(s) (see table above titled "Surveillance Period for Deep Incisional or Organ/Space SSI Following Selected NHSN Operative Procedure Categories"). Procedures meeting this designation are reported as only one operative procedure. For example:
- a) A saphenous vein harvest incision in a CBGB procedure is considered the secondary incision. One CBGB procedure is reported, the saphenous vein harvest site is monitored for 30 days after surgery for SSI, and the chest incision is monitored for 90 days.
  - b) A tissue harvest site (e.g., Transverse Rectus Abdominis Myocutaneous [TRAM] flap) in a BRST procedure is considered the secondary incision site. One BRST procedure is reported, and if the secondary incision gets infected, reported as either SIS or DIS as appropriate.
8. **SSI detected at another facility:** It is required that if an SSI is detected at a facility other than the one in which the operation was performed, notify the IP of the index facility with enough detail so the infection can be reported to NHSN. When reporting the SSI, the index facility should indicate that Detected = RO (Readmission to facility other than where procedure was performed).
9. **SSI attribution after surgical multiple types of NHSN procedures are performed during a single trip to the OR:** If more than one NHSN operative procedure category was performed through a single incision/laparoscopic sites during a single trip to the operating room, attribute the SSI to the procedure that is thought to be associated with the infection. If it is not clear, as is often the case when the infection is an incisional SSI, use the NHSN Principal Operative Procedure Category Selection Lists to select the operative procedure to which the SSI should be attributed. For example, if a patient develops SSI after a single trip to the OR in which both a COLO and SB were performed, and the source of the SSI is not apparent, assign the SSI to the COLO procedure.
10. **SSI following manipulation/accession of the operative site:** If during the post-operative period the surgical site has an invasive manipulation/accession for diagnostic or therapeutic purposes (e.g., needle aspiration), and following this manipulation/accession an SSI develops, the infection is not attributed to the operation. This reporting instruction does NOT apply to closed manipulation (e.g., 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 operative care.



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**11. Reporting instructions for specific post-operative infection scenarios:**

An SSI that otherwise meets the NHSN definitions should be reported to NHSN without regard to postoperative accidents, falls, inappropriate showering or bathing practices, or other occurrences that may or may not be attributable to patients' intentional or unintentional postoperative actions. Also, SSI should also be reported regardless of the presence of certain skin conditions (e.g., dermatitis, blister, impetigo) that occur near an incision, and regardless of the possible occurrence of a "seeding" event from an unrelated procedure (e.g., dental work). This instruction concerning various postoperative circumstances is necessary to reduce subjectivity and data collection burden associated with the previously exempted scenarios.



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**NHSN Principal Operative Procedure Category Selection Lists: (Last updated January 1, 2015)**

The following lists are derived from the operative procedures listed in the NHSN Operative Procedure Category Mappings to ICD-9-CM Codes and CPT Codes table. The categories with the highest risk of SSI are listed before those with lower risks

Priority	Code	Abdominal Operations
1	LTP	Liver transplant
2	COLO	Colon surgery
3	BILI	Bile duct, liver or pancreatic surgery
4	SB	Small bowel surgery
5	REC	Rectal surgery
6	KTP	Kidney transplant
7	GAST	Gastric surgery
8	AAA	Abdominal aortic aneurysm repair
9	HYST	Abdominal hysterectomy
10	CSEC	Cesarean section
11	XLAP	Laparotomy
12	APPY	Appendix surgery
13	HER	Herniorrhaphy
14	NEPH	Kidney surgery
15	VHYS	Vaginal Hysterectomy
16	SPLE	Spleen surgery
17	CHOL	Gall bladder surgery
18	OVRY	Ovarian surgery
Priority	Code	Thoracic Operations
1	HTP	Heart transplant
2	CBGB	Coronary artery bypass graft with donor incision(s)
3	CBGC	Coronary artery bypass graft, chest incision only
4	CARD	Cardiac surgery
5	THOR	Thoracic surgery
Priority	Code	Neurosurgical (Brain/Spine) Operations
1	VSHN	Ventricular shunt
2	RFUSN	Refusion of spine
3	CRAN	Craniotomy
4	FUSN	Spinal fusion
5	LAM	Laminectomy
Priority	Code	Neck Operations
1	NECK	Neck surgery
2	THYR	Thyroid and or parathyroid surgery





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**DENOMINATOR REPORTING INSTRUCTIONS:** *(Last updated January 1, 2015)*

1. **Closure type:** Incisional closure is NOT a part of the NHSN operative procedure definition; all otherwise eligible procedures are included in the denominator reporting, regardless of closure type. The closure technique is entered for each denominator for procedure. If a procedure has multiple incision sites and any of the incisions are closed primarily then the procedure is entered as a primary closure.

**NOTE:** When the patient returns to the OR within 24 hours of the end of the first procedure assign the surgical wound closure that applies when the patient leaves the OR from the first operative procedure

2. **Wound class:** A high wound class is not exclusion for denominator reporting. If the procedure meets the definition of an NHSN operative procedure it should be reported in the denominator data regardless of wound class. NHSN will use the wound class for risk adjustment, as appropriate.
3. **Different operative procedure categories performed during same trip to the OR:** If procedures in more than one NHSN operative procedure category are performed during the same trip to the operating room through the same or different incisions, a [Denominator for Procedure form](#) is reported for each NHSN operative procedure category being monitored. For example, if a CARD and CBGC are done through the same incision, a [Denominator for Procedure form](#) is reported for each. In another example, if following a motor vehicle accident, a patient has an open reduction of fracture (FX) and splenectomy (SPLE) performed during the same trip to the operating room and both procedure categories are being monitored, complete a [Denominator for Procedure form](#) for each.

**EXCEPTION:**

If a patient has both a CBGC and CBGB during the same trip to the operating room, report only as a CBGB. Only report as a CBGC when there is a chest incision only. CBGB and CBGC are never reported for the same patient for the same trip to the operating room.

4. **Duration of the procedure when more than one category of NHSN operative procedure is done through the same incision:** If more than one NHSN operative procedure category is performed through the same incision during the same trip to the operating room, record the combined duration of all procedures, which is the time from procedure/surgery start time to procedure/surgery finish time. For example, if a CBGC and a CARD are performed on a patient during the same trip to the operating room, the time from skin incision to primary closure is reported for both operative procedures.
5. **Duration of Operative procedures if patient has two different NHSN operative procedures performed via separate incisions on the same trip to the OR:** try to determine the correct duration for each separate procedure (if this is documented), otherwise, take the time for both procedures and split it evenly between the two.
6. **Same operative procedure category but different ICD-9-CM codes during same trip to the OR:** If procedures of different ICD-9-CM codes from the same NHSN operative procedure category are performed through the same incision/laparoscopic sites, record only one procedure for that category. For example, a facility is performing surveillance for CARD



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procedures. A patient undergoes a replacement of both the mitral and tricuspid valves (35.23 and 35.27, both CARD) during the same trip to the operating room. Complete one CARD Denominator for Procedure form because ICD-9-CM codes 35.23 and 35.27 fall in the same operative procedure category [CARD] (see Table 1).

7. **For revision HPRO and KPRO procedures:** If total or partial revision HPRO or KPRO is performed, also evaluate if any of the following ICD-9-CM diagnosis or procedure codes (below) were coded in the 90 days prior to and including the index HPRO or KPRO revision. If any of the specified codes is recorded, indicate that the revision was associated with 'prior infection at index joint.' Note that the 'prior infection at index joint' variable only applies to revision HPRO and KPRO. Additionally, it is not necessary to review the medical record for additional details concerning the prior infection; this variable is defined by the presence of one or more of the following ICD-9-CM codes in the 90-day preoperative (including index revision) period:
  - 84.56 Insertion or replacement of (cement) spacer
  - 84.57 Removal of (cement) spacer
  - V88.21 Acquired absence of hip joint, with or without the presence of an antibiotic-impregnated spacer
  - V88.22 Acquired absence of knee joint, with or without the presence of an antibiotic-impregnated spacer
  - Complications peculiar to certain specified procedures, infection and inflammatory reaction due to internal prosthetic device, implant and graft (extensions of 996, 996.6):
    - 996.60 Due to unspecified device, implant and graft
    - 996.66 Due to internal joint prosthesis
    - 996.67 Due to other internal orthopedic device, implant, and graft
    - 996.69 Due to other internal prosthetic device, implant, and graft
8. **Same NHSN operative procedure via separate incisions:** For operative procedures that can be performed via separate incisions during same trip to operating room (i.e., AMP, BRST, CEA, FUSN, FX, HER, HPRO, KPRO, LAM, NEPH, OVRY, PVBY, REFUSN), separate Denominator for Procedure forms are completed. To document the duration of January 2015 9-24 Procedure-associated Module SSI 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. Note: Laparoscopic hernia repairs are considered one procedure, regardless of the number of hernias that are repaired in that trip to the OR. In most cases there will be only one incision time documented for this procedure. If more than one time is documented, total the durations. Open (i.e., non-laparoscopic) hernia repairs are reported as one procedure for each hernia repaired via a separate incision, (i.e., if two incisions are made to repair two defects), then two procedures will be reported. It is anticipated that separate incision times will be recorded for these procedures. If not, take the total time for both procedures and split it evenly between the two.
9. **More than one operative procedure through same incision within 24 hours:** If a patient goes to the operating room more than once during the same admission and another procedure of the same or different NHSN procedure category is performed through the same incision within 24 hours of the end of the finish time of the original operative incision, 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. For



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example, a patient has a CBGB lasting 4 hours. He returns to the OR six hours later to correct a bleeding vessel (OTH). The second operation has duration of 1.5 hours. Record the operative procedure as one CBGB and the duration of operation as 5 hour 30 minutes. If the wound class has changed, report the higher wound class. If the ASA class has changed, report the higher ASA class. Do not report an 'OTH' record.

10. **Patient expires in the OR:** If a patient expires in the operating room, do not complete a [Denominator for Procedure](#) form. This operative procedure is excluded from the denominator.
11. **Laparoscopic Hysterectomy – HYST or VHYS:** When assigning the correct ICD-9-CM hysterectomy procedure code, a trained coder must determine what structures were detached and how they were detached based on the medical record documentation. The code assignment is based on the surgical technique or approach used for the detachment of those structures, not on the location of where the structures were physically removed from the patient's body.