

## Case Studies Functional Exercise 1

### Louisiana NHSN Trainings 2015

#### Instruction

- Divide yourselves into groups
- Complete the exercises with current NHSN definitions

#### Scenario 1:

- Day 1: Patient admitted and central line inserted.
- Day 2: Patient spikes a fever of 38.2C and blood cultures are drawn.
- Day 3: Blood cultures positive for *S. aureus*.

Is the infection POA or HAI?

- POA
- HAI

This patient does not meet the criteria for an HAI BSI because the patient was not admitted for >2 days before having a positive blood culture for *S. aureus* (a recognized pathogen). This infection is qualified as a POA.

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#### Scenario 2:

- Ms. Orwell was taken to the ED after passing out at a party. Her symptoms on admission are fever, generalized pain, nausea and hypotension. A central line is inserted in the ED and blood cultures are drawn, which are negative. She is admitted to ICU. On hospital day 5, February 13th, repeat blood cultures grow *E.coli*.

Is the infection POA or HAI?

- POA
- HAI

- On February 20th, a repeat blood culture is collected and is subsequently reported as growing *S. aureus*. No other source of infection is identified.

Is this reported as a separate Primary BSI or something else?

- Another Primary BSI
- Reported as a Secondary BSI
- Not a reportable infection, just add the organisms to the original LCBI 1

The patient has DOE on hospital day 5 when *E. coli* is found in blood cultures, qualifying the infection as an HAI. The repeat blood culture falls within the RIT of the primary BSI. Therefore, unless another primary source with a matching organism is identified, the pathogen is added to the primary BSI with date of event Feb 13. No new event should be identified or reported.

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#### Scenario 3:

- Day 1: Patient admitted and central line inserted.
- Day 2: Patient spikes a fever of 38.2C.
- Day 3: Blood cultures positive for *Streptococcus* sp.
- Day 4: Blood cultures positive for *Streptococcus diffcilis*.
- Is the infection POA or HAI?

- POA
- HAI
- What kind of HAI is this?
  - CLABSI LCBI 2
  - CLABSI LCBI 1
  - Not a CLABSI, but an LCBI 1

This is an HAI because the first diagnostic test is done on Day 3 with the positive blood culture of *Streptococcus* sp., which occurs >2 days after hospital admission. This is a CLABSI LCBI 1 because there was a central line inserted >2 days before a positive culture and on Day 4 there was a blood culture for *Streptococcus difficilis*. Whenever you have two blood cultures, one that is unspciated and one that is speciated from the same species, you assume the unspciated one is the same species as the speciated one. In this case, both blood cultures are assumed to be *Streptococcus difficilis* on Days 3 and 4.

#### Scenario 4:

- 5/1: Mr. Leonard is admitted with myocardial infarction. Central line inserted in ED. Admitted to CCU.
- 5/9: Status improved, transfer to 4East.
- 5/9: Central line discontinued.
- 5/10: WBCs 15,000. Blood cultures and urine cultures collected.
- 5/11: Blood cultures positive *S. aureus*. Urine culture negative.

What should be reported to NHSN?

- CLABSI attributed to 4 East
- CLABSI attributed to CCU
- Nothing to report to NHSN

The date of event is 5/10. The central line was removed the day before a positive blood culture for a recognized pathogen (*S. aureus*). It is attributed to CCU because all elements are present on the day after transfer.

#### Scenario 5:

- 8/11: Seen in the ED. CL inserted and IV fluids begun. Foley catheter inserted. Admitted to Trauma ICU.
- 8/12: To OR for closed reduction and traction placement. Returned to Trauma ICU postoperatively.
- 8/13: Temp 38.5° C.
- 8/14: Trauma unit. Temp 38.5° C. 1 set blood culture collected - positive for *S. epidermidis*.
- 8/15: Trauma unit. Temp 37.9° C. 1 set of blood cultures collected - positive for *S. epidermidis*.
- 8/16: Trauma unit. Temp 37.9° C.  
*S. epidermidis* is a common commensal
  - True

False

What do you think?

This is a BSI POA

This is a BSI HAI

This is NOT a BSI

If this is a BSI, then

Central line related

Not central line related

*S. epidermidis* is a common commensal and therefore two cultures from two separate preparations and draws are needed to meet the criteria for a LCBI 2. The first culture is collected on 8/14 and the second on 8/15. The infection window is set by the first culture on 8/14 and the DOE is 8/13 when the patient had a fever of 38.5C. With these two criteria met, the last thing to determine is whether this is a CLABSI or not. Since the central line had been in place for >2 days before the DOE, this is reported as a CLABSI LCBI 2.

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#### Scenario 6

- o 7/18: 64-year-old female admitted to your long-term acute care facility from acute care facility on 7/31 following lengthy admission for cerebral vascular accident. Patient on a ventilator, central line in place and in use. Percutaneous endoscopic gastrostomy tube in use.
- o PMH: Hypertension, Diabetic, 1 pack/day smoker, occasional alcohol use.
- o 7/25: Central line still in place. Fever 100.6°F. PEG tube site slightly reddened, but without drainage.
- o 7/26: Fever 101.0°F. Blood and urine culture collected. Remains on ventilator. Blood cultures positive for gram positive cocci. Antibiotics begun.
- o 7/27: Fever 101.4°F Final report of blood cultures collected on 7/26 = positive for *S. aureus*. Urine cultures are negative.

Does this patient have an LCBI?

Yes, this patient has an LCBI criterion 1.

No, this patient has a SKIN infection with secondary BSI.

Pathogen recovered from blood culture which is not related to infection at another site. SKIN or ST criterion not met.

Does this patient have a CLABSI?

Yes

No

Date of event = 7/26 – note that LCBI criterion 1 has a single element: positive BC. Must use the date of BC collection for date of event >2 days of CL use and CL in place on date of event therefore CLABSI.

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#### Scenario 7

- o 6/10: Temp 102° F. NG tube placed. NPO, IV fluids and supportive care. Blood cultures x2. Admit to Medical ICU

- 6/13: Afebrile. Poor peripheral access, TPN, Central line placed (L subclavian), CXR verified position. Blood cultures results from 6/10 negative.
- 6/15: Afebrile. CHF (CXR shows fluid), Lasix administered to correct.
- 6/16: Afebrile. Increased abdominal pain and vomiting, Levaquin & Flagyl started.
- 6/30: Afebrile. Dc'd TPN, PO fluids tolerated, transferred to 5 West Medical.
- 7/1: Temp 103° F. Nausea, vomiting, blood culture x2 collected, CL catheter removed.
- 7/3: Afebrile. One blood culture and catheter tip from 7/1 – Coagulase-negative Staph, DC'd Levaquin and Flagyl and began Vancomycin x 10 days.
- 7/6: Afebrile. Inserted Rt. Subclavian CL to continue therapy.
- 7/16: Afebrile. Discharged.

Does this patient have a CLABSI?

- Yes, this patient has a CLABSI because the catheter tip is positive for the same organism as the blood culture.
- No, this patient's BSI is secondary to a GIT infection.
- No, this patient does not have a CLABSI because only one blood culture is positive with a common skin commensal.

LCBI 2 requires 2 matching blood cultures. Catheter tips are not blood cultures and cannot be used for LCBI criteria. Also, patient does not meet criteria for any GIT criteria.

#### Scenario 7 Alternative

- 6/10: Temp 102° F. NG tube placed. NPO, IV fluids and supportive care. Blood cultures x2. Admit to Medical ICU
- 6/13: Afebrile. Poor peripheral access, TPN, Central line placed (L subclavian), CXR verified position. Blood cultures results from 6/10 negative.
- 6/15: Afebrile. CHF (CXR shows fluid), Lasix administered to correct.
- 6/16: Afebrile. Increased abdominal pain and vomiting, Levaquin & Flagyl started.
- 6/30: Temp 102° F. Dc'd TPN, PO fluids tolerated, transferred to 5 West Medical.
- 7/1: Temp 103° F. Nausea, vomiting, blood culture x2 collected, CL catheter removed.
- 7/3: Temp 102° F. One blood culture and catheter tip from 7/1 – Coagulase-negative Staph, one blood culture from 7/1 *S. epidermidis*. DC'd Levaquin and Flagyl and began Vancomycin x 10 days.
- 7/6: Afebrile. Inserted Rt. Subclavian CL to continue therapy.
- 7/16: Afebrile. Discharged.

Does this patient have a CLABSI?

- Yes, this patient has a CLABSI meeting LCBI Criterion 2.
- No, this patients BSI is secondary to a GIT infection.
- No, this patient does not have a CLABSI because the common commensals do not match.

This is an LCBI because *S. epidermidis* is a CNS, making them matching organisms, collected on the same day.

What is the Date of Event?

- 7/1 – the date of the blood culture.
- 6/30 – the first date of the fever during the infection window.

Date of event = 6/30 – note that LCBI criterion 2 requires a symptom, which in this case is fever and it occurs for the first time on 6/30. >2 days of CL use and CL in place on the date of event therefore CLABSI.

If there is/was a CLABSI to which unit should it be attributed?

- Medical ICU
- 5 West Medical

Transfer Rule – if date of event is on the day of transfer from one location to another, or the next day the infection is attributed to the transferring location. In this case the patient was transferred from the Medical ICU to 5 West Medical on the date of event.

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#### Scenario 8

- o 11/2: Temp 36° C. Admitted; L arm PICC line placed in interventional radiology.
- o 11/3: Patient typed and cross matched for 2 units packed RBC for treatment of anemia. Blood transfused through PICC.
- o 11/4: Patient c/o abdominal pain and distension, hypoactive bowel sounds noted.
- o 11/5: 39.2° C. Patient medicated for abdominal pain (8 on 10 scale). Documented pain on abdominal palpation.
- o 11/6: 38.8° C. Patient continues to complain of abdominal pain unresolved with pain meds. Tenderness again noted on palpation of L lower abdomen.
- o 11/7: 39° C. Blood cultures collected x2. Patient sent for CT scan of the abdomen. Report notes: “abscess present in L lower abdominal cavity”. Drain placed in the L lower abdominal cavity and cultures sent. Antibiotics started.
- o 11/9: 37.8° C. Blood culture positive for *Bacteroids fragilis* x2 and abscess culture positive for *Bacteroids fragilis*. Patient reports decreased abdominal pain.
- o 11/12: 36° C. Drain removed. Bowel sounds present. Follow-up CT scan reveals the intra-abdominal abscess is resolved. Patient discharged.

What type(s) of HAI does this patient have?

- The patient has an IAB with *B. fragilis* and a CLABSI with *B. fragilis*.
- The patient has an IAB with *B. fragilis* and secondary BSI.
- The patient has a NEC infection with *B. fragilis* with *B. fragilis* and a secondary BSI.

Patient has organisms cultures from abscess and/or purulent material from intraabdominal space. Patient has fever and abdominal pain in addition to organisms cultured from blood and imaging test evidence of infection.

What is the date of event?

- 11/4
- 11/5

Patient had abdominal pain, which is a S/S for an IAB.

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### Scenario 9

- Day 1: 79-year-old male, admitted with 3 necrotic toes secondary to peripheral vascular obstructive disease. Taken to OR for toe amputation. Central line, which was in place on admission for antibiotics, is accessed.
- Day 6: Patient progressing well until fever spike of 101.3° F. Amputation site reddened, purulent material, collected for culture. Blood collected for culture. Empiric antibiotics begun.
- Day 8: Wound cultures positive for *S. aureus*. Blood cultures positive for *E. faecium*.

Does Mr. Duval have a CLABSI?

- Yes, the patient has a CLABSI w/ *E. faecium*
- No, the BSI is secondary to the superficial SSI.

The blood culture did not match an organism recovered from the wound culture nor can a positive blood culture be used to meet the superficial SSI criteria. Therefore, unless there is another source of infection, this is a primary BSI. CL in place >2 days on date of LCBI therefore CLABSI.

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### Scenario 10

- 8/14: A 41-year-old female has been in your unit for 2 weeks. She has a central line through which she has been receiving hemodialysis.
- 8/17: She develops fever of 39°C and shaking chills. Two sets of blood cultures are sent.
- 8/19: Blood cultures are positive for *Pseudomonas aeruginosa*. Her central line insertion site shows inflammation but no other signs and there is no other documented infection.

Is there an LCBI?

- No, the patient does not have an LCBI.
- Yes, the patient has an LCBI w/ *P. aeruginosa*.
- Not sure.

Patient has a recognized pathogen cultured from one or more blood cultures and organism cultured from blood is not related to an infection at another site.

Let's change this scenario and say that on 8/17 the patient's central line site is red and has a small amount of pus present. Does this change your decision?

- No, this patient still has a CLABSI.
- Yes, this is no longer a CLABSI.
- Not sure.

If a patient meets the criteria for an LCBI in the presence of an intravascular infection report as an LCBI not as a VASC.

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### Scenario 11

- 4/1: Baby Girl born at 24 weeks due to PROM. Mom febrile during last 12 hours of labor. Placed on ventilator and umbilical line placed. Placenta was sent for culture. Blood cultures collected from baby.
- 4/2: Blood & placenta cultures = no growth.
- 4/8: Umbilical line discontinued. Peripheral IV placed. Temperature 35.8°C. Repeat blood cultures collected and are positive for *E. coli*. Antibiotics begun.
- 4/10: Temperature 35.8°C.
- 4/11: Temperature 35.8°C. Urine culture collected.
- 4/12: Urine culture positive for *E. coli* >100,000 CFU/ml and *S. aureus* >100,000 CFU/ml.
- 4/20: Blood culture positive for *S. aureus*.

Does this patient have a CLABSI?

- No, the infection was present at birth.
- No, patient has BSI not related to CL.
- Yes, meets LCBI criterion 1.
- No, patient has a UTI with secondary BSI.

The urine culture falls within the Secondary BSI Attribution Period of the UTI.

What is the Date of Event?

- April 8
- April 10
- April 11

The blood culture tested positive for *E. coli* on April 8.

The positive blood on 4/20 is a new event.

- True
- False

The blood culture falls within the RIT.

## Case Studies Functional Exercise 2

### Louisiana NHSN Trainings 2015

#### Instructions

- Divide yourselves into groups
- Complete the exercises with current NHSN definitions

#### Scenario 1:

- A patient is admitted with a ruptured diverticulum and a COLO procedure is performed in the inpatient OR.
- Case is entered as a wound class 4.
- Specimen is obtained in the OR which late returns (+) for *E. coli*.
- Surgeon staples closed the skin at 4 locations with packing placed between the staples.

**Is this procedure primarily closed?**

Yes, because the skin is closed at some points along the skin incision.

**If you are following COLO in your monthly reporting plan should this case be entered into your denominator data?**

Yes. All COLOs performed for the month are entered into your denominator data.

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#### Scenario 2:

- Patient was admitted with an acute abdomen, to OR for XLAP with findings of an abscess due to ruptured appendix and an APPY is performed.
- Patient returns 2 weeks later and meets criteria for an organ space IAB SSI.

**Does this patient meet the criteria for PATOS?**

Yes, since there was evidence of infection at the time of surgery and the subsequent SSI developed at the same level.

**True or False: Since this SSI is related to an infection that was PATOS it does not have to be reported to NHSN.**

False. Infections that meet SSI criteria and have the PATOS field as a YES are reported to NHSN.

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#### Scenario 3:

- Patient is admitted with a ruptured diverticulum and in the OR report the surgeon notes that there are multiple abscesses in the intraabdominal space.
- The patient returns 3 weeks later and meets criteria for a superficial incisional SSI.

**Should the PATOS field be selected for this patient?**

No, since there was no documentation of evidence of infection or abscess of the superficial area at the time of the procedure.

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Scenario 4:

- 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.

**Should the PATOS field be selected for this patient?**

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.

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Scenario 5:

- A patient had bilateral knee prostheses (KPRO) implanted during a single trip to the OR.
  - Left KPRO PST at 8:30 am. There was no note of finish time for this knee.
  - Right KPRO PF time 11:30 am.

**Which statement is correct?**

- One KPRO procedure should be reported with a combined duration of 3 hrs 0 min.
- Two separate KPRO procedures should be reported, each with a duration of 1 hr 30 min.
- Two separate KPRO should be entered, each with a duration of 3 hrs 0 min.

For operative procedures that can be performed via separate incisions during the same trip to the operating room, 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.*

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Scenario 6:

- 2/18: 45-year-old male admitted and had a laparoscopic left hemicolectomy (COLO). There was no evidence of infection noted at the time of surgery.
  - Three trocar sites were closed and the fourth was left open and used for placement of a JP drain.
- 2/24: Purulent drainage noted at one of the trocar sites. Culture obtained and was (+) for Enterobacter spp. and *E.coli*; patient started on antibiotics.

**Is this procedure primarily closed?**

Yes. If there are multiple incisions, if one of them is primarily closed it is considered a primarily closed procedure.

**What should be reported to NHSN?**

- The surgeon did not open the wound, so the criteria are not met.
- Nothing. It is an SSI, but not an HAI.
- SSI-SIP
- SSI-DIP

**Should the PATOS field be selected for this patient?**

No, because there was no infection at the time of surgery.

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Scenario 7:

- 3/17: Patient has a total hip arthroplasty (HPRO) performed at Hospital A.
- 3/19: Discharged from Hospital A.
- 3/25: Admitted to Hospital B with purulent drainage from the superficial incision.
  - Further investigation conclude this is a superficial incisional SSI.

**What should Hospital B do?**

Notify Hospital A about the SSI

**What should Hospital A do?**

Report the SSI to NHSN if it is in their monthly reporting plan

**What if the infection had date of event that is postop day 35?**

It falls outside of the 30 days after an NHSN operative procedure, where day of procedure = Day 1.

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Scenario 8:

- 70-year-old male patient admitted on 2/10/15 and underwent a hemicolectomy (COLO) and repair of an abdominal wall hernia (HER) via the same incision on day of admission. The incision was closed and a JP drain was placed via a stab wound in the LLQ.
- Patient discharged on 2/14/15.
- On 2/17/15 patient arrives to ED with a red, painful incision and the incision is draining yellow foul smelling discharge from the superficial incision. Physician removes 2 staples and probes wound. The fascia is intact and only the subcutaneous tissue is involved. No cultures were obtained.
- Antibiotics ordered, wound packed and patient discharged home.

**What should be reported to NHSN?**

- Nothing. The wound culture was negative, so the criteria are not met.
- Nothing. He had 2 procedures so you don't know which one caused the infection.
- SSI – SIP attributable to the COLO
- SSI – DIP attributable to the HER

For more than one procedure done through a single incision, if it is unclear what procedure the infection is associated with, use the NHSN Principal Operative Procedure Selection Lists to select which operative procedure to report. In this case, the SSI attributed to the COLO because it is listed before HER.

#### Scenario 9:

- 3/12: Patient is admitted to the hospital for elective surgery and active MRSA screening test is positive.
  - On the same day, patient undergoes total abdominal hysterectomy (HYST). No evidence of infection at the time of the surgery.
- 3/15: Postoperative course is unremarkable; patient discharged.
- 3/18: Patient is readmitted with complaints of acute incisional pain since day before. Surgeon opens the wound and notes that the fascia was not intact and sends a specimen from the deep wound.
- 3/20: Culture results are positive for MRSA.
- 3/25: Patient spikes temp and blood cultures obtained that are (+) for MRSA.

#### Is this an SSI?

- Yes, meets criteria
- No, patient was colonized with MRSA so this was PATOS

#### What infection should be reported?

- SSI-SIP
- SSI-SIS
- SSI-DIP
- SSI-DIS
- SSI-IAB

This is SSI-DIP because 1) it occurs within the 30 days after the NHSN operative procedure, 2) the deep soft tissue is involved, 3) the wound is deliberately opened by a surgeon, 4) the patient has localized pain, and 5) the culture taken from the deep wound is positive.

#### [Alternative Scenario]

- 3/12: Patient is admitted to the hospital for elective surgery and active MRSA screening test is positive.
  - On the same day, patient undergoes total abdominal hysterectomy (HYST). No evidence of infection at the time of the surgery.
- 3/15: Postoperative course is unremarkable; patient discharged.

- 3/18: Patient is readmitted with complaints of acute incisional pain since day before. Surgeon opens the wound and notes that the fascia was not intact and sends a specimen from the deep wound.
- 3/20: Cultures are final and no growth.

**What infection should be reported?**

- SSI-SIP
- SSI-DIP
- SSI- Organ Space
- Nothing – not an SSI

This findings from the assessment of this patient do not comply with the definition for a Deep Incisional SSI. While the incision was deliberately opened by a surgeon and the patient complained of pain, the negative culture negates the previous qualifying aspects of this case.

Scenario 10:

- 3/10: Patient admitted and underwent a hemicolectomy due to colon cancer. Would class = Clean Contaminated.
- 3/14: Temp up to 38.7° C, abdominal pain. Ultrasonography show intraabdominal abscess.
- 3/15: To OR for I&D of the abscess. Abscess specimen collected for culture. Antibiotics begun. Abscess culture positive for *E. coli*.
- 3/18: Discharged from hospital on oral antibiotics.

**Does this patient meet criteria for an organ space SSI?**

Yes

**What site specific SSI does this patient have?**

- SSI-SIP
- SSI-DIP
- SSI-IAB
- SSI-GIT

This is SSI-IAB because 1) it occurs within the 30 days after the NHSN operative procedure, 2) the infection involves a part of the body deeper than the fascial/muscle layers that is opened during the operative procedure, 3) the culture taken from the deep wound is positive and/or evidence of infection involving the organ/space is detected from gross anatomical/histopathologic exam or imaging test, and 4)meets at least one criterion for organ/space infection from the Surveillance Definitions for Specific Types of Infections.

[Alternative Scenario]

- 3/15: At the time of the I&D, it was discovered that the patient had suffered an anastomotic leak from which the abscess developed.

**Does this change your determination of an SSI-IAB?**

No. Although an anastomotic leak can be a complication of surgery, the fact remains that this patient meets the criterion for an SSI.

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Scenario 11:

- 1/22: Patient had an abdominal hysterectomy (HYST)
- 2/1: Pelvic pain; Temp 38.4°C
- 2/2: MRI reveals an abscess/fluid collection in the deep pelvic tissue
- 2/3: Surgeon opened wound in the OR and drained purulent fluid; specimen to lab for culture; notes “infected hematoma”; antibiotics begun; incision closed primarily
- 2/5: Culture positive for *Pseudomonas aeruginosa*

**What should be reported?**

- SSI-IAB
- SSI-OREP
- SSI-EMET

Meets criteria for Other Reproductive (OREP) and not Intraabdominal (IAB) because imaging shows abscess on specific location (pelvic tissue) noted in the OREP case definition.

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Scenario 12:

On 1/15 a 45-year-old female undergoes an abdominal hysterectomy (HYST) and colectomy (COLO) performed through the same incision.

**If both of these procedures are in your Monthly Reporting Plan in January, which one(s) do you enter into NHSN?**

You would enter both procedures into NHSN.

[Continued]

- 1/19: Patient spikes temp to 38.3°C, has abdominal pain and emesis. Ultrasound shows fluid collection in abdominal cavity. Fluid specimen for culture is obtained by needle aspiration.
- 1/20: Culture positive for *E. faecium*, many neutrophils seen
- 2/6: Patient spikes temp of 38.9°C; abdominal pain; patient has (+) blood cultures for *E. faecium*; CT scan is ordered and has evidence of an abscess.

**Is this an SSI?**

- SSI-Deep Incisional Primary
- SSI-Deep Incisional Secondary
- SSI Organ/Space specific site IAB
- This is an IAB, but there is no SSI infection

**To which procedure is the SSI attributed?**

- HYST
- COLO
- Both HYST and COLO

COLO ranks higher than HYST in the NHSN Principal Operative Procedure Category Selection List.

**Does this patient have a secondary BSI attributable to the COLO?**

Yes. This BSI occurs after the secondary BSI period, but must be fully evaluated as you would any BSI to see if it is a primary or secondary BSI. This patient is continuing to meet IAB SSI criteria so this is an ongoing SSI since you do not attribute 2 SSI to the same procedure in a 30 day surveillance period.

[Alternative Scenario]

- 1/15: A 45-year-old female undergoes an abdominal hysterectomy (HYST) and colectomy (COLO) performed through the same incision.
- 1/19: Patient spikes temp to 38°C, has abdominal pain and emesis. Ultrasound shows fluid collection in abdominal cavity. Fluid specimen for culture is obtained by needle aspiration.
- 1/20: Culture positive for *E. faecium*, many neutrophils seen
- 2/6: Patient spikes temp of 38.9°C; no abdominal pain, nausea or vomiting; patient has blood and urine cultures collected; urine culture returns no growth; patient has (+) blood cultures for *E. faecium*.

**Does this patient have a secondary BSI attributable to the COLO?**

No, because this patient no longer meets the criteria for an SSI.

Scenario 13:

- 1/15: A 60-year-old female admitted with an acute abdomen. Patient sent to OR and finding was a ruptured diverticulum with fecal contamination of the abdominal cavity (wound class = Contaminated). A colectomy is performed with a colostomy formation. Incision is loosely closed with staples to allow for drainage. Antibiotics ordered.
- 1/19: Patient progressing well; afebrile; discharged home.
- 1/25: Patient presents to ED with fever of 38.5°C; abdominal pain; CT scan suspicious for small abscess in the intraabdominal space; MD starts antibiotics; patient discharged. No cultures obtained. Discharge note states patient returned with possible intraabdominal abscess.

**Should this patient's chart be reviewed to see if they meet criteria for an organ space SSI?**

Yes

**Does this patient meet criteria for a site specific infection?**

No

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**Scenario 14:**

- 1/15: A male patient underwent a KPRO.
- 3/8: The patient went to MD with a red, warm to touch swollen knee. The MD aspirated the joint and found thick purulent appearing fluid. Specimen was sent for culture and patient was admitted to hospital that day.
- 3/9: To OR where an I&D of joint was performed. Purulent material found in joint. Two synovial fluid cultures and a deep knee tissue were obtained. Prosthesis was removed and an antibiotic spacer was placed.
  - All cultures from OR were (+) for MSSA.
- 3/11: (+) blood culture for MSSA

**Which site specific organ space definition should be reviewed for this case?**

- PJI – periprosthetic joint infection
- JNT – joint

**What is the date of event for this SSI?**

- January 15
- March 8
- March 9

Date of Event is the date where the first element used to meet the SSI infection criterion occurs for the first time during the surveillance period.

**Does this patient have a BSI secondary to the SSI?**

Yes

## Case Studies Functional Exercise 3

### Louisiana NHSN Trainings 2016

#### Instructions

- Divide yourselves into groups
- Complete the exercises with current NHSN definitions

#### Warm-up Questions

1. Different species from the same genus still count as the same organism when reporting to NHSN. (True/False)  
**True - Different species count as different organisms. Different drug susceptibilities do not count as different organisms (MRSA and MSSA are counted as one organism).**
2. What type of organism commonly found in urine does not constitute a NHSN reportable UTI?  
**Yeast such as *Candida* species (most common).**
3. Name the three symptoms that cannot be used to meet the criteria for a SUTI 1a while a catheter is in a patient.  
**Dysuria, urinary frequency, urinary urgency.**
4. At what age can you have a fever and still meet the criteria for an ABUTI?  
**65 years of age.**
5. What are the temperature cut-offs for a fever and hypothermia for SUTIs?  
**Fever: > 38°C/100.4°F; Hypothermia: <36.0°C/96.8°F**

#### Scenarios

##### Scenario 1

- An elderly man has been cared for in an inpatient rehabilitation following multiple fractures sustained while rock climbing.
- He is transferred to your hospital with a Foley catheter which has been in place for 2 weeks.
- He had a fever of 38.5°C and a change in mental status the day before transfer, reported by a healthcare worker.
- He is afebrile on admission. Urine cultures collected on admission are positive for *E. coli* and the urinary nitrite test is positive.
- **Which of the following is most accurate?**
  - The patient does not have an NHSN CAUTI.**
  - The patient has a CAUTI attributed to the new hospital.
  - The patient has a CAUTI attributable to the rehab facility and POA to the hospital.
- **If this doesn't meet criteria for a reportable NHSN CAUTI, what evidence would make this reportable as a NHSN CAUTI?**  
**For a culture to meet the criteria for an NHSN CAUTI, there must be a quantified CFU/ml result reported which is  $\geq 100,000/10^5$  CFU/ml. If this were reported with the positive urine culture for *E. coli* then it would meet the criteria for an NHSN SUTI 1a attributable to the inpatient rehab center due to his fever of 38.5°C the day before transfer and the**

positive urine culture for *E. coli* on the day of transfer, both of which the patient had an indwelling catheter inserted during for >1 day.

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#### Scenario 2

- 1/7: Patient admitted
- 1/8: Temperature 100.9°F; Foley inserted
- 1/9: Temp 102°F
- 1/10: Temp 100.9°F
- 1/11: Temp 101.6° F; Foley removed
- 1/12: Temp Urine culture collected and positive for 100,000 CFU/ml coagulase negative *Staphylococcus*
- **This patient meets the criteria of a NHSN HAI which is a UTI**
  - True
  - False
- **This patient has a SUTI 1a**
  - True
  - False

The DOE is on 1/9 (day 3 of hospital stay) due to the patient having a fever >100.4°F. This along with the positive urine culture on 1/12 meets the criteria for a SUTI. However, the DOE is 1 day after the Foley catheter is inserted and to meet the criteria for SUTI 1a, the catheter must be in place for ≥2 days. The criteria for a SUTI 1b (non-catheter associated) is met, however.

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#### Scenario 3

- Day 1: Admit to ICU
- Day 4: Foley inserted
- Day 8: Foley removed
- Day 9: Foley inserted
- Day 10: Temp of 100.6°F; Urine (+) 100,000 CFU/ml of *E. coli*, *Staphylococcus aureus*, and *Candida albicans*
- Day 12: Afebrile
- Day 15: Foley removed
- Day 16: Temp of 101.0°F;
- Day 17: Urine culture (+) for 100,000 CFU/ml of *E.coli*
- Day 21: Blood culture (+) for *E. coli*
- **The patient has a SUTI 1a on Day 10**
  - True
  - False
- **The patient has a SUTI 1b on Day 16**
  - True
  - False
- **Would you report anything else? If so, what?**

The culture results from Day 10 do not meet NHSN SUTI 1a criteria because there are

more than two organisms that have been cultured; this is considered a sign of sample/testing contamination and is invalid. The fever of 101.0°F on Day 16 (DOE) and the urine culture on Day 17 together meet the criteria for a SUTI. Because the Foley catheter was in place for ≥2 days as of Day 15 and had not been removed for >1 day on the DOE, the criteria for a SUTI 1a is met.

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#### Scenario 4

- 2/1, hospital day 4: Foley has been in place for >2 days and patient spikes temp of >38.0°C. Urine culture collected and positive for 10<sup>5</sup> CFU/ml of *Klebsiella pneumoniae* and *Citrobacter freundii* (2 species)
- 2/3: Urine culture collected and positive for 10<sup>5</sup> CFU/ml *Klebsiella ornithinolytica*
- **The patient has a CAUTI with the date of event Feb 1**
  - True
  - False

All criteria of a SUTI 1a is met as of 2/1 (catheter in place >2 days, fever >38.0°C, and a urine culture of ≥1 bacterium and ≤2 organisms. The culture on 2/3 adds a third distinct organism, but since this is from a separate culture, the rule of ≤2 organisms does not apply. The SUTI 1a that is reported would include all three organisms.

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#### Scenario 5

- 3/2: A 60 year old woman was transferred to the OR from the ER for exploratory lap; Foley inserted in OR. Transferred to surgical ward post-op.
- 3/3: Patient is stable, Foley in place.
- 3/5: Foley remains in place. Patient complains of pain in right lower back. He has cloudy, foul-smelling urine.
- 3/6: Urine culture w/ 10<sup>5</sup> CFU/ml of *E. faecalis* and *C. grabata* identified; afebrile.
- 3/7: Foley removed.
- 3/9: Asymptomatic. Urine culture negative.
- 3/10: WBC increased to 19,000/mcL.
- 3/11: Blood culture positive for *P. aeruginosa* and *E. faecalis*.
- 3/12: Urine culture positive w/ 10<sup>5</sup> CFU/ml of *E. faecium*.
- **What do you report?**
  - ABUTI (catheter associated) with DOE of 3/6 (*E. faecalis* and *C. grabata*)
  - SUTI 1a with DOE of 3/5 (*E. faecalis*)
  - Primary BSI for *P. aeruginosa* on 3/11
- **Would you report anything else? If so, what?**

The pain in right lower back on 3/5 (DOE) constitutes costovertebral angle pain and is a qualifying symptom of SUTI 1a when no other explanation is found. This along with the urine culture of *E. faecalis* and *C. grabata* on 3/6 and the catheter being in place for >2 days meet all the criteria for a SUTI 1a. The blood culture of *P. aeruginosa* on 3/11 and

*E. faecalis* falls in the RIT/BSI period of the SUTI 1a, but because *P. aeruginosa* wasn't present in the original urine sample, it must be reported as a Primary BSI (along with *E. faecalis*). The positive urine culture of *E. faecium* on 3/12 falls in the RIT of the original SUTI 1a, and therefore the organism is simply added to the list of organisms comprising the SUTI 1a.

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#### Scenario 6

- Day 1: 58-year-old patient is admitted to the ED with GI bleed. Foley inserted.
- Day 2: Patient spikes temp of 38.6°C. Indwelling catheter remains in place.
- Day 3: Urine specimen is collected.
- Day 4: Culture results 100,000 CFU/ml *P. aeruginosa*. Antibiotics started.
- Day 5: Patient asymptomatic and afebrile.
- **Is this an HAI? If so, what type?**
  - Yes, healthcare-associated UTI but not a CAUTI because catheter had not been in for > 2 calendar days.
  - No, it is a UTI that is POA.**
  - Yes, CAUTI, SUTI criterion 1a.
- Day 13: Foley remains in place. Patient completed treatment for UTI on hospital day 11 and has been afebrile since. Hospitalization has been complicated by development of DVT. Temperature today 38.1°C. Cough productive of yellow phlegm. Rhonchi present.
- Day 14: Fever 37.9°C and cough continues. Sputum specimen collected.
- Day 15: Urine and blood specimen collected.
- Day 16: Urine and sputum cultures both positive for *S. aureus* with > 100,000 CFU/ml in urine. Blood specimen positive for *P. aeruginosa* and yeast.
- **Should another CAUTI be reported?**
  - No. The UTI is secondary to the respiratory infection.
  - No, the date of event for a UTI related to this culture occurs during the RIT of previous UTI.**
  - Yes, first UTI resolved and treatment finished.
- **Should anything else be reported? If so, what?**

The DOE of the UTI is Day 2 of the hospital stay (fever of 38.6°C) and is thus POA. The RIT of this UTI extends until Day 17 and includes the second urine culture collected on Day 15. Since the organism of the second urine culture (*S. aureus*) is different from the original, the organism is added to the original UTI's organism list. The blood culture collected on Day 15 is the same organism as the original UTI and is reported as a Secondary BSI. However, since yeast is also found in the Day 15 blood culture, and was not present in the original UTI culture, a Primary BSI is also reported with *P. aeruginosa* and yeast.

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#### Scenario 7

- 4/5: 76- year-old woman is admitted from LTAC at 8a.m. for surgical debridement of sacral decubitus. Medical history notable for severe rheumatoid arthritis, CHF and atrial fibrillation. Routine admission U/A performed, positive for leukocyte esterase, and 3 WBC by HPF of spun urine. Patient afebrile, denies urinary urgency, frequency or pain. No suprapubic or CVA pain. Foley catheter present on admission, and peripheral IV is inserted in OR. Admit postoperatively to telemetry unit.
- 4/6: Wound care specialist documents wound clean. Temperature 37.4°C. Foley draining cloudy urine.
- 4/7: Transfer to surgical unit. WBC's 12,100/mcL. Temp of 37.9°C. Foley removed. Encouraged to push p.o. fluids. Urine specimen sent to lab for culture and sensitivity.
- 4/8: Patient complains of dysuria and tenderness with palpation to suprapubic area. Bactrim started.
- 4/9: Urine specimen sent on 4/7 results are positive for *Candida albicans* 100,000 CFU/ml. Patient afebrile. Preparing for discharge back to LTAC.
- **As of 4/9 does this patient have a UTI and if so, is it a CAUTI?**
  - No, UTI criterion not yet met.
  - No, UTI was present on admission.
  - Yes, patient has a SUTI 1a and it is a CAUTI.
  - Yes, patient has a SUTI 1b but it is not a CAUTI.
- **What if everything was the same except that the urine culture result was positive for *S. aureus* 100,000 CFU/ml and *Candida albicans* 100,000 CFU/ml? Does this patient have a UTI and is it a CAUTI?**
  - No, UTI criterion not met.
  - No, UTI was present on admission.
  - Yes, patient has a SUTI 1a and it is a CAUTI.
  - Yes, patient has a SUTI 1b but it is not a CAUTI.
- **To which location would the CAUTI be attributed?**
  - Telemetry unit
  - Surgical unit

The original scenario does not meet UTI criteria because there is not  $\geq 1$  bacterium isolated in the urine culture. In the second scenario where *S. aureus* and *C. albicans* are both isolated, the criteria of a SUTI 1a is met with the symptoms of dysuria and suprapubic area pain. Because the culture taken on 4/7 (DOE) is the same day as the transfer from the telemetry unit to the surgical unit, the SUTI 1a is attributed to the telemetry unit.

#### Scenario 8

- 5/15: 48-year-old male involved in motorcycle accident. Closed head injury, multiple fractures including one to the lower posterior ribs. Taken to OR for ORIFs and evacuation of subdural hematoma. Foley catheter and left subclavian catheter placed in ED. Patient remains on ventilator which was placed in OR. Lungs clear bilaterally.

- 5/21: Tmax 99.8°F, Lungs clear bilaterally. Foley remains in place draining, clear yellow urine. Patient remains ventilated, sputum production slightly increased.
- 5/22: Tmax 100.4°F; vent settings stable. No change to sputum production.
- 5/23: Tmax 100.4°F; WBC 14,000/mcL. Lungs sounds clear; CXR clear, remains on vent; Foley and central line remain in place. Pan cultures sent. Empiric antibiotic treatment begun.
- 5/24: Urine culture: >100,000 CFU/ml of *P. aeruginosa* and >100,000 CFU/ml of *C. glabrata*. Blood culture: *P. aeruginosa*. Physical assessment normal. Pain during palpation of costovertebral angle where bruising still present from lower posterior rib injury. No patient response to suprapubic.
- **Does this patient have a UTI? If so, what type and pathogen(s)?**
  - No, UTI.
  - Yes, ABUTI with *P. aeruginosa* and *C. glabrata*.
  - Yes, ABUTI with *P. aeruginosa*.
  - Yes, SUTI 1a.

The patient meets all the criteria of having a SUTI 1a except for symptoms. The patient's fever is not over 100.4°F on 5/21, 5/22, or 5/23. Also, the patient does have costovertebral angle pain, but it is possibly due to the bruising still present from the original injury and thus cannot only be attributed to the UTI. While this prevents the criteria of a SUTI 1a from being met, it meets the criteria of a catheter associated ABUTI.

#### Scenario 9

- 8/25: 73-year-old patient in neurosurgical ICU, admitted following cerebrovascular accident. Ventilated, subclavian catheter and Foley catheter inserted on admit. Patient reacts only to painful stimuli.
- 9/2: WBCs slightly elevated, at 12,000/mcL, temp maximum 38.2°C, urine cloudy. Lungs clear to auscultation. Still ventilated, and catheterized.
- 9:3 WBC 15,800/mcL, Temperature maximum: 37.6°C. Breath sounds slightly coarse, minimal clear sputum. Urine unchanged. U/A performed. Blood, endotracheal and urine specimens collected for culture. No suprapubic or CVA pain noted.
- 9/4: Urinalysis positive for leukocyte esterase, nitrites and WBC too numerous to count. Blood and endotracheal cultures no growth. Urine > 10,000 CFU/ml *E. faecium*. Antibiotics begun for UTI.
- 9/5-9/7: Afebrile
- **Does this patient have a UTI? If so, what type?**
  - Yes, ABUTI.
  - Yes, SUTI Criterion 1a.
  - Yes, SUTI Criterion 1b.
  - No, UTI.

The patient does not meet the criteria of a SUTI 1a because the urine culture collected on 9/4 does not have a CFU/ml measurement of >10<sup>5</sup> CFU/ml of *E. faecium*.

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Scenario 10

- 3/1: Peter Unlucky, 48-years-old, is admitted postoperatively to your surgical ward following injuries sustained in a crocodile wrestling tournament. A Foley catheter was placed during surgery. He is found to be severely anemic and is transfused with 2 units of blood. IV antibiotics begun.
- 3/2: Peter's Foley was removed this a.m. but he has been having trouble voiding and has not felt that he has been emptying his bladder. He is catheterized post-void and 600 ml of residual urine is collected. The Foley catheter is left in place and urine culture is sent. Temp 38.2°C.
- 3/3: Urine culture is reported positive for 80,000 CFU/ml of *E. faecium*. Temp 38.1°C.
- 3/4: Afebrile, Foley continues.
- 3/5: Foley discontinued.
- 3/6: Urine pink-tinged. Temp 38.0°C.
- 3/7: Temp 38.3°C. Right leg wounds slightly reddened.
- 3/8: Temp 38.0°C
- 3/9: Temp 37.9°C. Small amount of pus right leg wounds. Wound cultures collected.
- 3/10: Urine culture collected. Positive for 100,000 CFU/ml *E. faecium*. Wound culture positive for *P. aeruginosa*.
- **Does Peter Unlucky have a HAI UTI?**
  - Yes, SUTI criterion 1b, DOE is 3/7.
  - No, Peter's fever is due to his leg infection.
  - No, Peter's UTI is POA because of the positive urine cultured collected during the POA timeframe.
- **Would you report anything else? If so, what?**

The urine culture collected on 3/2 does not meet UTI criteria because only 80,000 CFU/ml of *E. faecium* was cultured. The urine culture on 3/10 does meet the criterion. There is also a fever of 38.3°C within the IWP on 3/7 (DOE). However, because the Foley catheter was removed on 3/5, the SUTI is as 1b (non-catheter associated).

## Case Studies Functional Exercise 4

### Louisiana NHSN Trainings 2015

#### Instructions

- Divide yourselves into groups
- Complete the exercises with current NHSN definitions

#### Scenario 1:

- 3/1: Patient presents to the emergency department (ED) with complaints of diarrhea and lower abdominal pain for the past two days.
  - She states that she attended a family picnic three days ago and wonders if she has food poisoning.
  - Medical history includes chronic cystitis and patient is currently being treated with unknown antibiotics.
  - Upon exam, patient is slightly hypotensive, but otherwise normal. A loose stool specimen collected in the ED is toxin positive for *C. difficile*; negative for Salmonella and other enteric pathogens.
  - Patient was treated with fluids and discharged home with prescription for Flagyl.

**For FacWideIN LabID Event reporting, can this result be entered as a LabID Event and if so, what location would be entered?**

- No. ED is an outpatient location and I am only monitoring inpatient locations.
- Yes. Location would be the ED since specimen was collected there.
- No. The patient was not admitted.
- Yes. Location would be FacWideIN
- No. Food poisoning can affect CDI toxin testing.

**If participating in FacWideIN, LabID event specimens collected in the facility's emergency department must be reported for that outpatient location even if the patient is not admitted to the hospital.**

**What if the patient was admitted to an inpatient unit on the same calendar day as specimen collection?**

- Report the positive CDI LabID Event separately, once for ED and again for admitting inpatient unit
- Report only as FacWideIN
- Report only as FacWideOUT
- Report only for ED
- Toss a coin to make location selection

**Only report ED because that is where the specimen was collected.**

**What if the specimen was collected in the ED on 3/1/15 and the patient was admitted to an inpatient on 3/1/15 where another *C. diff* specimen was collected on the same day?**

- Delete both CDI LabID Events and call it a day because it's too confusing.
- Enter both CDI LabID Events – one for ED and one for inpatient location
- Enter FacWideIN only
- Enter ED only since the other one is duplicate

Report a LabID Event for each location a positive sample is collected, even if collected the same day.

#### Scenario 2:

- 3/1: 77-year-old male admitted to 5 West medical unit with history of dehydration and diarrhea. Patient has history of wound infection on right leg.
- 3/2: Wound draining small amounts of clear drainage. Patient complains of lower abdominal cramps and two episodes of diarrhea, relieved with medication.
- 3/3: Later that day, patient has fever of 38.2°C and complains of worsening lower abdominal pain. BM with loose unformed stool. Blood cultures collected. C. diff toxin ordered, but not collected.
- 3/4 : Patient continues to complain of lower abdominal pain and loose stools. Patient transferred to 3 East unit in a private room. After transfer, a loose stool specimen was collected and positive for *C. difficile* toxin. Blood culture results positive for MRSA.

**For FacWideIN LabID reporting, should this be entered as a *C. difficile* LabID Event?**

- No. His symptoms started on admission to the hospital.
- Yes. This is the first toxin positive *C. difficile* isolate collected for this patient and location (no previous positive within 14 days for location).

**What location is the LabID Event Attributed?**

- 5 West
- 3 East
- Lab
- FacWideIN

Location attribution is based solely on where the specimen was collected. There is no thought process or subjective decisions allowed for location attribution for LabID event reporting.

**How will this event be categorized?**

- Community-Onset (CO)
- Healthcare Facility-Onset (HO)
- Community-Onset Healthcare Facility-Associated (CO-HCFA)

Specimen was collected > 3 days after admission to the facility where day of admission = Day 1.

**For FacWideIN LabID reporting, should the MRSA blood result be entered as a MRSA bacteremia LabID Event?**

- No. His symptoms started on admission to the hospital.
- Yes. This is the MRSA positive blood specimen collected for this patient and location (no previous positive with 14 days for location).
- No. The specimen was collected <4 days after admission.

**How will the MRSA bacteremia LabID Event be categorized?**

- Community-Onset (CO)
- Healthcare Facility-Onset (HO)
- Community-Onset Healthcare Facility-Associated (CO-HCFA)

Specimen was collected on inpatient Day 3, where day of admission = Day 1.

Scenario 3:

- 2/15: 6-year-old patient admitted to inpatient unit, 3E-Peds, from rehab facility. The patient was discharged from your facility 2-weeks ago after spending 1 week in the Orthopedic unit after a snowball injury.
  - Upon admission to 3E-Peds, patient is noted to have foul loose stools.
- 2/16: After three episodes of loose stools over the course of 24 hours, an unformed specimen was collected and tested positive for *C. difficile* toxin.

**For FacWideIN LabID reporting, should this be entered into NHSN as a LabID Event?**

- Yes. Specimen was collected from 3E-Peds inpatient location.
- No. Pediatrics are excluded from CDI LabID Event reporting.

Only baby locations are excluded from CDI reporting. Pediatric locations are not excluded.

**How will NHSN categorize the CDI event?**

- Community-Onset (CO)
- Healthcare Facility-Onset (HO)
- Community-Onset Healthcare Facility-Associated (CO-HCFA)
- NHSN will not categorize the event, the user will need to make the decision.

The stool specimen was collected less than 4 days after admission to the facility AND this patient was previously discharged from your facility 4 or less weeks prior to the current date of stool specimen collection.

**What categorization would the application assign if the stool specimen was collected 4 days after admission to the hospital?**

- Community-Onset (CO) since the patient was admitted with symptoms of foul stool.
- Healthcare Facility-Onset (HO)
- Community-Onset Healthcare Facility-Associated (CO-HCFA) since the patient was admitted from another healthcare facility.

Since the stool was collected more than 3 days after admission.

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Scenario 4:

**What if a patient with no previous admission to your facility presents with symptoms of diarrhea and fever on admission, but the *C. difficile* toxin was negative on admission and subsequently positive on day 4 of admission?**

- I can override NHSN and categorize the event as community-onset since patient was symptomatic on admission.
  - NHSN will categorize as community-onset (CO).
  - NHSN will categorize as healthcare facility-onset (HO).
- 

Scenario 5:

**If your hospital is participating in FacWideIN for *C. difficile* and MRSA blood, which locations must you select when setting up your monthly reporting plan for LabID Event reporting?**

- FacWideIN and each ED and each 24-hour observation location
  - FacWideIN only
  - FacWideIN and FacWideOUT
- 

Scenario 6:

- 6/15: 90-year-old patient admitted from the emergency department (ED) to ICU following a pogo stick accident. A Foley and central line inserted and patient scheduled form emergent surgery for pelvic fracture. Patient with multiple lacerations.
- 6/16: Patient spikes a fever of 101°F and urine draining cloudy drainage in bedside bag. A urine culture is collected.
- 6/18: Urine culture results are positive for *E. coli* and MRSA. Antibiotic treatment begun.
- 6/21: Patient continues to have fever of 101.4°F. Blood cultures collected from peripheral IV site.
- 6/22: Two of two blood cultures are positive for MRSA.

**Since your facility participates in MRSA bacteremia LabID Event Reporting for FacWideIN, would you report this positive blood culture as a LabID Event?**

- No. Since the patient already had a positive urine culture with MRSA for this month and location, the MRSA blood is considered a duplicate.
- Yes. This is considered a unique blood source.
- No. This is CLABSI.

This is considered a MRSA bacteremia LabID Event since the patient has no prior positive blood culture for MRSA in this location in the last 14 days.

**What if the patient had a previous positive MRSA blood culture 3 days prior to this culture while in the same location (ICU)?**

- This would be a duplicate MRSA isolate and NOT a MRSA bacteremia LabID Event.
- I would report as a MRSA bacteremia LabID Event.
- I would report as an Infection Surveillance Event.

A prior (+) MRSA blood culture result in the last 14 days from same patient and same location (including across calendar month) is considered a duplicate MRSA isolate and should NOT be reported as a LabID Event.

Scenario 7:

6/9: Mr. B, a local football player is admitted to the orthopedic floor after a knee injury while diving after a deflated football. Upon admission to the unit, a surveillance nasal screen tested positive for MRSA.

**Should this positive MRSA nasal screen be entered into NHSN as a MRSA LabID Event?**

No. MDRO/MRSA LabID Event Reporting excludes tests related to active surveillance testing

**What if blood cultures were also collected and tested positive for MRSA?**

- No. I would not consider this to be a MDRO LabID Event since the patient had a MRSA positive nasal screen.
- Yes, since the blood culture was obtained for clinical decision making. I would report his as a MRSA bacteremia LabID Event if no MRSA blood was reported for this patient and location in previous 14 days.

Scenario 8:

Identify the LabID Events

(Note: This table displays Tim’s hospital stay starting 6/1/12 through 7/15/12)

	Patient	Admit Date/Location	Specimen Collection Date/Loc	Specimen Source	Lab Result	LabID Event? Location?	Explanation
1	Tim	6/1/12 ICU	6/1/12 ED	Blood	MRSA	Yes ED	Location of patient at time of specimen collection
2	Tim	6/1/12 ICU	6/1/12 ICU	Blood	MRSA	Yes ICU	1st (+) MRSA blood in location (ICU)
3	Tim	6/1/12 ICU	6/12/12 ICU	Blood	MRSA	No	Less than or equal to 14 days

							from previous specimen in location
4	Tim	6/1/12 ICU	6/20/12 ICU	Blood	MRSA	No	Less than or equal to 14 days from previous specimen in location
5	Tim	6/1/12 ICU	7/10/12 ICU	Blood	MRSA	Yes ICU	More than 14 days previous specimen in same location
6	Tim	6/1/12 ICU	7/15/12 2 East	Blood	MRSA	Yes 2 East	New location

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Scenario 9:

Identify the LabID Events

	Patient	Admit Date/Location	Specimen Collection Date/Loc	Specimen Source	Lab Result	LabID Event? Location?	Explanation
1	Jim	8/2/12 CCU	8/2/12 CCU	Blood	MRSA	Yes CCU	1 <sup>st</sup> (+) MRSA blood for location
2	Jim	8/2/12 CCU	8/6/12 CCU	Blood	MRSA	No	Less than or equal to 14 days previous specimen/location
3	Sam	7/2/12 ICU	7/9/12 ICU	Stool	C. diff (+)antigen (-)toxin	No	Must be <b>toxin (+)</b>
4	Tim	7/2/12 NICU	7/6/12 NICU	Stool	C. diff (+)toxin	No	NICU excluded
5	Paul	8/2/12 M/S	8/5/12 M/S	Blood	MRSA	Yes M/S	1 <sup>st</sup> (+) MRSA blood for location
6	Paul	8/5/12 ICU	8/5/12 ICU	Blood	MRSA	Yes ICU	1 <sup>st</sup> (+) MRSA blood for location

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Scenario 10:

- 6/1: A 50-year-old patient presents to the emergency department with abdominal pain, fever, and diarrhea for three days.

- 6/2: The physician writes admission orders, but all inpatient units are full so the patient is transferred to an observation unit for monitoring. Upon arrival to the observation unit a loose stool specimen is collected and test toxin positive for CDI.
- 6/4: Patient is transferred to an inpatient unit.

**Should the specimen collected on 6/2 be entered as a LabID Event if participating in FacWideIN reporting? If so, what location?**

- Yes. Location = outpatient observation unit
- Yes. Location = admitting inpatient unit
- No

Location reported to NHSN is the location where the patient was physically located when specimen was collected.

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Scenario 11:

- 5/1: A 60-year-old patient presents to the emergency department with diarrhea for five days.
- 5/2: The physician writes orders for the patient to be observed in the 24 hour observation unit, but all observation beds are full so the patient is transferred to 2 South, an inpatient unit, for monitoring. Upon arrival to the inpatient unit, a loose stool specimen is collected and test toxin positive for CDI.

**Should the specimen collected on 5/2 be reported for FacWideIN LabID Event reporting? What location should be entered since the patient was on observation status?**

- Yes. Location = 2 South, inpatient unit
- Yes. Location = observation unit
- No
- Yes. Location = ED

If an observation patient is sent to an inpatient location for monitoring, the patient should be included for all inpatient and device day counts. The facility assignment of the patient as an observation patient or an inpatient has no bearing in this instance for counting purposes, since the patient is being housed, monitored, and cared for in an inpatient location.