Laboratory Identified Events (LabID) Case Studies  
Two-Day Healthcare-Associated Infections Workshops 2017

Instructions
• Divide yourselves into groups
• Complete the exercises with current NHSN definitions

Scenario 1:
Tim, an experienced IP with military background, is performing environmental rounds in the ED when an unruly patient escapes from the seclusion room. Tim – being in the right place at the wrong time – assists security in overcoming the patient, but in the process, falls over an errant wheelchair and breaks his leg. Tim is admitted and goes directly to surgery for an ORIF. A Foley & central line are placed during surgery. On POD 1 (1/29), Tim is stable but the next day (1/30), he spikes a temperature and is noted to have cloudy urine in the Foley bag. A urine culture is collected & antibiotic treatment begun. The next day, urine culture result is positive for E. coli and MRSA. The next evening (2/1), Tim again spikes a temperature; blood cultures are collected which return positive via PCR – 2 of 2 blood cultures are MRSA +.

This facility participates in MRSA bacteremia LabID Event Reporting for FacWidelIN blood specimens only. Would you report the positive blood culture as a LabID Event?

A. No. Since the patient already has a (+) urine culture with MRSA for this month and location, the MRSA blood is considered a duplicate.
B. Yes. This is considered a unique blood source.
C. No. This is a CLABSI!
D. No. This is a 2nd BSI to a primary UTI.

If the facility also performs BSI surveillance, what is reported?

A. Just a MRSA LabID event because I only have a PCR finding for MRSA.
B. I would report a MRSA bacteremia LabID Event and as a CLABSI since LCBI1 definition is met.
C. I wouldn’t report anything. This is all a result of an accident so it’s not reportable.

Scenario 2:
Karen Unlucky and family visit Disney World following the Patriots Super Bowl victory. Karen eats some questionable items and falls ill. She visits the local ER where she is diagnosed with possible intestinal sepsis and admitted to ICU where blood and urine cultures are collected – all on 2/7. She continues to complain of lower abdominal cramps and has two loose bowel movements, relieved with medication. On 2/9 she has fever of 38.6°C and worsening lower abdominal pain with loose unformed stool. Urine & blood cultures return positive for MRSA; C. difficile toxin ordered, but not collected. 2/10, she transfers to Stepdown Unit; after transfer, a loose stool specimen is collected which tests positive for C. difficile.
For FacWideIN LabID reporting, should a C. difficile LabID Event be reported?

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

To which location is the LabID Event attributed?

A. ICU  
B. Step down unit  
C. Lab  
D. FacWideIN

How will this event be categorized?  
(Hint: admission on 2/7; specimen collection on 2/10)

A. Community-Onset (CO)  
B. Healthcare Facility-Onset (HO)  
C. Community-Onset Healthcare Facility-Associated (CO-HCFA)  
D. As a traumatic experience

What about that MRSA+ blood culture? For FacWideIN LabID reporting, should the MRSA blood result be entered as a MRSA bacteremia LabID Event?

A. No. Her symptoms started on admission to the hospital  
B. Yes. First MRSA positive blood specimen collected for this patient and location (no previous positive within 14 days for location)  
C. No. The specimen was collected <4 days after admission

How will the MRSA bacteremia LabID Event be categorized and attributed?  
(Hint: admission on 2/7; specimen collection on 2/7)

A. Community-Onset (CO) for ICU  
B. Community-Onset for step down unit  
C. Healthcare Facility-Onset (HO) for FacWideIN  
D. Community-Onset Healthcare Facility-Associated (CO-HCFA)

Scenario 3:  
Brandi, a 9 month old preemie born at your facility, presents to the ED with a several day history of stomach virus. She’s severely dehydrated and is admitted to the hospital 1E-Peds unit. The patient was discharged from your facility 3 weeks prior after a long hospitalization related to premature birth. Upon admission to 1E-Peds, patient is noted to have foul loose stools (HD 1). After three episodes of loose stools over the course of 24 hours, an unformed specimen was collected and tested positive for C. difficile toxin (HD 2).
The facility shows FacWideIN LabID reporting for all inpatient locations. **Should this be entered into NHSN as a LabID Event?** REMEMBER: LabID event is location, not age-based!

A. Yes. Specimen was collected from 1E – Peds inpatient location 
B. No. Pediatric events are excluded from CDI LabID Event reporting 
C. No. There is no event as the patient was symptomatic on admission

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

A. Community-onset (CO) 
B. Healthcare-facility onset (HO) 
C. Community-onset healthcare facility-associated (CO-HCFA) 
D. NHSN will not categorize the event; the user will need to make the decision

**Scenario 4:**
Debby, a local soccer player, is admitted to the LTAC after a long hospitalization related to a head injury sustained while head-kicking an underinflated soccer ball. Upon admission, a rectal swab is collected for PCR C. difficile testing which subsequently is reported as positive for CD.

**Should this positive laboratory finding be entered into NHSN as a LabID Event?**

A. No 
B. Yes

**Scenario 5:**
1/1: Laura is admitted to ICU from an outlying facility where she was identified as CD+ during a long hospitalization related to injuries sustained in a crocodile wrestling tournament; She has no previous admissions to your facility.

1/4 @ 7am: Laura transfers to the Stepdown Unit & shortly thereafter, complains of abdominal pain. She has a single episode of what is documented as “diarrhea”. MD orders C. difficile testing; A specimen is collected and submitted which is rejected by the lab as it did not meet testing parameters (conforms to shape of collection container). A second specimen is collected for CD testing which is acceptable for testing. Laura is transferred back to ICU for higher level of care.

1/4 @ 1pm: Laura arrives to ICU. She has several loose stools and a new CD order is given. In the meanwhile, the prior specimen results are received as toxin + for CD.

**Should the specimen collected on ¼ be entered as a LabID Event if participating in FacWideIN reporting?**

A. Yes. Location = ICU 
B. Yes. Location = Stepdown Unit 
C. No. Patient is known + 
D. Too hard to determine
How will NHSN categorize this LabID event?

A. Community Onset
B. Community Onset – Healthcare Facility Associated (CO-HCFA)
C. Healthcare Onset

**Scenario 6:**

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.

**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.

**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
Scenario 7:

- 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 and 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 FacWIdelN 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
- FacWIdelN

How will this event be categorized?

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

For FacWIdelN LabID reporting, should the MRSA blood result be entered as a MTSA 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)
Scenario 8:

- 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.

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.

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.

Scenario 9:

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 10:

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 11:**

- 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 for 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.

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.

**Scenario 12:**

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?

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 13:**

Identify the LabID Events

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

<table>
<thead>
<tr>
<th></th>
<th>Patient</th>
<th>Admit Date/Location</th>
<th>Specimen Collection Date/Loc</th>
<th>Specimen Source</th>
<th>Lab Result</th>
<th>LabID Event? Location?</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tim</td>
<td>6/1/12 ICU</td>
<td>6/1/12 ED</td>
<td>Blood</td>
<td>MRSA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Tim</td>
<td>6/1/12 ICU</td>
<td>6/1/12 ICU</td>
<td>Blood</td>
<td>MRSA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Tim</td>
<td>6/1/12 ICU</td>
<td>6/12/12 ICU</td>
<td>Blood</td>
<td>MRSA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Tim</td>
<td>6/1/12 ICU</td>
<td>6/20/12 ICU</td>
<td>Blood</td>
<td>MRSA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Tim</td>
<td>6/1/12 ICU</td>
<td>7/10/12 ICU</td>
<td>Blood</td>
<td>MRSA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Tim</td>
<td>6/1/12 ICU</td>
<td>7/15/12 2 East</td>
<td>Blood</td>
<td>MRSA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Scenario 14:**

Identify the LabID Events

<table>
<thead>
<tr>
<th></th>
<th>Patient</th>
<th>Admit Date/Location</th>
<th>Specimen Collection Date/Loc</th>
<th>Specimen Source</th>
<th>Lab Result</th>
<th>LabID Event? Location?</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jim</td>
<td>8/2/12 CCU</td>
<td>8/2/12 CCU</td>
<td>Blood</td>
<td>MRSA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Jim</td>
<td>8/2/12 CCU</td>
<td>8/6/12 CCU</td>
<td>Blood</td>
<td>MRSA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Sam</td>
<td>7/2/12 ICU</td>
<td>7/9/12 ICU</td>
<td>Stool</td>
<td>C. diff (+)antigen (-)toxin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Tim</td>
<td>7/2/12 NICU</td>
<td>7/6/12 NICU</td>
<td>Stool</td>
<td>C. diff (+)toxin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Paul</td>
<td>8/2/12 M/S</td>
<td>8/5/12 M/S</td>
<td>Blood</td>
<td>MRSA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Paul</td>
<td>8/5/12 ICU</td>
<td>8/5/12 ICU</td>
<td>Blood</td>
<td>MRSA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Scenario 15:

- 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

Scenario 16:

- 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

~ THE END ~