Using NHSN for Multidrug Resistant Organism and *Clostridium difficile* Infection (MDRO/CDI) Laboratory-Identified (LabID) Event Reporting

Katherine Allen-Bridson, RN, BSN, MScPH, CIC
Nurse Consultant

Wichita, KA
September 20, 2012
Objectives

• Review the structure of the Multidrug-Resistant Organism & Clostridium difficile Infection (MDRO/CDI) Module within the Patient Safety Component of NHSN
• Describe the rationale for monitoring MDROs and CDI
• Review requirements for MRSA Bacteremia and CDI LabID Event reporting to CMS through NHSN
• Describe the methodology, protocols, and definitions used in data collection and reporting under the MDRO/CDI LabID Event Reporting in NHSN
• Review the correct method for entering MRSA Bacteremia and CDI LabID Events into NHSN
• Apply knowledge through case studies
Patient Safety Component

5 Modules

- Device-associated Module
- Procedure-associated Module
- Antimicrobial Use and Resistance (AUR) Module
- MDRO & CDI Module
- Vaccination Module
Multidrug-Resistant Organism & Clostridium difficile Infection Module (MDRO/CDI)

Infection Surveillance
- MDRO
- CDI

Laboratory-Identified (LabID) Event
- MDRO
- CDI

Prevention Process Measures
- Hand Hygiene
- Gowns/Gloves
- Adherence to Active Surveillance Testing (AST)
  MRSA & VRE only

Outcome Measures
- AST Prevalence/Incidence
  MRSA & VRE only
- Only in locations where AST adherence done
Background
Goal of the MDRO and CDI Module

- Monitoring of MDROs and *C. difficile* infection (CDI) helps to evaluate local trends and changes in the occurrence of these pathogens and related infections.

- This module provides a mechanism for facilities to report and analyze MDRO and CDI data, in order to inform infection control staff of the impact of targeted prevention efforts.
Antimicrobial-Resistant Pathogens Associated With Healthcare-Associated Infections: Annual Summary of Data Reported to the National Healthcare Safety Network at the Centers for Disease Control and Prevention, 2006–2007

Alicia I. Hidron, MD; Jonathan R. Edwards, MS; Jean Patel, PhD; Teresa C. Horan, MPH; Dawn M. Sievert, PhD; Daniel A. Pollock, MD; Scott K. Fridkin, MD; for the National Healthcare Safety Network Team and Participating National Healthcare Safety Network Facilities

Objective. To describe the frequency of selected antimicrobial resistance patterns among pathogens causing device-associated and procedure-associated healthcare-associated infections (HAIs) reported by hospitals in the National Healthcare Safety Network (NHSN).

Methods. Data are included on HAIs (ie, central line–associated bloodstream infections, catheter-associated urinary tract infections, ventilator-associated pneumonia, and surgical site infections) reported to the Patient Safety Component of the NHSN between January 2006 and October 2007. The results of antimicrobial susceptibility testing of up to 3 pathogenic isolates per HAI by a hospital were evaluated to define antimicrobial-resistance in the pathogenic isolates. The pooled mean proportions of pathogenic isolates interpreted as resistant to selected antimicrobial agents were calculated by type of HAI and overall. The incidence rates of specific device-associated infections were calculated for selected antimicrobial-resistant pathogens according to type of patient care area; the variability in the reported rates is described.

Results. Overall, 463 hospitals reported 1 or more HAIs: 412 (89%) were general acute care hospitals, and 309 (67%) had 200–1,000 beds. There were 28,502 HAIs reported among 25,384 patients. The 10 most common pathogens (accounting for 84% of any HAIs) were coagulase-negative staphylococci (15%), Staphylococcus aureus (15%), Enterococcus species (12%), Candida species (11%), Escherichia coli (10%), Pseudomonas aeruginosa (8%), Klebsiella pneumoniae (6%), Enterobacter species (5%), Acinetobacter baumannii (3%), and Klebsiella oxytoca (2%). The pooled mean proportion of pathogenic isolates resistant to antimicrobial agents varied significantly across types of HAI for some pathogen-antimicrobial combinations. As many as 16% of all HAIs were associated with the following multidrug-resistant pathogens: methicillin-resistant S. aureus (8% of HAIs), vancomycin-resistant Enterococcus faecium (4%), carbapenem-resistant P. aeruginosa (2%), extended-spectrum cephalosporin-resistant K. pneumoniae (1%), extended-spectrum cephalosporin-resistant E. coli (0.5%), and carbapenem-resistant A. baumannii, K. pneumoniae, K. oxytoca, and E. coli (0.5%). Nationwide, the majority of units reported no HAIs due to these antimicrobial-resistant pathogens.

Infect Control Hosp Epidemiol 2008; 29;996-1011

Antimicrobial-resistant pathogens that cause healthcare-associated infections (HAIs) pose an ongoing and increasing threat to patients in healthcare facilities and resistance varies from facility to facility. Healthcare facilities and
Why *C. difficile*?

- Unlike many causes of healthcare associated infections (HAIs), *C. difficile* diarrheal infections have increased, and are now at **historic highs**.
- *C. difficile* infections are linked to about **14,000 deaths** each year, with approximately 90% being among the elderly.
- Antibiotic use and healthcare exposure are two of the greatest risk factors.
- Careful attention to surface cleaning, and wearing gowns and gloves when treating those known to be infected, can reduce spread by 20%.

**Renewed interest:**
- Reporting to CMS via NHSN

---

Making Health Care Safer
Stopping C. difficile Infections

Centers for Disease Control and Prevention
Morbidity and Mortality Weekly Report
Early Release / Vol. 61
March 6, 2012

Vital Signs: Preventing Clostridium difficile Infections

Abstract

Background: Clostridium difficile infection (CDI) is a common and sometimes fatal health-care-associated infection; the incidence, deaths, and excess health-care costs resulting from CDIs in hospitalized patients are all at historic highs. Meanwhile, the contribution of nonhospital health-care exposures to the overall burden of CDI, and the ability of programs to prevent CDIs by implementing CDC recommendations across a range of hospitals, have not been demonstrated previously.

Methods: Population-based data from the Emerging Infections Program were analyzed by location and antecedent health-care exposures. Present-on-admission and hospital-onset, laboratory-identified CDIs reported to the National Healthcare Safety Network (NHSN) were analyzed. Rates of hospital-onset CDIs were compared between two 8-month periods near the beginning and end of three CDI prevention programs that focused primarily on measures to prevent intrahospital transmission of C. difficile in three states (Illinois, Massachusetts, and New York).

Results: Among CDIs identified in Emerging Infections Program data in 2010, 94% were associated with receiving health care of these, 75% had onset among persons not currently hospitalized, including recently discharged patients, outpatients, and nursing home residents. Among CDIs reported to NHSN in 2010, 52% were already present on hospital admission, although they were largely health-care related. The pooled CDI rate declined 20% among 71 hospitals participating in the CDI prevention programs.

Conclusions: Nearly all CDIs are related to various health-care settings where predisposing antibiotics are prescribed and C. difficile transmission occurs. Hospital-onset CDIs were prevented through an emphasis on infection control.

Implications for Public Health: More needs to be done to prevent CDIs; major reductions will require antibiotic stewardship along with infection control applied to nursing homes and ambulatory-care settings as well as hospitals. State health departments and partner organizations have shown leadership in preventing CDIs in hospitals and can prevent more CDIs by extending their programs to cover other health-care settings.

http://www.cdc.gov/mmwr/pdf/wk/mm61e0306.pdf
SHEA/HICPAC Position Paper (October 2008): *Recommendations for MDRO Metrics in Healthcare Settings*

- Define reasonable and practical metrics to best measure impact of prevention
- Authors from APIC, CDC, SHEA, HICPAC
- Five Categories of MDRO Outcome Measures
  1. Tracking Patients
  2. Monitoring Susceptibility Patterns
  3. Estimating Infection Burden
  4. Estimating Exposure Burden
  5. Quantifying Healthcare Acquisition (which includes Transmission)
Recommended metrics from the SHEA/HICPAC Position Paper were the basis for the new MDRO and CDI Module.
Organisms

1) Methicillin-Resistant *Staphylococcus aureus* (MRSA) [option w/ Methicillin-Sensitive *S. aureus* (MSSA)]

2) Vancomycin-Resistant *Enterococcus* spp. (VRE)

3) Cephalosporin-Resistant (CephR) *Klebsiella* spp.

4) Carbapenem-Resistant (CRE) *Klebsiella* spp.

5) Carbapenem-Resistant (CRE) *E. coli* spp.

6) Multidrug-Resistant (MDR) *Acinetobacter* spp.

7) *Clostridium difficile*
MRSA: *S. aureus* testing oxacillin, cefoxitin, or methicillin resistant; or positive from molecular testing for meca and PBP2a

MSSA: *S. aureus* testing oxacillin, cefoxitin, or methicillin intermediate or susceptible; or negative from molecular testing for meca and PBP2a

VRE: Any Enterococcus spp. testing resistant to vancomycin

CephR-*Klebsiella*: *Klebsiella* spp. testing intermediate or resistant to ceftazidime, ceftriaxone, cefotaxime, or cefepime

CRE-*Klebsiella*: *Klebsiella* spp. testing intermediate or resistant to imipenem, meropenem, or doripenem

CRE-*E. coli*: *E. Coli* spp. testing intermediate or resistant to imipenem, meropenem, or doripenem
MDR-Acinetobacter: *Acinetobacter* spp. testing intermediate or resistant to at least one drug within at least 3 antimicrobial classes of 6, including:

- β-lactam/β-lactamase inhibitor combo (PIP, PIPTAZ)
- cephalosporins (CEFEP, CEFTAZ)
- carbapenems (IMI, MERO, DORI)
- aminoglycosides (AMK, GENT, TOBRA)
- fluoroquinolones (CIPRO, LEVO)
- sulbactam (AMPSUL)

C. difficile: *C. difficile* is identified as the associated pathogen for LabID Event or HAI reporting [Gastrointestinal System Infection (GI) - Gastroenteritis (GE) or Gastrointestinal Tract (GIT)]
Active participants must choose main reporting method

Infection Surveillance
LabID Event Reporting

additional options then become available

Prevention Process Measures:
• Adherence to Hand Hygiene
• Adherence to Gown and Glove Use
• Adherence to Active Surveillance Testing (for MRSA/VRE Only)

Outcome Measures:
• AST Prevalence / Incidence (for MRSA/VRE Only)
CMS Reporting Requirements
LabID Event for FacWideIN
## Healthcare Facility HAI Reporting to CMS via NHSN – Current and Proposed Requirements
*

**DRAFT (11/23/2011)**

<table>
<thead>
<tr>
<th>HAI Event</th>
<th>Facility Type</th>
<th>Reporting Start Date</th>
</tr>
</thead>
</table>
| CLABSI                        | Acute Care Hospitals
Adult, Pediatric, and Neonatal ICUs           | January 2011         |
| CAUTI                         | Acute Care Hospitals
Adult and Pediatric ICUs                     | January 2012         |
| SSI                           | Acute Care Hospitals
Colon and abdominal hysterectomy               | January 2012         |
| I.V. antimicrobial start       | Dialysis Facilities                               | January 2012         |
| Positive blood culture        | Dialysis Facilities                               | January 2012         |
| Signs of vascular access infection | Dialysis Facilities                             | January 2012         |
| CLABSI                        | Long Term Care Hospitals *                        | October 2012         |
| CAUTI                         | Long Term Care Hospitals *                        | October 2012         |
| CAUTI                         | Inpatient Rehabilitation Facilities               | October 2012         |
| **MRSA Bacteremia LabID Event** | Acute Care Hospitals                             | January 2013         |
| **C. difficile LabID Event**  | Acute Care Hospitals                             | January 2013         |
| **HCW Influenza Vaccination** | Acute Care Hospitals                             | January 2013         |
| **HCW Influenza Vaccination** | Outpatient Surgery/ASCs                          | October 2014         |
| **SSI (future proposal)**     | Outpatient Surgery/ASCs                          | TBD                  |

* Long Term Care Hospitals are called **Long Term Acute Care Hospitals** in NHSN
CMS 2013
MRSA Bacteremia LabID Event

Organism: Methicillin-Resistant *Staphylococcus aureus* (MRSA)

Data Collection: CDC NHSN - MDRO/CDI Module

Required Locations:
All inpatient locations (=FacWideIN) for LabID Events

Required Data:
*Community-Onset (CO)* and *Healthcare-Onset (HO)* Event
MRSA blood specimens at the facility-wide inpatient level
CMS 2013

*C. difficile* LabID Event

- **Organism:** *Clostridium difficile* (C. diff)
- **Data Collection:** CDC NHSN - MDRO/CDI Module (LabID Event)
- **Required Locations:** All inpatient locations at Facility-wide Inpatient level (FacWideIN) minus NICU or other Well Baby locations (e.g. Nurseries, babies in LDRP)
- **Required Data:**
  - Community-Onset (CO) and Healthcare-Onset (HO) Events
  - All LabID Event C. diff unformed stool specimens at the Facility-wide Inpatient level
Facility-wide Inpatient FacWideIN

Includes all inpatient locations, including observation patients housed in an inpatient location
CMS 2013
What Data Will NHSN Report to CMS?

MRSA Blood and *C. difficile* Healthcare Facility-Onset (HO) LabID Events

**CDI:** All non-duplicate, non-recurrent LabID Event specimens collected > 3 days after admission to the facility

**MRSA Blood:** All non-duplicate, LabID Event specimens collected > 3 days after admission to the facility
Creating a Monthly Reporting Plan

Plan saved successfully.

Mandatory fields marked with *

- Facility ID*: DHQP Memorial Hospital (10000)
- Month*: July
- Year*: 2012
Monthly Reporting Plan

C. diff and MRSA LabID (blood specimens only) Events must be included in Monthly Reporting Plan each month for data to be reported on behalf of the facility to CMS.

All specimens are not required for CMS, but if state mandates, require facility to report all specimens, then it is okay and only bloods will be counted for CMS reporting.
Location Reporting Options

**Facility-Wide Inpatient or Facility-Wide Outpatient:**
- Options currently available only for LabID Event reporting
- Report from throughout all of a facility’s inpatient or outpatient locations
  - Numerator (MDRO/CDI Events) - report separately for each location in facility
  - Single denominators for entire facility:
    - FacWideIN – patient days and admissions
      - Separate counts for MDRO and CDI
      - Minus baby locations for CDI
    - FacWideOUT – encounters

**Location Specific:**
- Select only a few locations or every location for full facility coverage
- Report separately from each selected location in the facility
- Separate denominators for each location:
  - Patient days and admissions for inpatient locations
  - Encounters for outpatient locations
Location Reporting Options

**Location Specific**
- **Selected Locations**
  - Report LabID Events separately from all specific locations being monitored
- **All Locations**
  - Separate numerator and denominator from each chosen location

**Overall Facility-wide Inpatient (FacWideIN) and/or Outpatient (FacWideOUT)**
- Report LabID Events from all inpatient and/or all outpatient locations
- Report LabID Events from each patient location separately (numerator)
- Inpatient: one denominator for entire facility (patient days and admissions)
- Outpatient: one denominator for all outpatient locations (patient encounters)
Adding Locations
Why do I Need to Add Locations?

- Each LabID Event (numerator) is reported according to the patient’s location when the specimen is collected.
- This means that any inpatient unit could potentially house a patient who has a MRSA blood specimen or C. difficile stool specimen LabID Event.
- To ensure that a location is available for reporting when a LabID Event is identified:
  1. Add all inpatient locations before reporting begins in 2013.
Logged into Pleasant Valley Hospital (ID 10312) as DSIEVERT. Facility Pleasant Valley Hospital (ID 10312) is following the PS component.

NHSN Patient Safety Component Home Page

Use the Navigation bar on the left to access the features of the application.

Assurance of Confidentiality: The information obtained in this surveillance system that would permit identification of any individual or institution is collected with a guarantee that it will be held in strict confidence, will be used only for the purposes stated, and will not otherwise be disclosed or released without the consent of the individual, or the institution in accordance with Sections 304, 306 and 308(d) of the Public Health Service Act (42 USC 242b, 242k, and 242m(d)).

NHSN maintenance may occur nightly between 12am and 6am Eastern time.

Get Adobe Acrobat Reader for PDF files
Logged into Pleasant Valley Hospital (ID 10312) as DSIEVERT. Facility Pleasant Valley Hospital (ID 10312) is following the PS component.

**Locations**

**Instructions**

- To **Add** a record, fill in the form with the required fields and any desired optional values. Then click on the **Add** button.
- To **Find** a record, click on the **Find** button. One of more fields can be filled in to restrict the search to those values.
- To **Edit** a record, perform a **Find** on the desired record. Click on the desired record to fill in its values into the form and edit the values. To save the changes, click on the **Save** button.
- To **Delete** one or more records, perform a **Find** on the desired record(s). Check the corresponding box(es), then click on the **Delete** button.
- Press the **Clear** button to start over with a new form.

Mandatory fields to "Add" or "Edit" a record marked with *

Your Code*: 5W
Your Label*: MED WARD
CDC Location Description*: Inpatient Medical Ward
Status*: Active
Bed Size*: 22

A bed size greater than zero is required for most inpatient locations.
Find Locations: All or Specific Search

**Instructions**

- To **Add** a record, fill in the form with the required fields and any desired optional values. Then click on the **Add** button.
- To **Find** a record, click on the **Find** button. One or more fields can be filled in to restrict the search to those values.
- To **Edit** a record, perform a **Find** on the desired record. Click on the desired record to fill its values into the form and edit the values. To save the changes, click on the **Save** button.
- To **Delete** one or more records, perform a **Find** on the desired record(s). Check the corresponding box(es), then click on the **Delete** button.
- Press the **Clear** button to start over with a new form.

Mandatory fields to "Add" or "Edit" a record marked with *

<table>
<thead>
<tr>
<th>Your Code:*</th>
<th>CDC Location Description:*</th>
<th>Your Label</th>
<th>Status:*</th>
<th>Bed Size:*</th>
</tr>
</thead>
</table>

**Location Table**

<table>
<thead>
<tr>
<th>Delete</th>
<th>Status</th>
<th>Your Code</th>
<th>Your Label</th>
<th>CDC Description</th>
<th>CDC Code</th>
<th>Bed Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Active</td>
<td>5W</td>
<td>MED WARD</td>
<td>Inpatient Medical Ward</td>
<td>IN:ACUTE:WARD:M</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Active</td>
<td>INMEDWARD</td>
<td>IN:ACUTE:WARD:M</td>
<td>Inpatient Medical Ward</td>
<td>IN:ACUTE:WARD:M</td>
<td>42</td>
</tr>
</tbody>
</table>
LabID Event Reporting
Introduction

Reporting of proxy infection measures of MDRO and C. difficile healthcare acquisition, exposure burden, and infection burden by using primarily laboratory data. Laboratory testing results can be used without clinical evaluation of the patient, allowing for a much less labor-intensive means to track MDROs and CDI.
Overview

MRSA Bacteremia LabID Event Reporting in NHSN
Definition
MRSA Positive Blood Isolate

- Any blood specimen obtained for clinical decision making for MRSA

Excludes tests related to active surveillance testing
Definition
MRSA Bacteremia LabID Event

MRSA positive blood specimen for a patient in a location with no prior MRSA positive blood specimen result collected within 14 days for the patient and location

Also referred to as non-duplicate LabID Events
Definition
Duplicate MRSA Bacteremia LabID Event

Any MRSA blood isolate from the same patient and same location, following a previous positive MRSA blood laboratory result within the past 14 days.
Identifying an MRSA LabID Event

Begin Here → MRSA isolate from any specimen per patient per location → 1st in calendar Month per patient and location → YES → LabID Event (non-duplicate isolate)

NO → Not a LabID Event

MRSA Source = blood for patient and same location → YES → LabID Event (unique MRSA blood source)

NO → Not a LabID Event

Prior (+)MRSA from blood ≤ 2 wks from same location → YES

NO → Not a LabID Event

Adapted from Figure 1 MDRO Test Results Algorythm for LabID Events
Summary: MRSA Bacteremia

**Purpose:** To calculate proxy measures of MRSA bloodstream infections, exposures burdens, and healthcare acquisitions through monitoring and reporting data from positive clinical cultures.

**LabID Event:** A laboratory-identified event. MRSA positive blood specimen for a patient in a location with no prior MRSA positive blood specimen within 14 days for the patient and location. It must be a specimen that is collected for diagnosis/treatment (NO surveillance cultures). A patient in a location in a month can then have additional MRSA blood specimens reported as LabID Events after a full 14-day interval with no positive MRSA blood specimen for the same patient and same location identified by the lab.

- LabID Events (numerators) are reported by specific location where the specimen was collected.
- Monthly Monitoring Summary Data (denominators) for Total Patient Days and Total Admissions are reported for the overall inpatient facility (FacWideIN).
Add Event Information

Event Information

Event Type*: LABID - Laboratory-identified MDRO or CDAD Event

Date Specimen Collected*: 01/14/2012

Specific Organism Type*: MRSA - MRSA

Outpatient*: N - No

Specimen Body Site/Source*: CARD - Cardiovascular/ Circulatory/ Lymphatics

Specimen Source*: BLDSPC - Blood specimen

Date Admitted to Facility*: 01/09/2012

Location*: INMSWARD - IN:ACUTE:WARD:MS

Date Admitted to Location*: 01/09/2012

Patient Location when Specimen Collected

Auto-filled

Entries for Blood LabID Events

Documented prior evidence of previous infection or colonization with this specific organism type from a previously reported LabID Event?

Has patient been discharged from your facility in the past 3 months*: N - No
NHSN will Categorize your MRSA Blood Specimen LabID Events as CO or HO

NHSN Application Categorizes* LabID Events As:

- **Community-Onset (CO):** LabID Event specimen collected as an inpatient \( \leq 3 \text{ days} \) after admission to the facility (i.e., days 1 (admission), 2, or 3).

- **Healthcare Facility-Onset (HO):** LabID Event specimen collected \( > 3 \text{ days} \) after admission to the facility (i.e., on or after day 4).

*Based on Inpatient Admission & Specimen Collection Dates
Overview

CDI LabID Event Reporting in NHSN
Definition
CDI Positive Laboratory Assay

- A positive laboratory test result for *C. difficile* toxin A and/or B
- OR
- A toxin-producing *C. difficile* organism detected by culture or other laboratory means performed on a stool sample.

Remember...
*C. difficile* testing only on unformed stool samples (should conform to shape of container)
Definition
CDI LabID Event

A toxin-positive *C. difficile* stool specimen for a patient in a location with no prior *C. difficile* specimen result reported within **14 days** for the patient **and** location

*Also referred to as non-duplicate LabID Events*
Definition
Duplicate C. *difficile* Positive Test

Any *C. difficile* toxin-positive laboratory result from the same patient and same location, following a previous *C. difficile* toxin-positive laboratory result within the past 14 days.
Identifying a \textit{C. difficile} LabID Event

Figure 2. \textit{C. difficile} test Results Algorithm for Laboratory-Identified (LabID) Events

(+) \textit{C. difficile} toxin test result

Prior (+) in ≤ 2 weeks per patient and location

No

LabID Event

Yes

Duplicate \textit{C. difficile}

Not a LabID Event

Figure 2: \textit{C. Difficile} Test Results Algorithm for LabID Events
http://www.cdc.gov/nhsn/PDFs/pscManual/12pscMDRO_CDADcurrent.pdf page 12-23
Facility-wide Inpatient (FacWideIN) Reporting for CDI

- MICU
- SCA
- Med-Surg
- Surgical
- SICU
- NICU

No NICU indicated.
Summary: C. difficile

**Purpose:**
To calculate proxy measures of *C. difficile* infections, exposures burdens, and healthcare acquisitions through monitoring and reporting data from positive clinical cultures (unformed stool only)

**LabID Event:**
A laboratory-identified event. A toxin-positive / toxin-producing *C. difficile* stool specimen for a patient in a location with no prior *C. difficile* specimen reported within 14 days for the patient and location, and having a full 14-day interval with no toxin-positive *C. difficile* stool specimen identified by the lab since the prior reported *C. difficile* LabID Event. Also referred to as non-duplicate *C. difficile* toxin-positive laboratory result

- LabID Events (numerators) are reported by specific location where the specimen was collected
- Monthly Monitoring Summary Data (denominators) for Patient Days and Admissions (*minus all NICU and Well Baby locations, including LDRP baby counts*) are reported for the overall inpatient facility (FacWideIN)
# LabID Event Report Form

**Laboratory-identified MDRO or CDI Event**

- **Facility ID:**
- **Event #:**
- **Patient ID:**
- **Social Security #:**
- **Secondary ID:**
- **Patient Name, Last:**
- **First:**
- **Middle:**
- **Gender:** M/F
- **Date of Birth:**
- **Ethnicity (Specify):**
- **Race (Specify):**

## Event Details

- **Event Type:** LabID
- **Date Specimen Collected:**
- **Specific Organism Type:** (Check one)
  - MRSA
  - MSSA
  - VRE
  - C. difficile
  - CepHR-Klebsiella
  - CRE-Ecoli
  - CRE-Klebsiella
  - MDR-Acinetobacter
- **Outpatient:** Yes/No
- **Specimen Body Site/System:**
- **Specimen Source:**
- **Date Admitted to Facility:**
- **Location:**
- **Date Admitted to Location:**
- **Has patient been discharged from your facility in the past 3 months?** Yes/No
- **If Yes, date of last discharge from your facility:**

## Custom Fields

- **Label:**
- **Label:**
Add Patient Information

- The top section of data collection form is used to collect patient demographics. Required fields have an asterisk (*).
- There are 4 required fields:
  - Facility ID
  - Patient ID
  - Gender
  - Date of Birth
Add Event Information

Event Type: LABID - Laboratory-identified MDRO or CDI Event

Date Specimen Collected: 01/13/2013
Specific Organism Type: CDIF - C. difficile
Outpatient: N-No

Specimen Body: DIGEST - Digestive System
Site/Source: STOOL - Stool specimen

Location: INGI(WARD) - IN:ACUTE:WARD(GI)
Date Admitted to Facility: 01/11/2013
Date of last discharge from your facility: 12/19/2012

Documented prior evidence of previous infection or colonization with this specific organism type from a previously reported LabID Event?: N-No
Has patient been discharged from your facility in the past 3 months? Y-Yes
NHSN will Categorize CDI LabID Events Based on Inpatient Admission & Specimen Collection Dates

• **Healthcare Facility-Onset (HO):** LabID Event specimen collected > 3 days after admission to the facility (i.e., on or after day 4).

• **Community-Onset (CO):** LabID Event specimen collected as an inpatient ≤ 3 days after admission to the facility (i.e., days 1 (admission), 2, or 3).

• **Community-Onset Healthcare Facility-Associated (CO-HCFA):** CO LabID Event collected from a patient who was discharged from the facility ≤ 4 weeks prior to the date current stool specimen was collected.
NHSN will Further Categorize CDI LabID Events based on Specimen Collection Date & Prior Specimen Collection Date of a Previous CDI LabID Event (that was entered into NHSN)

- **Incident CDI Assay:** Any CDI LabID Event from a specimen obtained > 8 weeks after the most recent CDI LabID Event (or with no previous CDI LabID Event documented) for that patient.

- **Recurrent CDI Assay:** Any CDI LabID Event from a specimen obtained > 2 weeks and ≤ 8 weeks after the most recent CDI LabID Event for that patient.
Provision to LabID Event Reporting for CDI and MRSA Bacteremia

A LabID Event for an inpatient location can include specimens collected during an emergency department or other outpatient clinic visit, if collected same calendar day as patient admission.

**Location will be assigned to the admitting inpatient location (for FacWideIN).**

***If participating in both inpatient and outpatient LabID reporting, report the LabID Event in both locations as two separate Events, ED and admitting location.***
Rules for Entering MRSA Blood and C. diff LabID Events FacWideIN

- C. diff toxin-positive and MRSA blood specimens MUST be monitored throughout all inpatient locations within a facility
  - Exception for C. diff: NICUs, Well Baby Nurseries, Special Care Nurseries, and babies in LDRP units excluded

- LabID Event(s) MUST be entered whether community-onset (CO) or healthcare facility-onset (HO)

- A specimen (C. diff stool and/or MRSA blood) qualifies as a LabID Event if there has not been a previous positive laboratory result for the patient and location within the previous 14 days

- LabID Events never include results from Active Surveillance Testing
Entry of Monthly Denominator Data for FacWideIN LabID Event Reporting
Summary Data – FacWideIN Location

- Each monthly Summary Data (denominator) is reported at the inpatient facility-wide level = “FacWideIN”

- FacWideIN is a ‘virtual’ location within NHSN, which means the user does not define it like other specific units/locations
### MDRO and CDI Prevention Process and Outcome Measures Monthly Monitoring

**Facility ID #:**

**Month:**

**Year:**

**Location Code:**

**Setting:**
- Inpatient
- Total Patient Days: 
- Total Admissions: 
- Total Encounters:  

**Setting:**
- Outpatient (or Emergency Room)
- Total Encounters: 

**If monitoring C. difficile in a FACWIDE location, then subtract NICU & Well Baby counts from**

**Totals:**
- Total Patient Days:
- Total Admissions:
- Total Encounters:

### MDRO & CDI Infection Surveillance or LabID Event Reporting

<table>
<thead>
<tr>
<th>Specific Organism Type</th>
<th>MRSA</th>
<th>VRE</th>
<th>CephR-Klebsiella</th>
<th>CRE-Ecoli</th>
<th>CRE-Klebsiella</th>
<th>MDR-Acinetobacter</th>
<th>C. difficile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infection Surveillance</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>LabID Event (All specimens)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>LabID Event (Blood specimens only)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

### Process Measures (Optional)

#### Hand Hygiene
- **Performed:**
- **Indicated:**

#### Gown and Gloves
- **Used:**
- **Indicated:**

#### Active Surveillance Testing (AST)
- **Active Surveillance Testing perreport:**
Choose Summary Data and Add
Select Summary Data Type > Continue
Enter Location Code = FacWideIN plus Month and Year

MDRO and CDI Prevention Process and Outcome Measures Monthly Monitoring

Save of Summary Data successful.

Mandatory fields marked with *

Facility ID*: 10312 (Pleasant Valley Hospital)
Location Code*: FACWIDEIN - FacWideIN
Month*: January
Year*: 2013
Enter All Required Facility-Wide Inpatient Counts

MDRO and CDI Prevention Process and Outcome Measures Monthly Monitoring

Save of Summary Data successful.

Mandatory fields marked with *

Facility ID*: 10312 (Pleasant Valley Hospital)
Location Code*: FACWIDEIN - FacWideIN
Month*: January
Year*: 2013

General
Setting: Inpatient  Total Patient Days*: 680  Total Admissions*: 135
Setting: Outpatient (or Emergency Room)  Total Encounters:

If monitoring C. difficile in a FACWIDE location, then subtract NICU and Well Baby counts from Totals:
Patient Days*: 478  Admissions*: 98  Encounters:

MRSA Bacteremia
C. difficile

MDRO & CDI Infection Surveillance or LabID Event Reporting

Specific Organism Type
Infection Surveillance
LabID Event (All specimens)
LabID Event (Blood specimens only)

MRSA  VRE  Cephr-Klebsiella  CRE-Ecol  CRE-Klebsiella  MDR-Acinetobacter  C. difficile

Auto-filled
Resources
Resources for MDRO/CDI LabID Event Reporting

- NHSN Patient Safety Component Manual
  - Ch 12: MDRO and CDI Module (January 2012); pages 18-21
    http://www.cdc.gov/nhsn/PDFs/pscManual/12pscMDRO_CDADcurrent.pdf
  - Ch 14: Tables of Instructions, Table 19, 21
    http://www.cdc.gov/nhsn/PDFs/pscManual/14pscForm_Instructions_current.pdf

- Determining Patient Days for Summary Data Collection: Observation vs. Inpatients
  http://www.cdc.gov/nhsn/PDFs/PatientDay_SumData_Guide.pdf

http://www.cdc.gov/nhsn/TOC_PSCManual.html
Resources for MDRO/CDI LabID

- NHSN Forms (January 2012)
  - 57.106: Monthly Reporting Plan
  - 57.128: LabID MDRO or CDI Event Form (numerator)
  - 57.127: MDRO and CDI Prevention Process and Outcomes Measures Monthly Reporting (denominator)

http://www.cdc.gov/nhsn/forms/Patient-Safety-forms.html#mdro
Available Training

- **C. difficile Guidelines for Clinicians**
  - [http://www.cdc.gov/HAI/organisms/cdiff/Cdiff_clinicians.html](http://www.cdc.gov/HAI/organisms/cdiff/Cdiff_clinicians.html)

- **Training**
  - Lectoras (coming soon)

- **NHSN Training Website:** [http://www.cdc.gov/nhsn/training/](http://www.cdc.gov/nhsn/training/)
  - Currently updating site with updated LabID Event Reporting presentations
Thank You

Email help desk: nhsn@cdc.gov
NHSN website:
http://www.cdc.gov/nhsn/
Ground Rules for Case Studies

• Purposes:
  – Training on use of definitions AS THEY EXIST
  – Surveillance ≠ clinical
• Examples highlight common errors/difficult issues
• Lab ID Event reporting is a proxy measure to lighten the load of surveillance, but this reduction in burden is traded off with a decreased specificity as it relates to true infection and attribution
Case 1

• 2/1: 56 year old male admitted to ICU bed with pneumonia. Central IV inserted for antibiotics.
• 2/2: Patient voiding without difficulty. Cough with moderate sputum production. Patient complains of lower abdominal cramps, relieved with medication.
• 2/3: Patient transfers to 2E. Later that day, patient has fever of 38.2 and complains of worsening lower abdominal pain. BM with loose unformed stool.
Case 1

• 2/4: While on 2E, the patient continues to complain of lower abdominal pain and loose stools. Over the course of 24 hours, the patient had three loose stools. Unformed stool specimen collected and sent for testing.

• 2/5: Lab results identified toxin positive C. difficile toxin stool samples.
Case 1

For FacWideIN LabID reporting, would you enter this as a CDI LabID Event?

1. No. His symptoms started <4 days after admission.
2. Yes. This is the first positive CDI isolate collected in this inpatient location within 14 days.
3. No. *C. difficile* toxin assay is not an accurate test for CDI.
Case 1

#2..YES- This is a CDI LabID Event and should be entered into NHSN

A toxin positive *C. difficile* stool specimen for a patient in a location with no prior *C. difficile* specimen result within 14 days for the patient and the location

**Remember NHSN application will categorize as community-onset (CO) or healthcare-onset (HO)**
Case 1
What Location is CDI Attributed?

1. ICU
2. 2E
3. Lab
4. FacWideIN
Case 1
#2...2E

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

**NHSN “transfer rule” does NOT apply for LabID Events**
Case 2

3/1: Patient presents to the emergency department with complaints of diarrhea and lower abdominal pain for the past three days. Patient states that he has been on antibiotics for 10 days for tooth abscess. A stool specimen is collected while the patient is in the emergency department and toxin assay is positive for C. difficile.

3/1: Patient admitted to 2S medical unit for intravenous hydrations and medical management.
Case 2
For FacWideLND LabID reporting. Can this
result be entered as a LabID Event and, if
so, what location would be entered?

1. No. ED is an outpatient location and I am only
   monitoring inpatient locations.
2. Yes. Location would be the ED since specimen was
   collected there.
3. Yes. Location would be 2S, the admitting location.
4. Yes. Location would be FacWideLND.
If a specimen collected in the emergency department is positive for CDI, and the patient it is collected from is admitted to the facility on the SAME date into an location that is monitoring LabID events for CDI, then that specimen can be reported as the first specimen for the patient in that ADMITTING INPATIENT LOCATION.
Case 2
What if you are participating in both FacWideIN and ED location specific reporting?

1. Report the positive CDI LabID Event separately, once for ED and again for 2S.
2. Report only as FacWideIN.
3. Report only as FacWideOUT.
4. Toss a coin to make location selection.
If your monthly reporting plan includes both FacWideIN and ED location specific reporting, then you should report the positive CDI LabID Event separately, once as 2S (select NO for outpatient) and then again for ED (select YES for outpatient).
Case 3

• 2/15: 55 year old patient with end stage pancreatic cancer with liver & bone mets admitted to inpatient unit, 3E, from hospice facility. The patient has no previous history of inpatient admission to this facility. Upon admission to 3E, patient is noted to have foul loose stools. After three episodes of loose stools over the course of 24 hours, an unformed specimen was collected and tested positive for C. difficile toxin.
Case 3
For FacWideIN LabID reporting Should this be entered into NHSN as a LabID Event?

1. YES. Specimen was collected from 3E inpatient location

2. NO. This infection belongs to the Hospice
Case 3

YES.. This is a CDI LabID Event and should be entered into NHSN

A toxin positive *C. difficile* stool specimen for a patient in a location with no prior *C. difficile* specimen result within 14 days for the patient and the location. Both community-onset and healthcare-onset events should be reported.

Recommend the use of “Optional Field” to document history of Hospice if you want to track internally.
Case 3
How will NHSN Categorize the CDI Event?

1. Community-onset (CO)
2. Healthcare-Facility onset (HO)
3. Community-Onset Healthcare Facility-Associated (CO-HCFA)
4. NHSN will not categorize the event, the user will need to make the decision
Case 3

#1..Community-onset (CO)

This patient has no previous history of admission to this facility and the stool specimen was collected as an inpatient less than 4 days after admission to the facility.

**Community-Onset Healthcare Facility-Associated (CO-HCFA) is based on previous discharge from index facility.**
Case 3
What if the Stool Specimen was Collected 4 Days after Admission to the Hospital?

1. Community-onset (CO) since the patient was admitted with symptoms of foul stool.
2. Healthcare-Facility onset (HO) since the specimen was collected more than 3 days after admission.
3. Community-Onset Healthcare Facility-Associated (CO-HCFA) since the patient was admitted from another healthcare facility.
Case 3

#2..Healthcare Facility Onset (HO)

Healthcare Facility Onset (HO) since the stool was collected more than 3 days after admission.
Case 4

A toxin positive *C. difficile* stool specimen collected from a inpatient on day 4 of admission would be categorized as:

1. Healthcare Facility-Onset (HO)
2. Community-Onset (CO)
3. Community-Onset Healthcare Facility-Associated (CO-HCFA)
4. It depends on the patients history
Case 4

#1..Healthcare Facility-Onset (HO)

NHSN Categorizes CDI LabID Events Based on Date Admitted to Facility and Date Specimen Collected

- **Community-Onset (CO):** LabID Event collected as an outpatient or an inpatient ≤ 3 days after admission to the facility (i.e., days 1, 2, or 3 of admission).
- **Healthcare Facility-Onset (HO):** LabID Event collected > 3 days after admission to the facility (i.e., on or after day 4).
- **Community-Onset Healthcare Facility-Associated (CO-HCFA):** CO LabID Event collected from a patient who was discharged from the facility ≤ 4 weeks prior to current date of stool specimen collection.
Case 4
What if the patient was symptomatic on admission, but the toxin was negative on admission and positive on day 4 of admission?

1. I can over-ride NHSN and categorize the event as community-onset
2. NHSN will categorize as community-onset
3. NHSN will categorize as healthcare-onset
#3..Healthcare-Onset

NHSN would still categorize the event as healthcare-onset since the first positive stool specimen was collected on or after day 4 of admission.

**Lab ID Event reporting is a proxy measure to lighten the load of surveillance, but this reduction in burden is traded off with a decreased specificity as it relates to true infection and attribution.**
Case 5

In preparation for upcoming CMS reporting requirements for CDI LabID Events, you are completing your NHSN monthly reporting plan. What location(s) will you select if you are only reporting based on CMS?

1. ICU, NICU, medical-surgical units, emergency department, oncology.
2. Emergency department, outpatient surgery, and affiliated physician offices.
3. FacWideIN, which includes all inpatient locations, except no monitoring in NICU and Well Baby locations.
4. FacWideOUT, which includes all outpatient locations affiliated with the facility.
Case 5
#3…..FacWideIN

Healthcare facility HAI reporting to CMS via NHSN requires acute care hospitals to report C. *difficile* LabID Events for all inpatient locations at the facility-wide inpatient level where stools specimens may be collected.
FacWideIN is a ‘virtual’ location within NHSN, which means the user does not define it like other specific units/locations, and it is only used in the Monthly Reporting Plan, Summary Data Reporting Form (denominator), and for Conferring Rights.
Case 6

What denominator data is entered for CDI LabID Event Monitoring, FacWideIN?

1. Patient admissions by each unit and total patient days by unit.
2. C. diff patient days and admissions for all inpatient locations minus NICU, SCN, and Well Baby location counts.
3. Total patient days and total admissions for all inpatient locations.
4. Total patient encounters
Case 6

#2...Patient days and admissions for all inpatient locations minus NICU and Well Baby locations
Case 7

- 6/15: 25 year old patient with Crohn’s disease is admitted from the ED to a 3 East inpatient unit for corticosteroid treatment and pain management. Peripheral IV is inserted in the ED and patient is receiving intravenous fluids.
- 6/16: Patient request bedside commode and complains of frequent urination and burning during urination. A urine culture is collected via straight cath. Patient afebrile.
- 6/18: Urine culture results are positive for E. coli and MRSA. Antibiotic treatment begun.
Case 7

• 6/21: Patient spikes a temperature of 101.4 F. Blood cultures collected from peripheral IV site.
• 6/22: Two of two blood cultures are positive for MRSA.
Case 7

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

1. No. Since the patient already had a positive urine culture with MRSA for this month and location, the MRSA blood is considered a duplicate.

2. Yes. This is considered a unique blood source.
Case 7

YES

This is considered a MRSA bacteremia LabID Event since the patient has no prior positive blood culture for MRSA in this location in ≤ 2 weeks
Case 7
What if the patient had a previous positive MRSA blood culture one week prior to this culture while in the same location (3 East)?

1. This would NOT be a MRSA bacteremia LabID Event
2. I would report as a MRSA bacteremia LabID Event
3. I would report as an Infection Surveillance Event
Case 7

A prior + MRSA blood culture result in $\leq 2$ weeks 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.
Case 8

6/1: Mr. Smith, a local nursing home resident, is admitted to the ICU with a stage 4 sacral ulcer. Upon admission into the ICU, an active nasal screen tested positive for MRSA. Blood cultures were also collected upon admission to the ICU.
Case 8
Should this positive MRSA nasal screen be entered into NHSN as a MDRO/MRSA LabID Event?

1. YES

NO
Case 8

NO

MDRO LabID Event Reporting EXCLUDES tests related to active surveillance testing
Case 8
What if the blood culture also tested positive for MRSA?

1. NO. I would not consider this to be a MDRO LabID Event since the patient had a MRSA positive nasal screen.

2. YES. Since the blood culture was obtained for clinical decision making, I would report this as a MRSA bacteremia LabID Event.
Case 8

Since this was the first positive MRSA blood culture for this patient and location (ICU), this would be considered a MRSA Bacteremia LabID Event
Case 9
What denominator data is entered for MRSA Bacteremia LabID Event Monitoring for FacWideIN?

1. Patient admissions by each unit and total patient days by unit.
2. Patient days and admissions for all inpatient locations minus NICU and Well Baby location counts.
3. Total patient days and admissions for all inpatient locations.
4. Total patient encounters
Case 10

In preparation for upcoming CMS reporting requirements for MRSA Bacteremia LabID Events, you are completing your NHSN monthly reporting plan. What location(s) will you select if you are only reporting based on CMS?

1. ICU, NICU, medical-surgical units, emergency department, oncology.
2. FacWideIN, which includes all inpatient locations.
3. FacWideIN, which includes all inpatient locations, except no monitoring in NICU and Well Baby locations.
4. FacWideOUT, which includes all outpatient locations affiliated with the facility.
Case 11

#2.....FacWideIN

Healthcare facility HAI reporting to CMS via NHSN requires acute care hospitals to report MRSA Bacteremia LabID Events for all inpatient locations at the facility-wide inpatient level.
Case 11

FacWideIN is a ‘virtual’ location within NHSN, which means the user does not define it like other specific units/locations, and it is only used in the Monthly Reporting Plan, Summary Data Reporting Form (denominator), and for Conferring Rights.
Case 12

A positive MRSA blood specimen collected from an inpatient on day 4 of admission would be categorized as:

1. Healthcare Facility-Onset (HO)
2. Community-Onset (CO)
3. Community-Onset Healthcare Facility-Associated (CO-HCFA)
4. It depends on the patient’s history
Case 12

#1..Healthcare Facility-Onset (HO)
NHSN Categorizes MRSA Bacteremia LabID Events Based on Date Admitted to Facility and Date Specimen Collected

- **Healthcare Facility-Onset (HO):** LabID Event collected > 3 days after admission to the facility (i.e., on or after day 4).

- **Community-Onset (CO):** LabID Event collected as an outpatient or an inpatient ≤ 3 days after admission to the facility (i.e., days 1, 2, or 3 of admission).
Case 12

What if the patient was symptomatic for sepsis on admission, but the blood culture was not collected until day 4 of admission?

1. I can over-ride NHSN and categorize the event as community-onset
2. NHSN will categorize as community-onset
3. NHSN will categorize as healthcare-onset
Case 12

#3..Healthcare-Onset

NHSN would still categorize the event as healthcare-onset since the first positive blood specimen was collected on or after day 4 of admission.

**Lab ID Event reporting is a proxy measure to lighten the load of surveillance, but this reduction in burden is traded off with a decreased specificity as it relates to true infection and attribution.**
## Case 13
### Identify the LabID Events

<table>
<thead>
<tr>
<th>Pt ID</th>
<th>Admit Date/Loc</th>
<th>Specimen Collection Date/Loc</th>
<th>Specimen Source</th>
<th>Lab Result</th>
<th>Is this a LabID Event? If so, what location?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2468</td>
<td>6/1/12 ICU</td>
<td>6/1/12 ED</td>
<td>Stool</td>
<td>C. Diff + toxin</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>YES / ICU</td>
</tr>
<tr>
<td>2</td>
<td>2468</td>
<td>6/1/12 ICU</td>
<td>6/2/12 ICU</td>
<td>Blood</td>
<td>MRSA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>YES / ICU</td>
</tr>
<tr>
<td>3</td>
<td>2468</td>
<td>6/1/12 ICU</td>
<td>6/12/12 ICU</td>
<td>Blood</td>
<td>MRSA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>NO</td>
</tr>
<tr>
<td>4</td>
<td>2468</td>
<td>6/1/12 ICU</td>
<td>6/20/12 ICU</td>
<td>Blood</td>
<td>MRSA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>NO</td>
</tr>
<tr>
<td>5</td>
<td>2468</td>
<td>6/1/12 ICU</td>
<td>7/10/12 ICU</td>
<td>Blood</td>
<td>MRSA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>YES / ICU</td>
</tr>
<tr>
<td>6</td>
<td>2468</td>
<td>7/11/12 2 East Med</td>
<td>7/15/12 2 East Med</td>
<td>Blood</td>
<td>MRSA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>YES / 2 East Med</td>
</tr>
</tbody>
</table>

Assume all specimens collected are shown
## Case 14
### Identify the LabID Events

<table>
<thead>
<tr>
<th></th>
<th>Pt ID</th>
<th>Admit Date/Loc</th>
<th>Specimen Collection Date/Loc</th>
<th>Specimen Source</th>
<th>Lab Result</th>
<th>Is this a LabID Event? If so, what location?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3691</td>
<td>6/15/12 CCU</td>
<td>6/16/12 CCU</td>
<td>Blood</td>
<td>MRSA</td>
<td>YES / CCU</td>
</tr>
<tr>
<td>2</td>
<td>3691</td>
<td>6/16/12 3-East</td>
<td>6/20/12 3-East</td>
<td>Blood</td>
<td>MRSA</td>
<td>YES / 3-East</td>
</tr>
<tr>
<td>3</td>
<td>5678</td>
<td>7/2/12 ICU</td>
<td>7/1/12 ED</td>
<td>Stool</td>
<td>C. Diff + toxin</td>
<td>NO</td>
</tr>
<tr>
<td>4</td>
<td>5678</td>
<td>7/2/12 ICU</td>
<td>7/6/12 ICU</td>
<td>Stool</td>
<td>C. diff + toxin</td>
<td>YES / ICU</td>
</tr>
<tr>
<td>5</td>
<td>5678</td>
<td>7/7/12 2-West</td>
<td>7/10/12 2-West</td>
<td>Stool</td>
<td>C. Diff + toxin</td>
<td>YES / 2-West</td>
</tr>
<tr>
<td>6</td>
<td>2891</td>
<td>6/1/12 ICU</td>
<td>6/6/12 ICU</td>
<td>Stool</td>
<td>C. Diff equiv toxin</td>
<td>NO</td>
</tr>
</tbody>
</table>

Assume all specimens collected are shown
## Case 15

### Identify the LabID Events

<table>
<thead>
<tr>
<th>Pt ID</th>
<th>Admit Date/Loc</th>
<th>Specimen Collection Date/Loc</th>
<th>Specimen Source</th>
<th>Lab Result</th>
<th>Is this a MRSA bacteremia or CDI LabID Event? If so, what location?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2367</td>
<td>8/2/12 CCU</td>
<td>8/2/12 CCU</td>
<td>Nares</td>
<td>MRSA</td>
</tr>
<tr>
<td>2</td>
<td>2367</td>
<td>8/2/12 CCU</td>
<td>8/6/12 CCU</td>
<td>Blood</td>
<td>MRSA</td>
</tr>
<tr>
<td>3</td>
<td>9876</td>
<td>7/2/12 ICU</td>
<td>7/9/12 ICU</td>
<td>Stool</td>
<td>C. Diff + assay -Toxin -PCR +</td>
</tr>
<tr>
<td>4</td>
<td>6767</td>
<td>7/2/12 NICU</td>
<td>7/6/12 NICU</td>
<td>Stool</td>
<td>C. diff</td>
</tr>
<tr>
<td>5</td>
<td>8989</td>
<td>8/2/12 Med/Surg</td>
<td>8/5/12 Med/Surg</td>
<td>Wound</td>
<td>MRSA</td>
</tr>
</tbody>
</table>

Assume all specimens collected are shown
Great Job!!!