Multidrug-Resistant Organism (MDRO) and Clostridium difficile-Associated Disease (CDAD) Module

Training Course Section:
C. difficile Infection Surveillance and C. difficile LabID Event Reporting
Target Audience

This training session is designed for those who will collect and analyze *Clostridium difficile* Infection data in the MDRO and CDAD Module of NHSN. This may include:

- NHSN Facility Administrator
- Patient Safety Primary Contact
- Infection Preventionist
- Epidemiologist
- Microbiologist
- Professional Nursing Staff
- Trained Support Staff

You should have previously viewed the NHSN Overview to help with your understanding of this training.
C. difficile Infection

Objectives

• Review the structure of the MDRO and CDAD Module within the Patient Safety Component of NHSN

• Describe the rationale for monitoring *C. difficile* infection in NHSN

• Describe the methodology, protocols, and definitions used in data collection and reporting under the CDAD Infection Surveillance and CDAD LabID Event Reporting in NHSN
C. Difficile Infection

National Healthcare Safety Network (NHSN)

- Device-Associated Module
- Procedure-Associated Module
- Medication-Associated Module
- MDRO and CDAD Module
- High-Risk Inpatient Influenza Vaccination Module
Goal of MDRO and CDAD Module

- Monitoring of MDRO & *C. difficile* infection (CDI) will help to evaluate local trends and changes in the occurrence of these pathogens and related infections.
- This module will provide 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.

The term CDI is replacing CDAD. Both terms represent the same illness and will be used interchangeably as we transition this module to the newer terminology.
C. Difficile Infection

Background

Why monitor *Clostridium difficile* Infection?

- *C. difficile* infection has increased in prevalence in U.S. hospitals over the last three decades
- *C. difficile* has important implications for patient safety
- Options for treating patients with *C. difficile* are often extremely limited
- *C. difficile* infections are associated with increased lengths of stay, costs, and mortality
C. Difficile Infection Reporting Options

- Infection Surveillance

- Proxy Infection Measures:
  - Laboratory-Identified (LabID) Event

- Prevention Process Measures:
  - Monitoring Adherence to Hand Hygiene
  - Monitoring Adherence to Gown and Gloves Use
  - Monitoring Adherence to Active Surveillance Testing

- Active Surveillance Testing (AST) Outcome Measures

If you choose to monitor C. difficile infection you must select at least one of these two reporting options.

See: Prevention Process Measures and AST Outcome Measures Training Slides

Not used for C. difficile
C. Difficile Infection

The following documents and forms will be discussed in this training. You may wish to PRINT these to follow along.

1) MDRO and CDAD Module Protocol  
   - http://www.cdc.gov/ncidod/dhqp/nhsn_MDRO_CDAD.html

2) CDC Definitions for Nosocomial Infections document  

3) Patient Safety Monthly Reporting Plan  

4) MDRO or CDAD Infection Event form  

5) Laboratory-Identified MDRO or CDAD Event form  

6) MDRO and CDAD Prevention Process and Outcome Measures Monthly Monitoring form  
Infection Surveillance
C. Difficile Infection Surveillance

Reporting

Surveillance for all NHSN-defined healthcare-associated infections (HAI) caused by C. difficile in at least one selected inpatient location for at least 3 months in a calendar year.

A NSHN Healthcare-Associated Infection (HAI) is a localized/systemic condition resulting from an adverse reaction to the presence of an infectious agent or its toxin. There must be no evidence that the infection was present or incubating at the time of hospital admission. C. difficile infections must meet NHSN-defined criteria for gastroenteritis or gastrointestinal tract infections.
C. Difficile Infection Surveillance

Required Reporting

• Select at least one location in the healthcare facility
• Report at least three months* in a calendar year (months do not have to be sequential)

Reporting Methods: A. Facility-wide by location or B. Selected locations

Settings - Inpatient locations: 1) ICUs
  2) Specialty Care Areas
  3) Other inpatient care areas
  [No surveillance in Neonatal ICUs]

*At least six months for participation in NHSN Patient Safety Component
C. Difficile Infection Surveillance

NHSN Reportable Infections for C. Difficile

- GI-GE: Gastrointestinal System Infection-Gastroenteritis
- GI-GIT: Gastrointestinal System Infection-Gastrointestinal Tract
- CDAD Complications:
  Severe CDI in patient within 30 days after CDI symptom onset and at least one of the following:
  - Admission to ICU for CDAD complications
  - Surgery for CDAD complications
  - Death caused by CDAD within 30 days after symptom onset and during hospital admission
- If the patient develops both GI-GE and GI-GIT report only GI-GIT using the date of onset as that of GI-GE C. difficile infection.
Complete list of NHSN HAI definitions

Available at this Website:
Reporting Methods

A. Facility-Wide by Location:
Report separately from all locations of a facility.
Separate denominators (patient days, admissions) for all locations.

B. Selected Locations:
Report separately from 1 or more specific locations of a facility.
Separate denominators (patient days, admissions) for each location.
C. *Difficile* Infection Surveillance

A. Facility-Wide by Location

- MICU
- SCA
- Med-Surg
- Surgical
- SICU
- NICU
C. Difficile Infection Surveillance

B. Selected Locations

- MICU
- SCA
- Med-Surg
- Surgical
- SICU
- NICU
C. Difficile Infection Surveillance

Reporting Forms

1) Patient Safety Monthly Reporting Plan

2) MDRO or CDAD Infection Event form
   - Numerator – one form per infection

3) MDRO and CDAD Prevention Process and Outcome Measures Monthly Monitoring form
   - Denominator – total patient days per location
Example

Betty Brown, our infection preventionist at DHQP Memorial Hospital, initiated an infection surveillance program for *C. difficile* infection in MICU, SICU, and PICU in August 2008.

Because she is performing surveillance in 3 areas of her facility, the reporting method she has chosen is:

B. Selected locations

The next slide shows an example of how she completed her monthly reporting plan.
### C. Difficile Infection Surveillance

#### Patient Safety Monthly Reporting Plan

* required for saving

<table>
<thead>
<tr>
<th>Locations</th>
<th>Specific Organism Type</th>
<th>Infection Surveillance</th>
<th>%AST Timing</th>
<th>%AST Eligible</th>
<th>Incidence</th>
<th>Prevalence</th>
<th>Lab ID Event</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>MICU</em></td>
<td><em>C. diff</em></td>
<td>X</td>
<td>Adm Both</td>
<td>All NHx</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>SICU</em></td>
<td><em>C. diff</em></td>
<td>X</td>
<td>Adm Both</td>
<td>All NHx</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>PICU</em></td>
<td><em>C. diff</em></td>
<td>X</td>
<td>Adm Both</td>
<td>All NHx</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- No NHSN Patient Safety Modules Followed this Month

*Facility ID: ___9999__________  *Month/Year: ___08__/___2008___*
Example (cont)

During the monitoring month Betty identified a patient in MICU with gastroenteritis due to *C. difficile* that had not been present when the patient was admitted to the hospital.

The next slides show how Betty completed her NHSN form. Detailed instructions for completing each field on the form are contained in the Tables of Instructions. Note that there are additional questions concerning ICU admission for CDAD complications and surgery.
<table>
<thead>
<tr>
<th>Event Details</th>
</tr>
</thead>
</table>
| *Event Type*: GI  
*Post Procedure Event*: Yes  
MDRO/CDAD Infection: Yes  
*Specific Organism Type*: C. difficile  
*Date Admitted to Facility*: 08/04/2008  
*Specific Event Type (only used for CDC defined events)*: GE  
*Location*: MICU  

| Facility ID: 9999  
*required for saving*  
*Patient ID*: A081234  
*required for completion*  
*Gender*: M  
*Date of Birth*: 04/12/1942  

| Event #*: 333  
Social Security #:  
Secondary ID:  
Patient Name, Last:  
First:  
Middle:  
*Date of Event*: 08/27/2008  
Date of Procedure:  
NHSN Procedure Code:  
ICD-9-CM Procedure Code:  
```
C. Difficile Infection Surveillance

Specify Criteria Used (check all that apply)

<table>
<thead>
<tr>
<th>Signs &amp; Symptoms</th>
<th>Laboratory or Diagnostic Testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abcess</td>
<td>□ Positive □ Negative or Not done</td>
</tr>
<tr>
<td>Apnea</td>
<td>□ Positive □ Not done</td>
</tr>
<tr>
<td>Hypotension</td>
<td>□ Positive □ Not done</td>
</tr>
<tr>
<td>Bradycardia</td>
<td>□ Positive □ Not done</td>
</tr>
<tr>
<td>Redness</td>
<td>□ Positive □ Not done</td>
</tr>
<tr>
<td>Cough</td>
<td>□ Positive □ Not done</td>
</tr>
<tr>
<td>Suprapubic tenderness</td>
<td>□ Positive □ Not done</td>
</tr>
<tr>
<td>Fever</td>
<td>□ Positive □ Not done</td>
</tr>
</tbody>
</table>

- Acute onset of diarrhea (liquid stools for > 12 hours)
- Purulent drainage or material
- Pain or tenderness
- New onset/change in sputum, increased secretions or increased suctioning
- Localized swelling
- Persistent microscopic or gross blood in stools
- Wheezing, rales or rhonchi
- Other evidence of infection found on direct exam, during surgery or by diagnostic testing
- Other signs and symptoms

Clostridium difficile-Associated Disease

*Admitted to ICU for CDAD complications: Yes No
*Secondary Bloodstream Infection: Yes No
**Died: Yes No
Discharge Date: ___/___/______

*Pathogens Identified: Yes No
If Yes, specify on page 2

Other Organisms

<table>
<thead>
<tr>
<th>Pathogen</th>
<th>Other Organisms</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Organism 1</td>
</tr>
<tr>
<td></td>
<td>C. diff</td>
</tr>
<tr>
<td></td>
<td>Drug 1</td>
</tr>
<tr>
<td></td>
<td>SRM</td>
</tr>
<tr>
<td></td>
<td>Drug 2</td>
</tr>
<tr>
<td></td>
<td>SRM</td>
</tr>
</tbody>
</table>
**C. Difficile Infection Surveillance**

**AJIC major articles**

**CDC/NHSN surveillance definition of health care–associated infection and criteria for specific types of infections in the acute care setting**

Teresa C. Horan, MPH, Mary Andrus, RN, BA, CIC, and Margaret A. Dudeck, MPH
Atlanta, Georgia

**Table 1. CDC/NHSN major and specific types of health care–associated infections**

<table>
<thead>
<tr>
<th>UTI</th>
<th>Urinary tract infection</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUTI</td>
<td>Symptomatic urinary tract infection</td>
</tr>
<tr>
<td>ASB</td>
<td>Asymptomatic bacteriuria</td>
</tr>
<tr>
<td>OUTI</td>
<td>Other infections of the urinary tract</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SSI</th>
<th>Surgical site infection</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIP</td>
<td>Superficial incisional primary SSI</td>
</tr>
<tr>
<td>SIS</td>
<td>Superficial incisional secondary SSI</td>
</tr>
<tr>
<td>DIP</td>
<td>Deep incisional</td>
</tr>
<tr>
<td>DIS</td>
<td>Deep secondary SSI</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organ/space</th>
<th>Organ/space SSI. Indicate specific type:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• BONE • LUNG</td>
</tr>
</tbody>
</table>

**Table 1. Continued**

<table>
<thead>
<tr>
<th>EENT</th>
<th>Eye, ear, nose, throat, or mouth infection</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONJ</td>
<td>Conjunctivitis</td>
</tr>
<tr>
<td>EYE</td>
<td>Eye, other than conjunctivitis</td>
</tr>
<tr>
<td>EAR</td>
<td>Ear, mastoid</td>
</tr>
<tr>
<td>ORAL</td>
<td>Oral cavity (mouth, tongue, or gums)</td>
</tr>
<tr>
<td>SNU</td>
<td>Sinusitis</td>
</tr>
<tr>
<td>UR</td>
<td>Upper respiratory tract, pharyngitis, laryngitis, epiglottitis</td>
</tr>
</tbody>
</table>

**GI**

**Gastrointestinal system infection**

| GE   | Gastroenteritis |
| GIT  | Gastrointestinal (GI) tract |
| HEP  | Hepatitis |
| IAB  | Intraabdominal, not specified elsewhere |
| NEC  | Necrotizing enterocolitis |
C. *Difficile* Infection Surveillance

GI-GASTROINTESTINAL SYSTEM INFECTION

GE-Gastroenteritis

Gastroenteritis must meet at least 1 of the following criteria:

1. Patient has an acute onset of diarrhea (liquid stools for more than 12 hours) with or without vomiting or fever (>38°C) and no likely noninfectious cause (eg, diagnostic tests, therapeutic regimen other than antimicrobial agents, acute exacerbation of a chronic condition, or psychologic stress).

2. Patient has at least 2 of the following signs or symptoms with no other recognized cause and compatible with infection of the organ or tissue involved: fever (>38°C), nausea, vomiting, abdominal pain, fever (>38°C), or headache and at least 1 of the following:

   a. an enteric pathogen is cultured from stool or rectal swab
   b. an enteric pathogen is detected by routine or electron microscopy
   c. an enteric pathogen is detected by antigen or antibody assay on blood or feces
   d. evidence of an enteric pathogen is detected by cytopathic changes in tissue culture (toxin assay)
   e. diagnostic single antibody titer (IgM) or 4-fold increase in paired sera (IgG) for pathogen.

GIT-Gastrointestinal tract (esophagus, stomach, small and large bowel, and rectum) excluding gastroenteritis and appendicitis

Gastrointestinal tract infections, excluding gastroenteritis and appendicitis, must meet at least 1 of the following criteria:

1. Patient has an abscess or other evidence of infection seen during a surgical operation or histopathologic examination.

2. Patient has at least 2 of the following signs or symptoms with no other recognized cause and compatible with infection of the organ or tissue involved: fever (>38°C), nausea, vomiting, abdominal pain, or tenderness and at least 1 of the following:

   a. organisms cultured from drainage or tissue obtained during a surgical operation or endoscopy or from a surgically placed drain
   b. organisms seen on Gram's or KOH stain or multinucleated giant cells seen on microscopic examination of drainage or tissue obtained during a surgical operation or endoscopy or from a surgically placed drain
   c. organisms cultured from blood
   d. evidence of pathologic findings on radiographic examination
   e. evidence of pathologic findings on endoscopic examination (eg, *Candida* esophagitis or proctitis).
Example (cont)

At the end of the month, Betty completed her Prevention Process and Outcome Measures Monthly Monitoring form that includes her denominators. A separate form for each unit that is monitored should be completed.

Because she is performing infection surveillance her denominator is patient days. Even though she did not identify any *C. difficile* infections in SICU or PICU, she completed a denominator form for each of those units, also.
# C. Difficile Infection Surveillance

## MDRO and CDAD Prevention Process and Outcome Measures Monthly Monitoring

**Facility ID #: **9999 **Month:** 08 **Year:** 2008 **Location Code:** MICU

**Setting:** Inpatient **Days:** 180 **Admissions:**

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

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

<table>
<thead>
<tr>
<th>(Specific Organism Type)</th>
<th>MRSA</th>
<th>VRE</th>
<th>MDR-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>X</td>
</tr>
<tr>
<td>LabID Event</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:**
C. Difficile LabID Event Reporting
Purpose

• To calculate proxy measures of CDI events, exposures, and healthcare acquisition, facilities may choose to monitor Laboratory-identified (LabID) CDI Events. The main proxy measures are included in a table at the end of this presentation.

• This monitoring method enables a facility to rely almost exclusively on data obtained from the laboratory (i.e. proxy measures).
**Definitions**

**Laboratory-Identified (LabID) Event:** Any non-duplicate CDI-positive lab assay.

**CDI-positive Lab Assay:** Positive lab assay for *C. difficile* toxin A and/or B, or toxin-producing organism detected from stool culture or other lab means.

**Duplicate C. difficile-positive test:** CDI-positive assay from same patient within 2 weeks of previous positive assay.
C. Difficile LabID Event

Required Minimum Reporting

• All non-duplicate CDI-positive lab assays per patient per month

• At least three consecutive months in a calendar year

  March  April  May

• *C. difficile* testing performed routinely in lab, only on unformed (conforming to the shape of the container) stool samples
C. Difficile LabID Event

Requirements

- Reporting Methods:  
  A. Facility-wide by location  
  B. Selected locations  
  C. Overall facility-wide

- Settings:  
  1) Inpatient locations  
  2) Outpatient locations – where care provided to patients post-discharge OR prior to admission

- No Neonatal Intensive Care Units (NICU)

- No outpatient dialysis centers
**C. Difficile LabID Event**

Identifying a LabID Event

- Testing on unformed stool sample
- Positive for C. difficile
- Prior C. difficile positive in ≤ 2 weeks?
  - Yes → Duplicate test
  - No → Not LabID Event

**Laboratory-identified MDRO or CDAD Event**

- Facility ID:
- Patient ID:
- Social Security ID:
- Secondary ID:
- Patient Name, Last: First: Middle:
- Gender: M F
- Date of Birth:
- Ethnicity (Specify):
- Race (Specify):
- Event Details
- Event Type: LabID
- Specific Organism Type: (Check one) MDR, MRSA, VRE, MRSE, ESBL, P. aeruginosa, C. difficile
**C. Difficile LabID Event**

### C. Overall Facility-Wide

Patient Days = 2950, Admissions = 300, Encounters = 700

- **MICU**
- **OP dialysis**
- **Med-Surg**
- **PICU**
- **ER**
- **SICU**
- **NICU**
C. Difficile LabID Event

Reporting Forms

1) Patient Safety Monthly Reporting Plan

2) Laboratory-Identified MDRO or CDAD Event form
   - Numerator – one form per LabID Event

3) MDRO and CDAD Prevention Process and Outcome Measures Monthly Monitoring form

Denominators:
   IP locations - total patient days, admissions
   OP locations - encounters per location
Example

Bob Jones, our infection preventionist at Tinytown Memorial Hospital wants to monitor *C. difficile* in MICU, SICU, and PICU. Because his is a small facility and he is the only person performing surveillance, he has chosen LabID Event reporting because it is less labor intensive than infection surveillance. He will be able to use his laboratory data to identify cases.

Because he is performing surveillance in 3 areas of the facility, the reporting method he has chosen is:

B. Selected locations

The next slide shows how he completed his monthly reporting plan.
### Patient Safety Monthly Reporting Plan

* required for saving

Facility ID: ___9999_______________  *Month/Year: ___08__/___2008___

☐ No NHSN Patient Safety Modules Followed this Month

<table>
<thead>
<tr>
<th>Locations</th>
<th>Specific Organism Type</th>
<th>Infection Surveillance</th>
<th>%AST Timing</th>
<th>%AST Eligible</th>
<th>Incidence</th>
<th>Prevalence</th>
<th>Lab ID Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>MICU</td>
<td>C. diff</td>
<td></td>
<td>Adm</td>
<td>All</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>SICU</td>
<td>C. diff</td>
<td></td>
<td>Adm</td>
<td>All</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>PICU</td>
<td>C. diff</td>
<td></td>
<td>Adm</td>
<td>All</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
Example (cont)

At the end of the surveillance month, Bob identified one patient in PICU with a positive LabID Event for *C. difficile*. This was the only unique (non-duplicate) specimen identified positive for this patient.

The next slide shows how Bob completed the LabID Event form.
<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility ID</td>
<td>9999</td>
</tr>
<tr>
<td>Patient ID</td>
<td>A086789</td>
</tr>
<tr>
<td>Gender</td>
<td>M</td>
</tr>
<tr>
<td>Date of Birth</td>
<td>11/06/2000</td>
</tr>
<tr>
<td>Event Type</td>
<td>LabID</td>
</tr>
<tr>
<td>Specific Organism Type</td>
<td>C. difficile</td>
</tr>
<tr>
<td>Date Specimen Collected</td>
<td>08/27/2008</td>
</tr>
<tr>
<td>Specimen Source</td>
<td>Unformed stool</td>
</tr>
<tr>
<td>Date Admitted to Location</td>
<td>PICU</td>
</tr>
<tr>
<td>Date Admitted to Location</td>
<td>08/14/2008</td>
</tr>
<tr>
<td>Documented prior evidence of</td>
<td></td>
</tr>
<tr>
<td>infection or colonization</td>
<td>No</td>
</tr>
<tr>
<td>Has patient been discharged</td>
<td>No</td>
</tr>
<tr>
<td>Date of last discharge</td>
<td></td>
</tr>
</tbody>
</table>
Example (cont)

At the end of the month, Bob completed his Prevention Process and Outcome Measures Monthly Monitoring form to indicate the denominators for each location he monitored. Note that he entered both admissions and patient days for the location.

Because LabID Event reporting is recommended for at least 3 consecutive months in the same location, Bob will continue to perform CDI surveillance in MICU, SICU, and PICU in September and October.
## C. Difficile LabID Event

### MDRO and CDAD Prevention Process and Outcome Measures Monthly Monitoring

*required for saving  **conditionally required based upon monitoring selection in Monthly Reporting Plan*

<table>
<thead>
<tr>
<th><strong>Facility ID #: <em><strong>9999</strong></em></strong></th>
<th><strong>Month: _08</strong></th>
<th><strong>Year: _2008</strong></th>
<th><strong>Location Code: <em><strong>PICU</strong></em></strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Setting: Inpatient</strong></td>
<td><strong>Days$: <em><strong>565</strong></em></strong></td>
<td><strong>Admissions$: <em><strong>27</strong></em>__</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Setting: Outpatient (or Emergency Room)</strong></td>
<td><strong>Encounters:__________</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>Infection Surveillance</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>LabID Event</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

**Hand Hygiene**  
**Gown and Gloves**
LabID Event reporting for *C. difficile* can also be performed overall facility-wide in both in and outpatient locations. This means that single denominators are reported for the entire facility. However, even if performing overall facility-wide, NICU and outpatient dialysis centers should not be included. Make sure you remove NICU patient days and admissions from your inpatient denominators and outpatient dialysis visits from your encounters.

The next two slides show an example of the reporting plan and monthly monitoring form for this type of reporting.
C. Difficile LabID Event

Patient Safety Monthly Reporting Plan

* required for saving

Facility ID: ___9999______________  *Month/Year: __08__/__2008__

☐ No NHSN Patient Safety Modules Followed this Month

<table>
<thead>
<tr>
<th>Locations</th>
<th>Setting (Circle one)</th>
<th>Specific Organism Type</th>
<th>LabID Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL</td>
<td>In</td>
<td>C. diff</td>
<td>X</td>
</tr>
<tr>
<td>ALL</td>
<td>Out</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALL</td>
<td>Both</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALL</td>
<td>In</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALL</td>
<td>Out</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALL</td>
<td>Both</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALL</td>
<td>In</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALL</td>
<td>Out</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALL</td>
<td>Both</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Process and Outcome Measures
### C. Difficile LabID Event

**MDRO and CDAD Prevention Process and Outcome Measures Monthly Monitoring**

*required for saving  **conditionally required based upon monitoring selection in Monthly Reporting Plan*

<table>
<thead>
<tr>
<th>Facility ID #:</th>
<th>9999</th>
<th><em>Month</em>:</th>
<th>08</th>
<th><em>Year</em>:</th>
<th>2008</th>
<th><em>Location Code</em>:</th>
<th>ALL (IN/OUT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting:</td>
<td>Inpatient</td>
<td><strong>Days</strong>:</td>
<td>7,127</td>
<td><strong>Admissions</strong>:</td>
<td>2,359</td>
<td>Setting:</td>
<td>Outpatient (or Emergency Room)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>(Specific Organism Type)</th>
<th>MRSA</th>
<th>VRE</th>
<th>MDR-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>
</tr>
<tr>
<td>LabID Event</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

**Process Measures (Optional)**

- **Hand Hygiene**
- **Gown and Gloves**
When a LabID Event is identified for an outpatient, complete the same event form as that used for an inpatient. Make sure you circle “Yes” to the Outpatient question. An example of the form is shown on the next slide.

Notice that for *C. difficile* LabID Events, two additional questions concerning patient admission to your facility must be answered.
### Laboratory-identified MDRO or CDAD Event

**Facility ID:** 9999  
**Event #:** 445  
**Patient ID:** A086520  
**Social Security #:**

<table>
<thead>
<tr>
<th>Patient Name, Last:</th>
<th>First:</th>
<th>Middle:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender:</th>
<th>M</th>
<th>F</th>
</tr>
</thead>
</table>

**Date of Birth:** 09/06/1951

<table>
<thead>
<tr>
<th>Ethnicity (Specify):</th>
<th>Race (Specify):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Event Details

**Event Type:** LabID  
**Date Specimen Collected:** 08/27/2008

**Specific Organism Type:** (Check one)  
- [ ] MRSA  
- [ ] MSSA  
- [ ] VRE  
- [ ] MDR-Klebsiella  
- [ ] MDR-Acinetobacter  
- [X] C. difficile

**Outpatient:** Yes  
**Specimen Source:** Unformed stool

<table>
<thead>
<tr>
<th>Location:</th>
<th>Date Admitted to Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>GI Clinic</td>
<td></td>
</tr>
</tbody>
</table>

**Documented prior evidence of previous infection or colonization with this specific organism type?**  
- [ ] Yes  
- [X] No

### Required for CDAD (Optional for MDRO)

**Has patient been discharged from your facility in the past 3 months?**  
- [ ] Yes  
- [X] No

**Date of last discharge from your facility:** 06/15/2008

### Custom Fields
LabID Events Categorized through NHSN Calculations as:

1) Incident CDI Assay: CDI LabID Event from specimen obtained > 8 weeks after most recent LabID Event.

2) Recurrent CDI Assay: CDI LabID Event from specimen obtained > 2 weeks and ≤ 8 weeks after most recent LabID Event.
*LabID Events Further Categorized through NHSN Calculations:

1) Healthcare Facility-Onset (HO): LabID event from stool collected >3 days after admission to the facility (= on or after day 4)

2) Community-Onset (CO): LabID Event from stool collected from an outpatient or inpatient ≤ 3 days after admission to the facility (Day 1, 2 or 3 with date of admission as Day 1)

3) CO Healthcare Facility-Associated (CO-HCFA): CO LabID Event collected from a patient who was discharged from this facility ≤ 4 weeks prior to stool collection

* See MDRO and CDAD Module Protocol for detailed descriptions of metrics
### C. Difficile Infection

**Proxy Measures Calculated Using C. Difficile Infection Surveillance and LabID Event Reporting**

<table>
<thead>
<tr>
<th>Specific Metrics</th>
<th>Exposure</th>
<th>Infection</th>
<th>Acquisition</th>
</tr>
</thead>
<tbody>
<tr>
<td>C. Difficile Infection Incidence Rate</td>
<td></td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Facility CDI Healthcare Facility-Onset Incidence Rate</td>
<td></td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Facility CDI Combined Incidence Rate</td>
<td></td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Admission Prevalence Rate</td>
<td>√</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>Overall Prevalence Rate</td>
<td>√</td>
<td></td>
<td>√</td>
</tr>
</tbody>
</table>
Table 1. Reporting Choices for *C. difficile*

<table>
<thead>
<tr>
<th>Reporting Choices</th>
<th>C. difficile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infection Surveillance (Location Specific for $\geq 3$ months) Choose $\geq 1$ organism</td>
<td>A, B OR LabID Event</td>
</tr>
<tr>
<td>Proxy Infection Measures Laboratory-Identified (LabID) Event</td>
<td>A, B, C</td>
</tr>
<tr>
<td>Prevention Process Measures Options: Hand Hygiene Adherence Gown and Gloves Use Adherence</td>
<td>B B</td>
</tr>
</tbody>
</table>

Method
Let’s Review!

1. If your facility chooses to monitor CDI, either infection surveillance OR LabID Event reporting is required
2. *C. difficile* infection surveillance can be performed using Method A (facility-wide by location) and Method B (selected locations)
3. CDI LabID Event reporting can also be performed using Method C (overall facility-wide)
4. LabID Event reporting is recommended in the same facility location for at least 3 consecutive months
5. Infection surveillance should be reported for at least 3 calendar months in the reporting year, but months do not have to be sequential
6. NHSN reportable CDIs include gastroenteritis (GI-GE) and gastrointestinal tract infections (GI-GIT)
C. Difficile Infection

Custom Fields

- Alphanumeric fields – labels and dates
- Available with each form
- User can customize the data being collected and submitted (i.e. additional information)
References

Centers for Disease Control and Prevention (CDC)
– National Healthcare Safety Network (NHSN) –

Home Page:
http://www.cdc.gov/ncidod/dhqp/nhsn.html

Document Library (main link to all specific forms):
http://www.cdc.gov/ncidod/dhqp/nhsn_documents.html

MDRO and CDAD Module:
http://www.cdc.gov/ncidod/dhqp/nhsn_MDRO_CDAD.html