

# DRAFT

Welcome to *California*

## NHSN MRSA Bloodstream Infection and *C. difficile* Infection LabID Event Reporting

National Healthcare Safety Network Class  
Richmond California  
August 17-18, 2016



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# Acknowledgement

DRAFT

Information in this presentation is from the  
NHSN training courses  
[www.cdc.gov/nhsn](http://www.cdc.gov/nhsn)

DRAFT

## Objectives

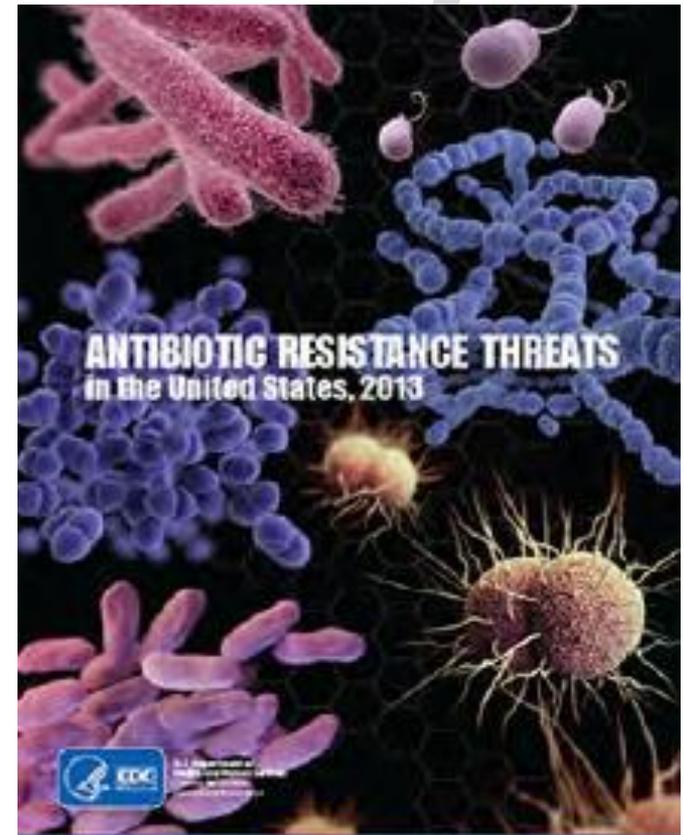
- Describe the importance of surveillance for MRSA/VRE bacteremia and *C. difficile*
- Describe how to correctly set-up monthly reporting plan for MRSA/VRE bacteremia and *C. difficile* LabID event reporting
- Review MRSA/VRE bacteremia and *C. difficile* LabID Event definitions and protocols
- Describe how to correctly enter MRSA/VRE bacteremia and *C. difficile* LabID events into NHSN
- Describe how to correctly enter denominator data for LabID reporting into NHSN

# California Reporting Requirements

- California requires reporting of Methicillin Resistant *Staphylococcus aureus* blood stream infection (MRSA BSI) **And** Vancomycin Resistant *Enterococcus* (VRE BSI) using the LabID module.
- Inpatient Rehabilitation Facilities (IRF) and Inpatient Psychiatric Facilities (IPF) in acute care hospitals are also required to report infections in California.

# Why is MRSA Bacteremia Surveillance Important?

- Serious threat level, requiring prompt, sustained action.
- Staph bacteria, including MRSA, are one of the most common causes of healthcare-associated infections.
- CDC estimates >80,000 invasive MRSA infections and >11,000 related deaths occurred in 2011.
- Despite a slight decrease in the percentage of *S. aureus* resistant to Oxacillin (MRSA), MRSA continues to dominate among pathogens



# Why is *C. difficile* Surveillance Important?

- Urgent threat level, requiring prompt and sustained action.
- *C. Difficile* infections (CDI) contribute to approximately 14,000 deaths/year
  - ~90% elderly
  - 400% increase, 2000-07
- Hospital stays from CDI tripled in the last decade

**DEADLY DIARRHEA:**  
*C. DIFFICILE* CAUSES IMMENSE SUFFERING, DEATH

**IMPACT**

500,000  
Caused close to half a million illnesses in one year.

Comes back at least once in about 1 in 5 patients who get *C. difficile*.

Caused 15,000 deaths in one year.  
1 in 11 people 65 and older died within a month of *C. difficile* infection diagnosis.

**RISK**

People on antibiotics are 7-10 times more likely to get *C. difficile* while on the drugs and during the month after.

Being in healthcare settings, especially hospitals or nursing homes.

More than 80% of *C. difficile* deaths occurred in people 65 and older.

**SPREAD**

Touching unclean surfaces, especially those in healthcare settings, contaminated with feces from an infected person.

Dirty hands.

Failing to notify other healthcare facilities when patients with *C. difficile* transfer from one facility to another.

**PREVENT**

Improve prescribing of antibiotics.

Use best tests for accurate results to prevent spread.

Rapidly identify and isolate patients with *C. difficile*.

Wear gloves and gowns when treating patient with *C. difficile*. Remember that hand sanitizer doesn't kill *C. difficile*.

Clean room surfaces with EPA-approved, spore-killing disinfectant (such as bleach), where *C. difficile* patients are treated.

[http://www.cdc.gov/HAI/organisms/cdiff/cdiff\\_infect.html](http://www.cdc.gov/HAI/organisms/cdiff/cdiff_infect.html)  
[www.cdc.gov/media](http://www.cdc.gov/media)

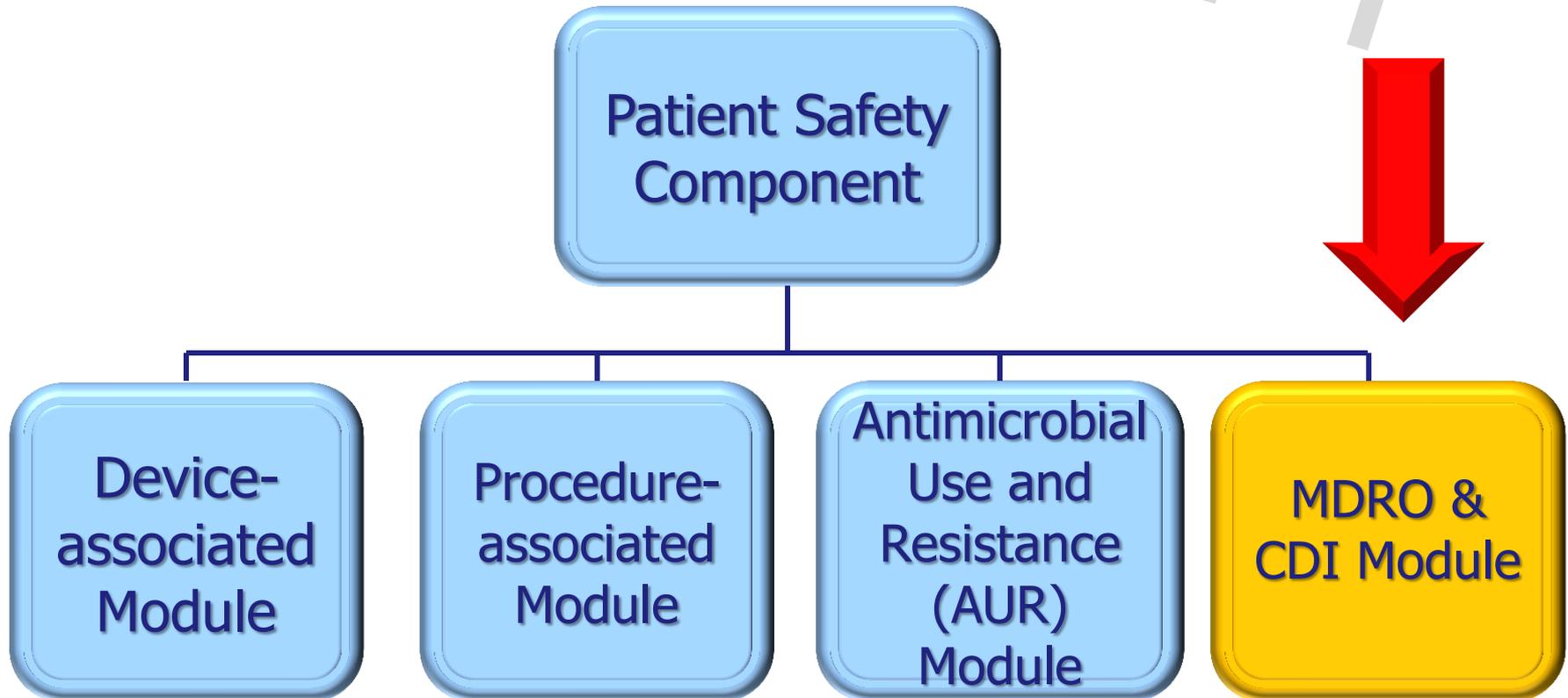
**CDC**  
U.S. Department of Health and Human Services  
Centers for Disease Control and Prevention

# Risk Factors: Key Prevention Targets

- Antimicrobial exposure
- Acquisition of *C. difficile*
- Advanced age
- Underlying illness
- Immunosuppression
- Tube feeds
- Gastric acid suppression?

Main modifiable  
risk factors

# Patient Safety Component- 4 Modules



# Reporting Requirements and Options

Active participants must choose main reporting method

Infection Surveillance  
MDRO/CDI

LabID Event Reporting  
(MDRO/CDI)

Additional options then become available

Prevention Process measures:

- Adherence to Hand Hygiene
- Adherence to Gown and Glove Use
- Adherence to Active Surveillance Testing (MRSA/VRE Only)

Outcome Measures:

- AST Prevalence/Incidence (MRSA/VRE Only)

# LabID Event Reporting

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LabID Event reporting allows laboratory testing data to be used without clinical evaluations of the patient, allowing for a much less labor intensive method to track *C. difficile* and MDROs such as MRSA and VRE

These provide **proxy** infection measures of **healthcare acquisition, exposure burden, and infection burden** based primarily on laboratory and limited admission data.

# Advantages of LabID Event Reporting

- Objective laboratory based metrics that allow the following **without** extensive chart review to:
  - Identify vulnerable patient populations
  - Estimate infection burden
  - Estimate exposure burden
  - Assess need for an effectiveness of interventions
- Standardized case definitions

# Importance of Standardized Case Definitions & Data Collection Methods

- Increases comparability between clinical settings.
- Guides implementation of interventions and to monitor impact of such interventions.

## ***AND WE KNOW.....***

- Documentation of symptoms may differ between healthcare settings.
- Resources vary among facilities, which may result in unfair comparison.
- Completeness of medical record documentation & variances among facilities may influence definition application.
- Simplicity of auditing data to validate accuracy of submitted data.

# Facility-wide Inpatient (FacWideIN) for LabID Event Reporting Only

- FacWideIn refers to the hospital-wide denominators used for MRSA/VRE BSI and CDI surveillance and reporting
- Includes inpatient locations\* plus
  - each outpatient emergency department (ED) and 24-hour observation location
  - Each of these outpatient locations must be mapped
- Excludes Long-term Care Facilities (LTCF)/Skilled Nursing Facilities (SNF), which must enroll as a separate facility type



*\* See C. difficile LabID Event protocol, Chapter 12, for complete list of location exclusions*

# Determining Locations for FacWideIn MDRO Reporting

- If reporting FacWideIN MDRO Blood Only LabID Events, the facility must:
  - Map the ED and 24-hour observation locations
  - Report MRSA or VRE blood specimen Lab ID Events separately for each outpatient location
- If reporting FacWideIN MDRO All Specimens LabID Events, the facility must
  - Report all positive MRSA/VRE specimens from each mapped outpatient emergency department and 24-hour observation location.

Note: If a hospital is reporting all MRSA specimens, and not just blood specimens, CDC will only share MRSA bloodstream infection data with CMS

# LabID Event Reporting for Outpatient Locations

- LabID Events are reported for ED and 24-hour observation units (required)
- Positive specimens collected from any other affiliated outpatient location should be reported if collected on the same calendar day as inpatient admission
  - Attribute the positive specimen to the admitting inpatient location

Together, these 2 methods for reporting LabID events from outpatient locations

- 1) facilitate accurate categorization when specimens are collected in the ED or 24-hour observation units, and
- 2) allow capture of other community-onset cases coming into the facility

# Setting up and Reporting LabID Events

	Acute Care Hospital	Hospital IRF Unit	Free-standing IRF
<b>Enrollment</b>		No separate enrollment (already enrolled under the hospital)	Enroll as separate facility-HOSP-REHAB Will have a unique NHSN orgID
<b>Locations</b>	All inpatient locations must be mapped (see Locations guidance in Ch. 15). Additionally, outpatient ED and 24-hour observation locations must be mapped	Map each CMS-IRF unit to Inpatient Rehabilitation Ward location within enrolled hospital. Must indicate the unit is a CMS IRF on the Location screen and enter the CCN for the IRF unit.	Map each inpatient location to CDC-defined location type (Rehabilitation Ward or Rehabilitation Pediatric Ward)
<b>Monthly Reporting Plan</b>	FacWideIN <u>and</u> outpatient ED and 24 locations for same organism and LabID event	Location specific for each CMS-IRF unit in hospital	Facility-wide Inpatient (FacWideIN)
<b>Numerator Data (LabID events)</b>	Report LabID events separately for each inpatient unit and ED and 24-hour observation	Report LabID Events separately for each IRF unit	Report LabID Events separately for each location
<b>Denominator Data</b>	FacWideIN and again excluding locations with separate CCNs . Location specific counts for each ED and 24-hour observation	Location specific counts	FacWideIN

# “Checklist” for MRSA Bacteremia and *C. difficile* LabID Event Reporting

- Review location options and map inpatient locations
- Review Monthly Reporting Plan(s) – update as necessary
- Identify and enter all MRSA bacteremia and *C. difficile* LabID events into NHSN by location using the MDRO/CDI LabID Event protocols
- Enter denominator data for each month under surveillance
- Resolve “Alerts” if applicable

# Add Locations: Specify Location Information

Your Code\*:

Your Label\*:

CDC Location Description\*:

Status\*:

Bed Size\*:  A bed size greater than zero is required for most inpatient locations.

[Display All](#) [Print Location List](#)

Page 1 of 1 10 View 1 - 1 of 1

Delete	Status	Your Code	Your Label	CDC Description	CDC Code	NHSN HL7 Code	Bed Size
<input type="checkbox"/>	Active	<a href="#">2 WEST</a>	M/S ICU	Medical/Surgical Critical Care	IN:ACUTE:CC:MS	1029-8	24

Page 1 of 1 10 View 1 - 1 of 1

If participating in FacWideIN, must also map each outpatient emergency department location.

**DRAFT**

Your Code\*:

Your Label\*:

CDC Location Description\*:

Status\*:

Bed Size:  A bed size greater than zero is required for most inpatient locations.

**Includes off-site ED locations**

[Display All](#) [Print Location List](#)

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Delete	Status	Your Code	Your Label	CDC Description	CDC Code
<input type="checkbox"/>	Active	<a href="#">ED</a>	EMERGENCY DEPARTMENT (ED)	Emergency Department	<b>OUT:ACUTE:ED</b>
<input type="checkbox"/>	Active	<a href="#">DLB93</a>	MMC	Mobile MRI/CT	OUT:NONACUTE:MOBILE_DIAG:RAD
<input type="checkbox"/>	Active	<a href="#">DLB94</a>	MAR	Morgue/Autopsy Room	NONPTC:NA:LAB:PATH_MORG

# If participating in FacWideIN, must also map each 24-hour observation location

Your Code\*:

Your Label\*:

CDC Location Description\*:

Status\*:

Bed Size:  A bed size greater than zero is required for most inpatient locations.

Location Table

[Display All](#) [Print Location List](#)

Page 1 of 1 10 View 1 - 3 of 3

Delete	Status	Your Code	Your Label	CDC Description	CDC Code	NHSN HL7 Code	Bed Size
<input type="checkbox"/>	Active	<a href="#">24-HR OB</a>	24-HOUR OBSERVATION	24-Hour Observation Area	<b>OUT:ACUTE:WARD</b>	1162-7	16
<input type="checkbox"/>	Inactive	<a href="#">DLB3</a>	OBS AREA	24-Hour Observation Area	OUT:ACUTE:WARD	1162-7	34
<input type="checkbox"/>	Inactive	<a href="#">INACTIVE</a>	INACTIVE	24-Hour Observation Area	OUT:ACUTE:WARD	1162-7	1

Page 1 of 1 10 View 1 - 3 of 3

# CMS-licensed IRF and IPF unit (s) must be Set-up as Inpatient Rehabilitation Ward/ Inpatient Psychiatric Ward and CCN entered for each unit

Your Code\*: IRF

Your Label\*: IRF WITH OWN CCN NUMBER

CDC Location Description\*: Rehabilitation Ward - Within ACH

Is this location a CMS IRF unit within a hospital?\*: Y - Yes

If Yes, specify the IRF CCN (will have an R or T in the 3rd position)\*: 99T999 Effective Date of IRF CCN: 05/06/2014 2014Q2 [Edit IRF CCN](#)

Status\*: Active

Bed Size\*: 10 A bed size greater than zero is required for most inpatient locations.

Find Add Export Location List Clear

Remember to do the same for IPF

Location Table

[Display All](#) [Print Location List](#)

Delete	Status	Your Code	Your Label	CDC Description	CDC Code	NHSN HL7 Code	Bed Size
<input type="checkbox"/>	Active	<a href="#">IRF</a>	IRF WITH OWN CCN NUMBER	Rehabilitation Ward - Within ACH	IN:ACUTE:WARD:REHAB	1070-2	10

Page 1 of 1 10 View 1 - 1 of 1

# “Checklist” for MRSA/VRE Bacteremia and *C. difficile* LabID Event Reporting

- Review location options and map inpatient locations
- Review Monthly Reporting Plan(s) –update as necessary
- Identify and enter all MRSA bacteremia and *C. difficile* LabID events into NHSN by location using the MDRO/CDI LabID Event protocols.
- Enter denominator data for each month under surveillance
- Resolve “Alerts”, if applicable

# Monthly Reporting Plan -1

- The Monthly Reporting Plan informs CDC which modules a facility is participating in during a given month.
  - Referred to as “In-Plan” data.
- The Plan also informs CDC which data can be used for aggregate analysis.
  - This **includes** sharing applicable data with CMS!
- A facility must enter a Plan for every month of the year.
- NHSN will only submit data to CMS for those complete months in which the following are indicated on the monthly reporting plan

## Monthly Reporting Plan -2

### At the beginning of each month:

- Add facility-wide inpatient reporting for MRSA and VRE bacteremia and *C. difficile* LABID events to your monthly reporting plan (MRP) using the “FACWIDEIN” location.
- If reporting FacWideIN, must also add location specific reporting for the same organism and LabID Event for each outpatient emergency department and 24-hour observation location.
- If applicable, add each CMS-IRF location for MRSA/VRE bacteremia and *C. difficile* LabID events to your MRP.

# Creating a Monthly Reporting Plan

DRAFT

The screenshot displays the NHSN (National Healthcare Safety Network) interface. At the top left is the CDC logo and the text "Department of Health and Human Services, Centers for Disease Control and Prevention". Below this is the NHSN logo and the text "NHSN - National Healthcare Safety Network". A navigation menu on the left includes "NHSN Home", "Alerts", "Reporting Plan", "Patient", "Event", "Procedure", "Summary Data", "Import/Export", "Analysis", "Surveys", "Users", "Facility", "Group", and "Log Out". The "Reporting Plan" menu item is highlighted, and a red arrow points to the "Add" sub-item. The main content area shows a "Logged into California General Hospital (ID 15633) as VICKIKELLER. Facility California General Hospital (ID 15633) is following the PS component." message. A large button labeled "Add Monthly Reporting Plan" is prominently displayed. Below it, a section titled "Mandatory fields marked with \*" contains dropdown menus for "Facility ID\*" (set to "California General Hospital (ID 15633)"), "Month\*", and "Year\*", along with a checkbox for "No NHSN Patient Safety Modules Followed this Month". A red oval highlights the "Multi-Drug Resistant Organism Module" section, which includes a "HELP" link, dropdowns for "Locations" and "Specific Organism Type", and a table for "Process and Outcome Measures". The table has columns for "Infection Surveillance", "AST-Timing", "AST-Eligible", "Incidence", "Prevalence", "Lab ID", "Event", and "All Specimens". At the bottom are buttons for "Add Row", "Clear All Rows", and "Copy from Previous Month".

# Creating a Monthly Reporting Plan - 2

## Multi-Drug Resistant Organism Module [HELP](#)

Locations	Specific Organism Type	Infection Surveillance	AST-Timing	AST-Eligible	Incidence	Prevalence	Lab ID Event All Specimens	Lab ID Event Blood Specimens Only	HH	GG
FACWIDEIN - Facility-wide Inpatient (FacWIDEIn)	CDIF - C. difficile	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
FACWIDEIN - Facility-wide Inpatient (FacWIDEIn)	MRSA - MRSA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
FACWIDEIN - Facility-wide Inpatient (FacWIDEIn)	VRE - VRE	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
24-HR OB - 24-HOUR OBSERVATION	MRSA - MRSA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
24-HR OB - 24-HOUR OBSERVATION	CDIF - C. difficile	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
24-HR OB - 24-HOUR OBSERVATION	VRE - VRE	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

# Adding Other Pathogens to Monthly Reporting Plans

Your state or local health department may require reporting of other MDRO available in NHSN to add to your monthly reporting plan

## Multi-Drug Resistant Organism Module [HELP](#)

Locations

Specific Organism Type

Process and Outcomes  
 Infection Surveillance  
 AST-Tin

ACINE - MDR-Acinetobacter  
 CDIF - C. difficile  
 CEPHRKLEB - CephR-Klebsiella  
 CRE - CRE (CRE-Ecoli, CRE-Enterobacter, CRE-Klebsiella)  
 MRSA - MRSA  
 MRSA/MSSA - MRSA with MSSA  
 VRE - VRE

Incidence  
 Prevalence  
 Lab ID Event All Specimens  
 Lab ID Event Blood Specimens Only  
 HH  
 GG

Add Rows

Clear All Rows

Copy from Previous Month

# Monthly Reporting Plan CMS-IRF/IPF Units within the hospital

- Each CMS IRF/IPF location must be entered for all three organisms:
  - *C. difficile*
  - MRSA
  - VRE

IRF - IRF WITH OWN CCN NUMBER

CDIF - C. difficile

Process and Outcome Measures

Infection Surveillance

AST-Timing

AST-Eligible

Incidence Prevalence

Lab ID Event All Specimens

Lab ID Event Blood Specimens Only

HH GG

IRF - IRF WITH OWN CCN NUMBER

MRSA - MRSA

Process and Outcome Measures

Infection Surveillance

AST-Timing

AST-Eligible

Incidence Prevalence

Lab ID Event All Specimens

Lab ID Event Blood Specimens Only

HH GG

IRF - IRF WITH OWN CCN NUMBER

VRE - VRE

Process and Outcome Measures

Infection Surveillance

AST-Timing

AST-Eligible

Incidence Prevalence

Lab ID Event All Specimens

Lab ID Event Blood Specimens Only

HH GG

IPF - IPF WITH OWN CCN NUMBER

CDIF - C. difficile

Process and Outcome Measures

Infection Surveillance

AST-Timing

AST-Eligible

Incidence Prevalence

Lab ID Event All Specimens

Lab ID Event Blood Specimens Only

HH GG

IPF - IPF WITH OWN CCN NUMBER

VRE - VRE

Process and Outcome Measures

Infection Surveillance

AST-Timing

AST-Eligible

Incidence Prevalence

Lab ID Event All Specimens

Lab ID Event Blood Specimens Only

HH GG

IPF - IPF WITH OWN CCN NUMBER

MRSA - MRSA

Process and Outcome Measures

Infection Surveillance

AST-Timing

AST-Eligible

Incidence Prevalence

Lab ID Event All Specimens

Lab ID Event Blood Specimens Only

HH GG

# “Checklist” for MRSA Bacteremia and *C. difficile* LabID Event Reporting

- Review location options and map inpatient locations
- Review Monthly Reporting Plan(s) –update as necessary
- Identify and enter all MRSA bacteremia and *C. difficile* LabID events into NHSN by location using the MDRO/CDI LabID Event protocols
- Enter denominator data for each month under surveillance
- Resolve “Alerts”, if applicable

# MDRO Bacteremia Reporting Definitions

## MDRO Positive Blood Isolate

- Any MDRO blood specimen obtained for clinical decision-making purposes
- Excludes screening cultures, such as those used for active surveillance testing

## MDRO Bacteremia LabID Event

- MDRO positive blood specimen for a patient in a location with no prior same MDRO positive blood specimen result collected within 14 days for the patient and location
  - Including across calendar months for Blood Only reporting
  - Also referred to as non-duplicate LabID Events

# MRSA or VRE (MDRO) Bacteremia LabID Event Reporting Blood Specimen Only

Begin  
Here

MDRO isolate from blood per  
patient and location

Prior (+) MDRO  
from blood  $\leq$  2  
weeks from same  
patient and  
Location (including  
across calendar  
month)

Yes

Not a LabID  
Event  
(Duplicate)

No

LabID Event  
(*unique MDRO  
blood source*)

# LabID Event Patient Information



- NHSN Home
- Alerts
- Reporting Plan
- Patient
- Event
  - ▶ Add
  - ▶ Find
  - ▶ Incomplete
- Procedure
- Summary Data
- Import/Export
- Analysis
- Surveys
- Users
- Facility
- Group
- Log Out

Logged into California General Hospital (ID 15633) as VICKIKELLER.  
 Facility California General Hospital (ID 15633) is following the PS component.

## Add Event

Mandatory fields marked with \*

Fields required for record completion marked with \*\*

Fields required when in Plan marked with >

### Patient Information [HELP](#)

Facility ID\*:

Patient ID\*:

Secondary ID:

Last Name:

Middle Name:

Gender\*:

Ethnicity:

- Race:
- American Indian/Alaska Native
  - Black or African American
  - White

- Asian
- Native Hawaiian/Other Pacific Islander

Event #:

Social Security #:

Medicare #:

First Name:

Date of Birth\*:

# MDRO Event Information - Specimens Collected from ED or 24-hour Observation

## Event Information

Event Type\*: LABID - Laboratory-identified MDRO or CDI Event ▼

Date Specimen Collected\*: 01/11/2015 

Specific Organism Type\*: MRSA - MRSA ▼

Outpatient\*: Y - Yes ▼

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

Specimen Source\*: BLDSPC - Blood specimen ▼

Date Admitted to Facility: 01/10/2015 

Location\*: ED - EMERGENCY DEPARTMENT (ED) ▼

Last physical overnight location of patient immediately prior to arriving into facility (applies to specimen(s) collected in outpatient setting or <4 days after inpatient admission): RES - Personal residence/Residential care

Has patient been discharged from your facility in the past 3 months?: N - No ▼

Has the patient been discharged from another facility in the past 4 weeks?: Y - Yes ▼

If yes, from where (Check all that apply)\*:

- Nursing Home
- Other Inpatient (i.e., acute care)

Documented evidence of previous infection or colonization with this specific organism type from a previously reported LabID Event in **any prior month**?: N - No

**Not required  
for outpatient  
LabID Event  
reporting**

**Auto-populated.  
Based on previous  
month LabID  
Events**

# MDRO Event Information Specimens collected from Inpatients

Event Information 

Event Type\*: LABID - Laboratory-identified MDRO or CDI Event ▼

Date Specimen Collected\*: 01/11/2015 

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\*: 01/10/2015 

Location\*: Z-MED - MEDICAL UNIT

Date Admitted to Location\*: 01/10/2015 

Last physical overnight location of patient immediately prior to arriving into facility (applies to specimen(s) collected in outpatient setting or <4 days after inpatient admission): RES - Personal residence/Residential care

Has patient been discharged from your facility in the past 3 months?: N - No ▼

Has the patient been discharged from another facility in the past 4 weeks?: Y - Yes ▼

If yes, from where (Check all that apply)\*:  Nursing Home/Skilled Nursing Facility  
 Other (i.e.,  Home,  Residential care,  Other) ▼

Documented evidence of previous infection or colonization with this specific organism type from a previously reported LabID Event in any prior month?: N - No

## Choices

1. Nursing home/SNF
2. Personal residence
3. Other inpatient setting
4. unknown

**At time of specimen collection**

**Auto-populated.  
Based on  
previous month  
LabID Events**

# Two Optional Questions to Improve Tracking Through the Continuum of Care

1

Last physical overnight location of patient immediately prior to arriving into facility (applies to specimen(s) collected in outpatient setting or <4 days after inpatient admission):

RES - Personal residence/Residential care

2

Has patient been discharged from your facility in the past 3 months?\*

N - No ▼

Has the patient been discharged from another facility in the past 4 weeks?:

Y - Yes ▼

If yes, from where (Check all that apply)\*:

Nursing Home/Skilled Nursing Facility

Other Inpatient Healthcare Setting  
(i.e., acute care hospital, IRF, LTAC, etc.)

**No impact on  
categorizations  
or analyses**

Documented evidence of previous infection or colonization with this specific organism type from a previously reported LabID Event in **any prior month**? N - No

# What **Facility** Admission Date Should be Used?

## **Acute Care Hospital and CMS-IRF/IPF**

The admission date should reflect the dated the patient was physically admitted to an inpatient unit in the hospital.

# Acute Care Hospital

DRAFT

NHSN application Categorizes\* MDRO LabID Events as:

- Community-Onset (CO)
  - LabID Event specimen collected in an outpatient location or in an inpatient location  $\leq 3$  days after admission to the facility (i.e., days 1 [admission], 2, or 3).
- Healthcare Facility-Onset (HO)
  - LabID Event specimen collected  $> 3$  days after admission to the facility (i.e., on or after day 4).



\*Based on Inpatient Admission & Specimen Collection Dates

# CMS-IRF Unit within Hospital

NHSN will categorize your MDRO blood specimen LabID Events as Incident\* or Prevalent\*.

- Prevalent
  - LabID Event specimen collected in the IRF unit  $\leq 3$  days after admission into that IRF unit (i.e., days 1[admission], 2, or 3).
- Incident
  - LabID Event specimen collected  $>3$  days after admission to the IRF unit (i.e., on or after day 4).



\*Based on IRF unit admission and specimen collection dates

# MRSA Bacteremia Data Reported to CMS

- **Acute Care Hospitals (ACH):**
  - FacWideIN **HO MRSA** bacteremia standardized infection ratio (SIR), defined as all blood source, no-duplicate LabID Events identified >3 days after admission to the ACH. Only data from locations with the same CMS Certification Numbers (CCNs) will be included.
- **CMS-IRF Unit inside Hospital:**
  - MRSA bacteremia incidence rates for all CMS-certified IRF units combined, defined as all incident blood source MRSA LabID events identified >3 days after admission to an IRF unit and where the patient had no positive MRSA bacteremia LabID events in the prior 14 days in any CMS-certified IRF unit of that type.

# Reporting Requirements for MDRO Bacteremia -1

- All MDRO bacteremia LabID Events, including community-onset(CO) and prevalent events (IRF/IPF units) must be reported into NHSN so that the categorization of incidence and prevalence can be assigned correctly.
- MDRO blood specimens **MUST** be monitored throughout all inpatient locations within a facility.
- A blood specimen qualifies as a LabID if there has not been a previous positive lab result for the patient and location within the previous 14 days.

# Reporting Requirement for MDRO -2

- Like specimens and LabID Events collected from ED and 24-hour observation must be reported for that outpatient location regardless of subsequent patient admission.
- Denominator counts are reported separately for each outpatient location.
- Specimens collected from other affiliated outpatient locations (non-ED, non-24 hour observation) may be entered for FacWideIN ONLY if specimen collection date = admission date.

# Reporting Requirements for MDRO Bacteremia in an Inpatient Rehabilitation Unit (IRF or IPF) Within a Hospital

- Location specific reporting is required
  - Numerator and denominator counts are reported separately for each CMS certified IRF unit inside the hospital.
- All MRSA and VRE blood LabID event(s) MUST be entered.
- A blood specimen qualifies as a LabID Event:
  - If there has not been a previous positive blood culture result for the patient, organism (MRSA or VRE), and IRF location within the previous 14 days.

## Examples: Identifying MRSA Bacteremia LabID Events

	Pt	Hospital Admit Date/ Location	Specimen Collection Date/Loc	Specimen Source	Lab Result	LabID Event? Location?	Explanation
1	Mr.T	02/15/15 CCU	02/15/15 ED	Blood	MRSA		
2	Mr.T	02/15/15 CCU	02/15/15 CCU	Blood	MRSA		
3	Mr.T	02/15/15 CCU	02/20/15 2-Rehab	Blood	MRSA		
4	Mr.T	02/15/15 CCU	02/25/15 CCU	Blood	MRSA		
5	Mr.T	02/15/15 CCU	03/10/15 2-Rehab	Blood	MRSA		
6	Ms.T	None	03/12/15 ED	Blood	MRSA		
7	Ms.T	None	3/22/15 ED	Blood	MRSA		

# Reporting a Patient with BOTH CLABSI with MRSA/VRE

- Report both a MRSA/VRE bacteremia LabID Event and a CLABSI. Each Event must be reported separately in NHSN.
- LCBI-CLABSI Event, *using the applicable HAI criteria,*  
**AND**
  - LabID Event, *using the MDRO LabID Event reporting protocol*

## *C. Difficile (CDI)* LabID Event Reporting

- Can occur in any inpatient or outpatient location **except** locations known to predominantly house babies:
  - Neonatal intensive care (NICU)
  - Specialty care nursery (SCN)
  - Babies in L&D, recovery, post-partum (LDRP)
  - Well baby nurseries
  - Well baby clinics

## Definition : CDI Positive Laboratory Assay

- A positive Lab test result for *C. difficile* toxin A and/or B, Includes molecular assays [PCR] and /or toxin assays),  
**OR**
- A toxin-producing *C. difficile* organism detected by culture or other Lab means performed on a stool sample

***C. difficile* testing on  
only unformed stool  
samples!!!  
Stool should conform to  
shape of the container**



## CDI LabID Event Definition

- 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-duplicated LabID events***

# *C. difficile* Event Information Specimens Collected from the ED and 24 hour OBS

Event Information 

Event Type\*: LABID - Laboratory-identified MDRO or CDI Event ▾

Date Specimen Collected\*: 01/04/2015 

Specific Organism Type\*: CDIF - C. difficile ▾

Outpatient\*: Y - Yes ▾

Specimen Body Site/Source\*: DIGEST - Digestive System ▾

Specimen Source\*: STOOL - Stool specimen ▾

Date Admitted to Facility:  

Location\*: ED - EMERGENCY DEPARTMENT (ED)

Does **not** include outpatient beds located in inpatient units

At time of specimen collection

Last physical overnight location of patient immediately prior to arriving into facility (applies to specimen(s) collected in outpatient setting or <4 days after inpatient admission): NURS - Nursing Home/Skilled Nursing Facility

Has patient been discharged from your facility in the past 3 months?\*: Y - Yes ▾

Date of last discharge from your facility\*: 12/14/2014 

Has the patient been discharged from another facility in the past 4 weeks?: Y - Yes ▾

If yes, from where (Check all that apply)\*:  Nursing Home/Skilled Nursing Facility

Other (i.e.

Documented evidence of previous infection or colonization with this specific organism type from a previously reported LabID Event in **any prior month**? N - No

Same process for 24 hour observation unit

Automated –no impact on CDI categorizations or

# *C. difficile* Event Information Specimens Collected from Inpatient Locations

## Event Information

Event Type\*: LABID - Laboratory-identified MDRO or CDI Event ▼

Date Specimen Collected\*: 01/22/2015 

Specific Organism Type\*: CDIF - C. difficile ▼

Outpatient\*: N - No ▼

Specimen Body Site/Source\*: DIGEST - Digestive System ▼

Specimen Source\*: STOOL - Stool specimen ▼

Date Admitted to Facility\*: 01/17/2015 

Location\*: Z-ICU - MED/SURG ICU

Date Admitted to Location\*: 01/17/2015 

Has patient been discharged from your facility in the past 3 months?: Y - Yes ▼

Date of last discharge from your facility\*: 12/20/2014 

Has the patient been discharged from another facility in the past 4 weeks?: Y - Yes ▼

If yes, from where (Check all that apply)\*:  Nursing Home/Skilled Nursing Facility

Other (file)

Documented evidence of previous infection or colonization with this specific organism type from a previously reported LabID Event in **any prior month**?: N - No

**At time of specimen collection**

**Excludes outpatient encounters**

**Automated. Does not impact CDI categorizations or analysis**

## *C. difficile* LabID Events Categorization

- Community-Onset (CO)
  - LabID Event specimen collected in an outpatient location or in an inpatient location  $\leq 3$  days after admission to the facility (i.e., days 1 [admission], 2, or 3).
- Healthcare Facility-Onset (HO)
  - LabID Event specimen 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  $\leq 4$  weeks prior to the date current stool specimen was collected.

# IRF Unit Within the Hospital

NHSN will categorize *C. difficile* specimen LabID Events as Incident\* or Prevalent\*.

- Prevalent
  - LabID Event specimen collected in the IRF unit  $\leq 3$  days after admission into that IRF unit (i.e., days 1[admission], 2, or 3).
- Incident
  - LabID Event specimen collected  $> 3$  days after admission to the IRF unit (i.e., on or after day 4).



\*Based on IRF unit admission and specimen collection dates

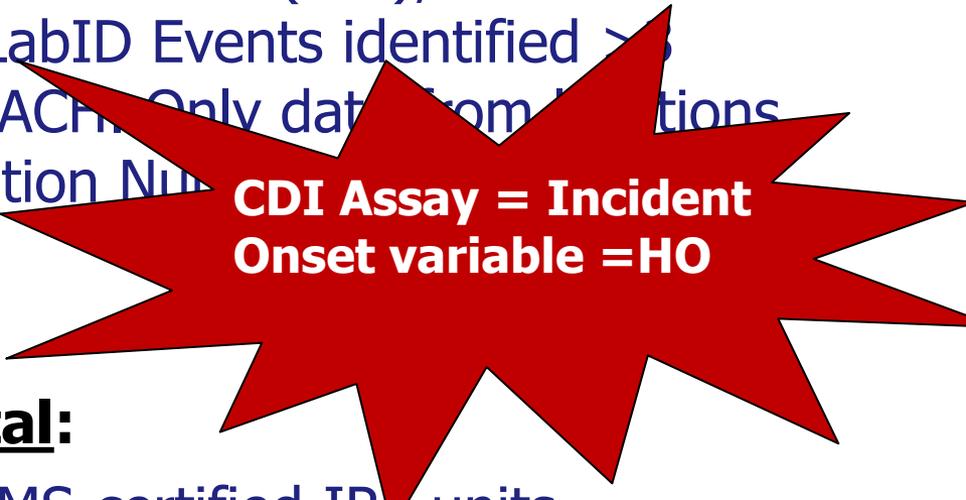
## C. Difficile – Further Categorization

- Based on current specimen collection date and 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.

# What CDI Data are Reported to CMS?

- **Acute Care Hospitals (ACH):**

- FacWideIN **HO CDI** LabID Event ratio (SIR), defined as all blood source, no-duplicate LabID Events identified > 3 days after admission to the ACH. Only data from locations with the same CMS Certification Number are included.



**CDI Assay = Incident  
Onset variable =HO**

- **CMS-IRF Unit inside Hospital:**

- CDI incidence rates for all CMS-certified IRF units combined, defined as all incident blood source CDI LabID events identified >3 days after admission to an IRF unit and where the patient had no positive CDI LabID Events in the prior 14 days in any CMS-certified IRF unit of that type.

# Importance of Reporting Both Community-Onset and Hospital-Onset CDI Events

- Community-onset LabID Events and admission prevalence of a facility will play an important role in assignment of LabID Event onset, and so both **HO** and **CO** LabID Events must be reported into NHSN.
- Accurate SIRs depend upon accurate reporting of ALL LabID events
- Duplicate LabID Events reported at the location level are excluded from SIR calculations

# Will a patient in my facility still be categorized as CO-HCFA if he/she spent time in another healthcare facility between admissions to my facility?

**YES.** Although the patient could have spent time at another facility in the time between previous discharge and the new admission, this additional information is not utilized because of burden for searching outside of one's own facility.

The optional fields can be used, if a facility wants to track such information for internal purposes



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

LabID Events categorized as **CO-HCFA** are simply an additional level and subset of the categorized CO events



Healthcare facilities  
are **NOT** penalized for  
CO-HCFA LabID  
Events

# LabID Event Reporting

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- Events are categorized based on the date of the specimen collection and the date of admission
- Signs and symptoms are NOT applicable to LabID Event reporting

# New (Incident) vs. Recurrent *C. Difficile* LabID Events

- Each CDI event is categorized as incident or recurrent based on current specimen collection date and specimen collection date of previous CDI event within the same facility
- Only incident hospital-onset *C. difficile* LabID Event data are shared with CMS

# Reporting Requirements - FacWideIN CDI -1

- C. diff toxin-positive specimens MUST be monitored throughout all inpatient locations.
  - **Exception:** NICUs, SCN, well baby nurseries, and babies in LDRP units are excluded in CDI Lab ID Event reporting.
- CDI LabID Events collected from ED and 24-hour observation must be reported for that outpatient location regardless of subsequent patient admission.
- Specimens collected from other affiliated outpatient locations (non-ED, non-observation) may be entered for admitting inpatient unit, ONLY if specimen collection date = admission date.

## Reporting Requirements for CDI - 2

- Location specific reporting is required for CMS-IRF.
- All LabID Event(s) MUST be entered whether community-onset (CO) or healthcare facility-onset (HO).
- Only loose stools should be tested fro C. difficile.
- A toxin positive loose stool specimen 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 for the patient location.

## Examples: Identifying CDI LabID Events

	Pt	Admit Date/ Location	Specimen Collection Date/Loc	Specimen Source	Lab Result	LabID Event? Location?	Explanation
1	Sue	02/15/15 CCU	02/16/15 CCU	Stool	C. Diff toxin +		
2	Sue	02/15/15 CCU	02/20/15 2-Rehab	Stool	C. Diff toxin +		
3	Sue	02/15/15 CCU	03/01/15 2-Rehab	Stool	C. Diff toxin +		
4	Sue	02/15/15 CCU	03/10/15 2-Rehab	Stool	C. Diff toxin +		
5	Sue	02/15/15 CCU	03/10/15 ICU	Stool	C. Diff toxin +		
6	Joe	None	4/1/15 ED	Stool	C. Diff Antigen+ toxin -		

# “Checklist” for MRSA Bacteremia and *C. difficile* LabID Event Reporting

- Review location options and map inpatient locations
- Review Monthly Reporting Plan(s) –update as necessary
- Identify and enter all MRSA bacteremia and *C. difficile* LabID events into NHSN by location using the MDRO/CDI LabID Event protocols
- Enter denominator data for each month under surveillance
- Resolve “Alerts”, if applicable

# Facility-wide Inpatient Denominator Reporting for Acute Care Hospitals

- Must exclude and indicate that inpatient locations with a different CMS Certification Number (CCN) have been removed from the acute care facility monthly FacWideIN denominator counts (patient days and admissions).
- e.g., inpatient rehabilitation facilities (IRF) and inpatient psychiatric facilities (IPF).
- CDC Form 57.127 (MDRO and CDI Prevention Process and Outcome Measures Monthly Reporting).
- Detailed guidance available, Table of Instructions for Form 57.127

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# Entering Denominator Data

 Department of Health and Human Services  
Centers for Disease Control and Prevention

NHSN - National Healthcare Safety Network

 **NHSN Home** Logged into California General Hospital (ID 15633) as VICKIKELLER.  
Facility California General Hospital (ID 15633) is following the PS component.

- Alerts
- Reporting Plan
- Patient
- Event
- Procedure
- Summary Data
  -  Add
  -  Find
  -  Incomplete
  -  Delete AUR Data

## Add Patient Safety Summary Data

Summary Data Type:



# Denominator Data: FacWideIN

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

Enter TOTAL number of inpatient patient days for the hospital for the month. Observation patients cared for in an inpatient unit must be included in this count.

Enter TOTAL number of inpatient admissions into the hospital for the month. Includes observation patients cared for in an inpatient unit

Enter number of inpatient patient days/admissions excluding counts for locations with different CCN.

Enter number of inpatient days/admissions excluding counts for locations with different CCN **and** baby locations.

Logged into California General Hospital (ID 15633) as VICKIKELLER.  
Facility California General Hospital (ID 15633) is following the PS component.

Mandatory fields marked with \*

Facility ID\*: 15633 (California General Hospital)

Location Code\*: FACWIDEIN - Facility-wide Inpatient (FacWIDEIn) ▼

Month\*: June ▼

Year\*: 2016 ▼

### General

Setting: Inpatient Total Facility Patient Days \*: 1050 Total Facility Admissions \*: 708

Setting: Outpatient Total Facility Encounters :

If monitoring MDRO in a FACWIDE location, then subtract all counts from patient care units with unique CCNs (IRF and IPF) from

MDRO Patient Days\*: 1000 MDRO Admissions\*: 600 MDRO Encounters:

If monitoring C. difficile in a FACWIDE location, then subtract all counts from patient care units with unique CCNs (IRF and IPF) from

CDI Patient Days\*: 980 CDI Admissions\*: 590 CDI Encounters:

## Denominator Data

### IRF Unit within a Hospital

- ❑ **On the summary data entry screen, you must select the CMS IRF unit as the location for which you are entering the summary data by clicking on the drop down menu next to 'Location Code.'**
- ❑ **After selecting the appropriate unit, month, and year, two summary data fields will become required.**
- ❑ **Repeat these steps for each CMS-IRF unit.**

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

[HELP](#)

Mandatory fields marked with \*

[Print](#)

Facility ID\*: 10401 (DHQP Memorial Annex)

Location Code\*: 2S - CMS REHAB

Month\*: December

Year\*: 2014

General

Setting: Inpatient Total Patient Days \*: 500 Total Admissions \*: 250

Setting: Outpatient Total Encounters :

Enter total month patient days and admissions into this unit only.

# Denominator Data – IRF Unit within a Hospital

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

Mandatory fields marked with \*

Facility ID\*: 15633 (California General Hospital)

Location Code\*: IRF PED - IRF PED

Month\*: June

Year\*: 2016

### General

Setting: Inpatient Total Patient Days : 250 Total Admissions : 25

Setting: Outpatient Total Encounters :

- On the summary data entry screen, select the CMS IRF unit for which you are entering data from the drop down menu.
- After selecting unit, month, and year, two summary data fields will become required. Enter total patient days/admissions for the month for this unit.
- Repeat these steps for each CMS-IRF unit.

# Denominator Data – Emergency Department

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

Repeat steps for 24-hour observation locations and other ED locations (i.e., pediatric ED)

[Print](#)

Mandatory fields marked with \*

Facility ID\*: 10401 (DHQP Memorial Annex)

Location Code\*: ED - ED

Month\*: December

Year\*: 2015

Enter Total ED encounters (visits) for the month

General

Setting: Inpatient

Total Patient Days :

Total Admissions :

Setting: Outpatient

Total Encounters \*: 12000

# “Checklist” for MRSA Bacteremia and *C. difficile* LabID Event Reporting

- Review location options and map inpatient locations
- Review Monthly Reporting Plan(s) –update as necessary
- Identify and enter all MRSA bacteremia and *C. difficile* LabID events into NHSN by location using the MDRO/CDI LabID Event protocols
- Enter denominator data for each month under surveillance
- Resolve “Alerts”, if applicable

# Denominator Data: Report No Events

- If you have identified and reported both MRSA/VRE bacteremia and C. difficile LabID events during the month, you are finished with your reporting for the month and can skip this step.
- If you have not identified any of these LabID events at the end of a month, you must indicate this on the summary data record. See below
- Must repeat steps for each ED, 24-hr-observation and CMS-IRF location

MDRO & CDI Infection Surveillance or LabID Event Reporting

Specific Organism Type	MRSA	Report No Events	VRE	Report No Events	CephR-Klebsiella	Report No Events	MDR-Acinetobacter	Report No Events	C. difficile	Report No Events
Infection Surveillance										
LabID Event (All specimens)									*X	X
LabID Event (Blood specimens only)	*X	X	*X	X						

These boxes will auto-check for each event you are following "in-plan". If these boxes are not checked automatically, your data are not complete and will not be submitted to CMS

# Selecting CDI Test Type

- Important to select correct CDI test type for future risk adjustment.
- If “Other” is selected when a more appropriate response is available on the form, your facility’s data will not be risk-adjusted to the most appropriate level.
- “Other” should only be used to name specific laboratories, reference labs, or the brand names of *C. difficile* tests; most test methods can be categorized accurately by selecting from the options provided

# MDRO and CDI LabID Event Calculator

The calculator is a web-based tool designed to help users learn how to accurately apply the MDRO & CDI LabID Event algorithms and assist users in making the correct MDRO & CDI LabID Event determinations.

**MDRO & CDI LabID Event Calculator Ver 1.0**

Welcome to the Multidrug-resistant Organism and Clostridium difficile LabID Event Calculator (LabID Calculator) which implements the National Healthcare Safety Network (NHSN) MDRO and C. difficile surveillance definitions. The calculator is designed as a learning tool for understanding the [...more](#)

**Enter a Reporting Plan...**

Choose an organism to track ▾

- MRSA
- MSSA
- VRE
- CephR-Klebsiella
- CRE-Ecoli
- CRE-Klebsiella
- MDR-Acinetobacter
- CDIF-C. difficile

All Specimen Types:  Blood Specimens Only:

Use Generic Locations:  Type In Your Own:

Choose a reporting month ▾ Choose a reporting year ▾

Next



<http://www.cdc.gov/nhsn/labid-calculator/index.html>

## Picnic gone bad....or did it?

- 3/1: Patient presents to the ED with complaints of diarrhea and lower abdominal pain for past 2 days.
- She states she attended a picnic 3 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 a prescription for Flagyl.

For FacWideIN LabID Event reporting, should this result be entered as a LabID Event? If so, what location would be entered?

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

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

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

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

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

# “Checklist” for MRSA Bacteremia and *C. difficile* LabID Event Reporting

- ☑ Review location options and map inpatient locations
- ☑ Review Monthly Reporting Plan(s) – update as necessary
- ☑ Identify and enter all MRSA bacteremia and *C. difficile* LabID events into NHSN by location using the MDRO/CDI LabID Event protocols
- ☑ Enter denominator data for each month under surveillance
- ☑ Resolve “Alerts”, if applicable

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## Summary

- LabID events must now be reported for specimens collected in the ED and 24-hour observation locations.
- Inpatient Rehabilitation Facility units must now report MRSA/VRE BSI and CDI as LabID Events.
- All locations, including ED and 24 hour observation units, must be mapped and included in the monthly reporting plan.
- Use a checklist to ensure accurate and complete reporting of MRSA/VRE bacteremia and CDI LabID events.

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Questions?

For more information, please contact  
[HAIProgram@cdph.ca.gov](mailto:HAIProgram@cdph.ca.gov)

Thank you

