

**LABORATORY-IDENTIFIED (LABID)
EVENT REPORTING
MRSA BACTEREMIA AND
*C. DIFFICILE***

National Healthcare Safety
Network (NHSN)

IMPORTANT

- ▶ LabID event reporting is based strictly on laboratory testing data without clinical evaluation of the patient, allowing for a much less labor intensive method to track *C. difficile* and MDROs, such as MRSA
- ▶ These provide proxy infection measures of healthcare acquisition, exposure burden, and infection burden based primarily on laboratory and limited admission data
- ▶ Only for collecting and tracking positive lab results that are collected for “clinical” purposes (specifically for diagnosis and treatment)...not active surveillance testing

MRSA BACTEREMIA AND *C. DIFFICILE* LABID EVENT REPORTING *ADVANTAGES*

- ▶ Objective laboratory-based metrics that do not require extensive chart review to:
 - ▶ Identify vulnerable patient populations
 - ▶ Estimate infection burden
 - ▶ Estimate exposure burden
 - ▶ Assess need for an effectiveness of interventions
- ▶ Standardized case definitions for surveillance
- ▶ Increases comparability between clinical settings

SETTING UP AND REPORTING LABID EVENTS

	Acute Care	Hospital IRF	Free-standing IRF
Enrollment		No separate enrollment (already enrolled under the hospital)	Enroll as separate facility-HOSP-REHAB Will have a unique NHSN orgID
Location	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)
Monthly Reporting Plan	FacWideIN and outpatient ED and 24 locations for same organism and LabID event	Location specific for each CMS-IRF unit in hospital	Facility-wide Inpatient (FacWideIN)
Numerator	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
Denominator	FacWideIN and again excluding locations with separate CCNs . Location specific counts for each ED and 24-hour observation	Location specific counts	FacWideIN

IMPORTANT

- ▶ To ensure accurate categorizations of LabID events (e.g., incident, recurrent, healthcare facility-onset), facilities should continue to report LabID Events from all inpatient locations in the facility, including those locations with a different CMS Certification Number (CCN) even though these data will be removed during FacWideIN analysis for the acute care hospital and not shared with CMS for IQR.
- ▶ Locations that may have a different CCN include inpatient rehabilitation facility (IRF), and inpatient psychiatric facility (IPF).

Lab ID Event and

HAI Surveillance

Reporting

ARE

Not the Same!!!!!!

	LabID Event	HAI Surveillance
Signs and Symptoms	NONE: Laboratory and admission data, with out clinical evaluation of patient	Combination of laboratory data and clinical evaluation of patient
Surveillance Rules	<p>HAI and POA do NOT apply</p> <ul style="list-style-type: none"> • Transfer Rule does NOT apply • Location = location of patient at time of specimen collection • Event date = specimen collection 	<p>HAI and POA do apply</p> <ul style="list-style-type: none"> • Transfer Rule applies • See NHSN protocol for details regarding location and date of event
Denominator Reporting	<ul style="list-style-type: none"> • Number of patient days and patient admissions • Can be reported by specific location or facility-wide 	<ul style="list-style-type: none"> • Device days/patient days • Collected separately for specific location • Inpatient only
Categorization of Infections	<ul style="list-style-type: none"> • Healthcare Facility Onset (HO) collected > 3 days after admission • Community Onset (CO) \leq 3 days after admission 	<ul style="list-style-type: none"> • HAI protocols used events are either HAI or not • LabID Event categorizations do NOT apply • Only HAIs are reported to NHSN

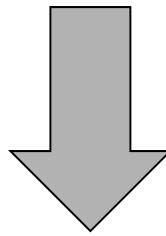
BEWARE THE PITS

- ▶ LabID Events and HAI Events are two reporting pathways
 - ▶ An Event that is both a LabID Event and an HAI should be reported (if in plan)



KEY POINTS TO REMEMBER

- ▶ Always report the LabID event for the specific unit where specimen was collected. If date of specimen collection = physical inpatient admission calendar date or an ED/24 hour observation encounter



- ▶ Report as LabID Event for specific location

******the “Transfer Rule” does NOT apply to LabID event reporting*

IMPORTANT

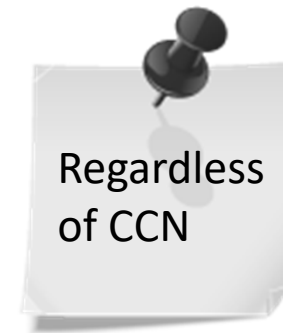
- ▶ Specimens collected from any other affiliated outpatient location (excluding ED and 24-hour observation locations) can be reported for the inpatient admitting location IF collected on the same calendar day as inpatient admission
- ▶ In this circumstance, the admitting inpatient location should be assigned.
- ▶ This is the ONLY exception to the LabID attribution rule

KEY POINTS TO REMEMBER

- ▶ The admission date should reflect the date the patient was physically admitted to an inpatient location.
- ▶ Time spent in the ED or other outpatient location (observation unit) should not contribute towards inpatient counts

KEY POINTS TO REMEMBER

- ▶ NHSN considers transfers to inpatient rehabs (IRFs) and inpatient psychiatric locations (IPFs) a continuous stay for NHSN reporting purposes.
- ▶ Facility admission date for a LabID event should reflect the date the patient was physically admitted into either the inpatient location for the acute care hospital or the IRF location whichever comes first during that patient stay.





When calculating the “14 day” rule the LAST positive LabID event, at that location, is your starting point.

REPORTING METHOD MDRO MODULE (NON-CDI)



- ▶ Facility-wide by location
- ▶ Selected locations within the facility
- ▶ Overall Facility-wide Inpatient (FacWideIN)
- ▶ Overall Facility-wide Outpatient (FacWideOUT)
- ▶ Overall facility-wide Inpatient: Blood Specimens Only (MRSA LabID events)
- ▶ Overall facility-wide Outpatient: Blood Specimens Only



FACILITY-WIDE INPATIENT: BLOOD
SPECIMENS ONLY (MRSA)
(*FACWIDEIN*)

Important

- ▶ Enter each MDRO LabID Blood Specimen Event from all inpatient locations

AND

- ▶ Separately for outpatient emergency department, and 24-hours observation location(s)

Important


FACILITY-WIDE INPATIENT: BLOOD
SPECIMENS ONLY (MRSA)
(*FACWIDEIN*)

- ▶ Report total denominator for all inpatient locations physically located in the hospital as well as denominators for all locations minus inpatient rehabilitation facility and inpatient psychiatric facility locations with separate CCNs

AND

- ▶ Separately for outpatient emergency department, and 24-hours observation location(s)

Below is a screen shot of the FacWideIN monthly denominator data entry screen:



MDRO and CDI Prevention Process and Outcome Measures Monthly Monitoring

Mandatory fields marked with *

Facility ID *:

Location Code *:

Month *: February

Year *: 2015

General

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

Setting: Outpatient Total Encounters:

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

MDRO Patient Days *: MDRO Admissions *: MDRO Encounters:

If monitoring *C. difficile* in a FACWIDE location, then subtract all counts from patient care units with unique CCNs (IRF and IPF) as well as NICU and Well Baby counts from Totals:

CDI Patient Days *: CDI Admissions *: CDI Encounters:

DENOMINATORS FOR MRSA LABID EVENT

Denominators = Patient Days, admissions (for inpatient locations) and encounters for emergency department, and observation units.

Patient Days:

- At the same time each day, the number of patients on the inpatient units should be recorded. This procedure should be followed regardless of the patient's status as an observation patient or an inpatient (based on IP location).
- **Patient Admissions:**
 - Include any **new** patients that are assigned to a bed in any inpatient location within the facility at the time of the facility-wide admission count (i.e., was not present on the previous calendar day at the time of patient count).
- **Encounter:**
 - A Patient visit to an outpatient location

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 the LOCATION (includes across calendar months and different facility admissions to same location)

Referred to as all non-duplicate LABID Events



DUPLICATE MRSA BACTEREMIA LABID EVENT



- Definition:

Any MRSA blood isolate from the **same patient** and **same location**, following a previous positive MRSA blood laboratory result within the past 14 days (*including across calendar months*).

NHSN removes ALL duplicates within 14 days even when it's obtained in a new unit

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

CATEGORIZATION OF MRSA BLOOD LABID EVENTS



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



MRSA BLOODSTREAM INFECTION SIR

- ▶ Number of all unique blood source MRSA LabID Events identified in an non-IRF/IPF inpatient location >3 days after admission to the facility (specifically, HO MRSA blood events with no prior MRSA blood event for that patient in the previous 14days)/Number of predicted HO MRSA blood LabID Events

BEWARE THE PITS

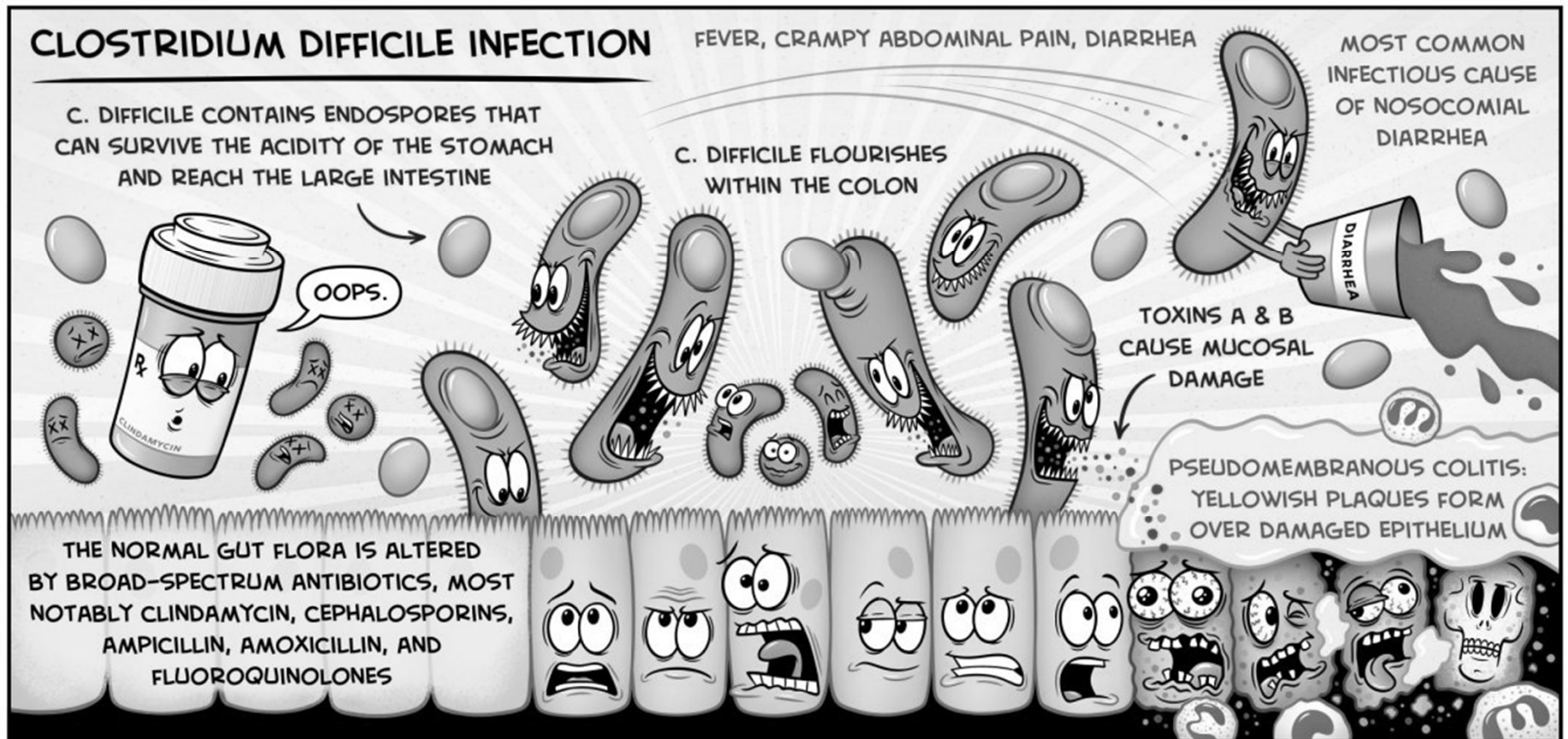


- ▶ MRSA bacteremia that is secondary to another HAI will still need to be reported as a LabID event

MRSA BACTEREMIA LABID EVENT: REVIEW

- ▶ MRSA blood specimens MUST be monitored throughout all inpatient locations, ED and Observation units
- ▶ All MUST be entered whether community-onset or healthcare facility-onset
- ▶ A blood specimen qualifies if there has not been a previous + result for the patient and location within the previous 14 days.

CLOSTRIDIUM DIFFICILE




REPORTING OPTIONS FOR *C. DIFFICILE* LABID EVENT

▶ Overall Facility-wide Inpatient (FacWideIN)

- ▶ Enter each C DIFF LabID Event from all inpatient locations AND separately for outpatient emergency department and 24-hour observation location(s)
- ▶ Report total denominator data for ALL inpatient locations physically located in the hospital (for example, total number of admissions and total number of patient days), minus inpatient rehabilitation facility and inpatient psychiatric facility locations with unique CCNs
- ▶ C. difficile LabID Event reporting can occur in any location: inpatient or outpatient. ***Surveillance will NOT be performed in NICU, SCN, babies in LDRP, well-baby nurseries, or well-baby clinics. If LDRP locations are being monitored, baby counts must be removed***

Below is a screen shot of the FacWideIN monthly denominator data entry screen:



MDRO and CDI Prevention Process and Outcome Measures Monthly Monitoring

Mandatory fields marked with *

Facility ID *:

Location Code *:

Month *: February

Year *: 2015

General

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

Setting: Outpatient Total Encounters:

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

MDRO Patient Days *: MDRO Admissions *: MDRO Encounters:

If monitoring *C. difficile* in a FACWIDE location, then subtract all counts from patient care units with unique CCNs (IRF and IPF) as well as NICU and Well Baby counts from Totals:

CDI Patient Days *: CDI Admissions *: CDI Encounters:

***C. DIFFICILE* 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 in the stool specimen by culture or other laboratory means

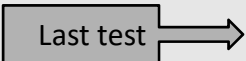



***C. difficile* testing only on
UNFORMED stool samples!!
Stool should conform to shape
of container**

NEW CLARIFICATION FOR MULTI-STEP CDI TESTING



- ▶ When using a multi-testing methodology for CDI identification, the final result of the last test finding will determine if the CDI positive laboratory assay definition is met.

EXAMPLES OF MULTI-STEP TESTING INTERPRETATIONS

Multi-step Testing Same Specimen	Testing Step	Testing Method	Documented Findings	Eligible LabID Event?
Example A 	Test 1	NAAT	Negative	Yes
	Test 2	GDH	Positive	
	Test 3	EIA	Positive	
Example B 	Test 1	NAAT	Positive	No
	Test 2	GDH	Positive	
	Test 3	EIA	Negative	
Example C 	Test 1	GDH	Positive	Yes
	Test 2	EIA	Negative	
	Test 3	NAAT	Positive	
Example D 	Test 1	GDH	Positive	No
	Test 2	EIA	Positive	
	Test 3	NAAT	Negative	

DEFINITION *C. DIFFICILE* 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 the LOCATION (includes across calendar months)



DUPLICATE *C. DIFFICILE* LABID EVENT

► Definition:

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 (*including across calendar months and readmissions to the same facility location*).

There should be 14 days with **NO** *C. difficile* toxin-positive laboratory result for the patient and specific location before another *C. difficile* LabID Event is entered into NHSN for the patient and the location

The 14-day rule for LabID events reporting is specific to the location and resets each time a patient transfers to a new inpatient location.

CATEGORIZATION OF *C. DIFFICILE* LABID EVENTS

- **Healthcare Facility-Onset (HO):**

- LabID Event specimen collected > 3days after admission to the facility (i.e., on or after day 4)



- **Community-Onset (CO):**

- LabID Event specimen collected in an outpatient location in which the patient was not previously discharged from an inpatient location within the same facility ≤ 28 days prior to current date of specimen collection
- OR
- 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 specimen collected from a patient who was discharged from the facility < 28 days prior to the date current stool specimen was collected. Discharge must have been from an IP location within the same facility



ADDITIONAL CATEGORIZATION OF *C. DIFFICILE* LABID EVENTS

- ▶ Incident CDI Assay: Any CDI LabID Event from a specimen obtained > 56 day (day 57) 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 > 14 days (day 15) and ≤ 56 days after the most recent CDI LabID event for that patient

Events are facility specific

BEWARE THE PITS



- Specimens for *C. difficile* collected in the outpatient setting (*hospital affiliated outpatient location...physician clinic etc*) should be included ONLY if collected on the same calendar day as patient admission

C. DIFFICILE LABID EVENT: REVIEW

- ▶ *C. difficile* toxin-positive specimens MUST be monitored throughout all inpatient locations, the ED and 24 observation units....with the exception of NICU, SCN, Well baby Nurseries and babies in LDRP units.
- ▶ All *C. difficile* LabID events MUST be entered whether community-onset, or healthcare facility-onset.
- ▶ Only loose stools should be tested for *C. difficile*.
- ▶ A toxin positive loose stool specimen qualifies if there has not been a previous + result for the patient and location within the previous 14 days.

MRSA AND C. DIFFICILE LABID EVENTS DELIVERED TO CMS

<u>Facility Type</u>	<u>CMS Quality Reporting Program</u>	<u>MRSA Bloodstream Infection LabID Event Measure Sent to CMS</u>	<u>C. difficile LabID Event Measure Sent to CMS</u>
General Acute Care Hospitals	Inpatient Quality Reporting Program	MRSA Bloodstream Infection SIR (FacWideIN)	CDI Incidence SIR (FacWideIN)
Long Term Care Hospitals (referred to as Long Term Acute Care Hospitals in NHSN)	Long Term Care Hospital Quality Reporting Program	NONE*	CDI Incidence SIR (FacWideIN)
Inpatient Rehabilitation Facilities (IRFs)	Inpatient Rehabilitation Facility Quality Reporting Program	IRF units within a hospital: NONE*	IRF units within a hospital: CDI Incidence SIR for IRF Units
		Free-standing IRFs: NONE*	Free-standing IRFs: CDI Incidence SIR (FacWideIN)

Starting with 2018 Q4 data, CMS removed the requirement for IRFs and LTACs to report MRSA bacteremia LabID Events as part of the CMS QRP

ONLINE RESOURCES-NHSN

[HTTP://WWW.CDC.GOV](http://www.cdc.gov)

- On-Demand trainings
- NHSN Manual & Errata
- Data Collection Forms & Instructions
- CDC Location descriptions and guidance
- CMS-related documents
- Analysis guides
- FAQs

ONLINE RESOURCES-CMS RELATED

[HTTP://WWW.CDC.GOV/NHSN/CMS/INDEX.HTML](http://www.cdc.gov/nhsn/cms/index.html)

- ▶ Operational Guidance
- ▶ “How to Set Up NHSN Reporting for Facility-Wide Inpatient MRSA Bacteremia and C. difficile LabID events for the CMS Inpatient Quality Reporting Program”
- ▶ Helpful Tips
- ▶ Using the SIRs

Case Studies & Discussion

**THANK YOU
AND GOOD LUCK**

