



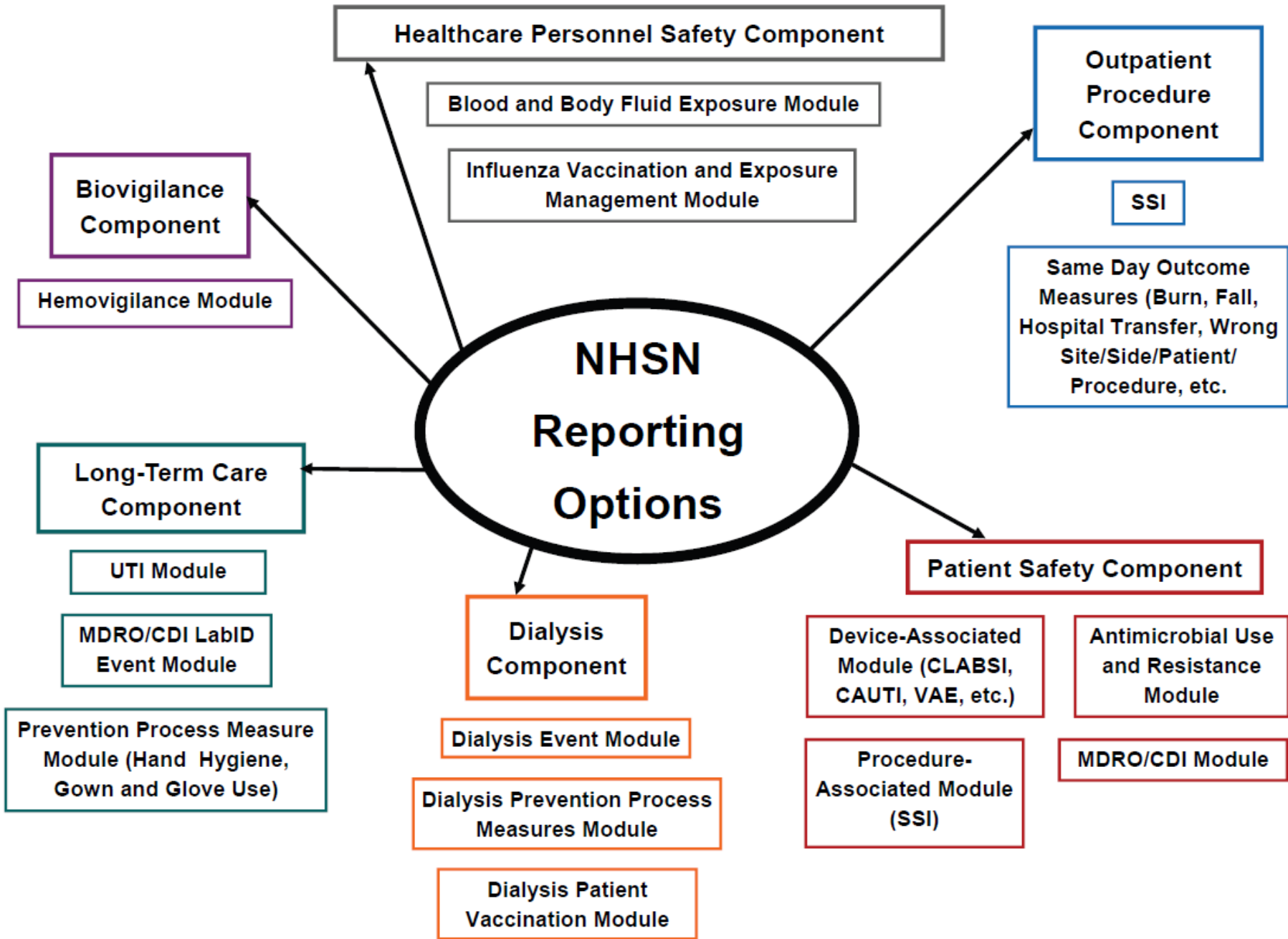
WISCONSIN DEPARTMENT
of **HEALTH SERVICES**

The National Healthcare Safety Network for New Long-Term Care Infection Preventionists

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June 6, 2019

Objectives

- Provide high-level National Healthcare Safety Network (NHSN) overview
- Review NHSN carbapenem-resistant *Enterobacteriaceae* (CRE) data entry processes
- View resources for successful NHSN use



Advantages

- Free, web-based training
- Standardized surveillance protocols
- Real-time data analysis
- Secure data sharing
- Gold standard for healthcare-associated infection (HAI) data collection and reporting, used for federal and state reporting requirements
- Contribute to national benchmarks

Wisconsin LTC Reporting

- Department of Health Services CRE mandate*
- MetaStar *C. difficile* infection project

*More information available at

<https://www.dhs.wisconsin.gov/disease/cre.htm>

<https://www.dhs.wisconsin.gov/hai/nhsn-resources.htm>

Wisconsin NHSN Use

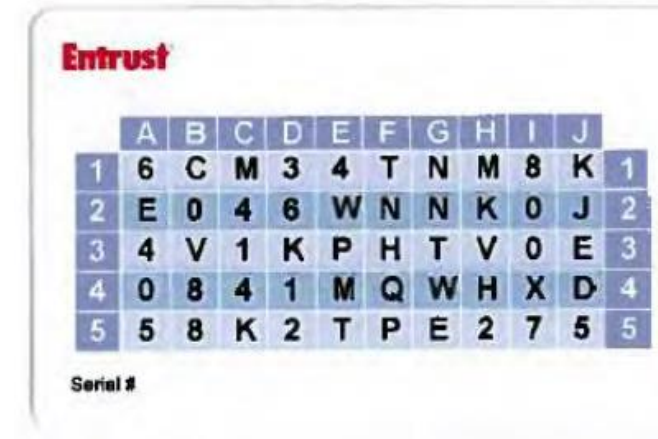
- Total facilities: 602+
- Hospitals: 156
- Dialysis: 118
- Ambulatory surgery centers: 78
- Long-term care facilities: 250

NHSN Enrollment Basics

- Facility enrollment vs. individuals
- Secure access management system (SAMS)
- NHSN facility administrator
- Conferred rights



Back



Facility Activation Basics

- Location mapping
- Additional users
- Annual facility survey

NHSN CRE Data Entry

Monthly reporting plans, numerators, denominators, and missing data alerts

Logging In – <https://sams.cdc.gov>

- Multi-step login
- Choose SAMS grid card login option
- Username = email
- Password = set up during enrollment
- Grid card coordinates
- My applications = NHSN reporting
- NHSN landing page (select your facility and component)

Monthly Reporting Plan

- Lists surveillance plan for the month
- Certifies adherence to NHSN protocols
- Triggers missing data alerts
- Allows data inclusion in national benchmarking aggregates

NHSN Home	
Alerts	
Reporting Plan	Add
Resident	Find
Event	
Summary Data	
Surveys	



Add Monthly Reporting Plan

Mandatory fields marked with *

Facility ID *: State Memorial Long-term Care Facility

Month *: March

Year *: 2017

No Long Term Care Facility Comp

Alert

No data found for March, 2017

OK

HAI Module

	Locations	UTI
	Facility-wide Inpatient (FacWIDEIn)	<input type="checkbox"/>

Monthly Reporting Plan

Facility ID *: State Memorial Long-term Care Facility (ID 30203) ▼

Month *: December ▼

Year *: 2018 ▼

No Long Term Care Facility Component Modules Followed this Month

HAI Module

	Locations	UTI
	Facility-wide Inpatient (FacWIDEIn) ▼	<input type="checkbox"/>

LabID Event Module

	Locations	Specific Organism Type	Lab ID Event All Specimens
	Facility-wide Inpatient (FacWIDEIn) ▼	CRE - CRE (CRE-Ecoli, CRE-Enterobacter, CRE-Klebsiella) ▼	<input checked="" type="checkbox"/>

Add Row

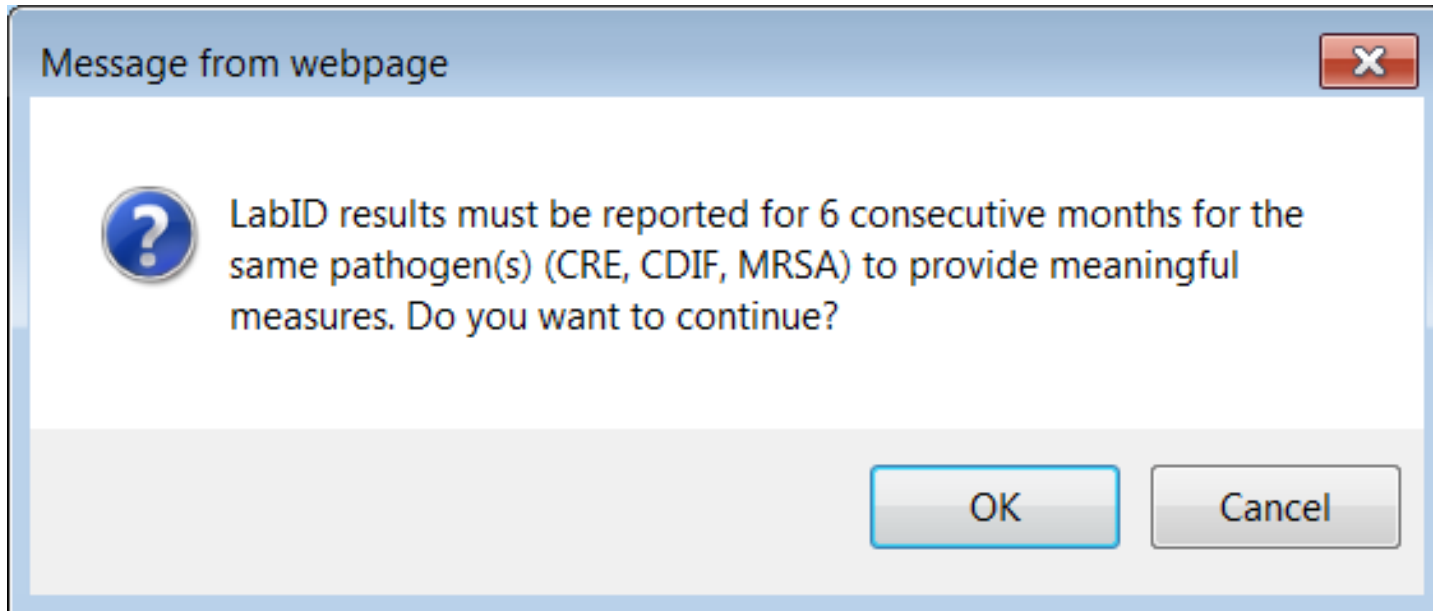
Clear All Rows

Copy from Previous Month

Prevention Process Measure Module

	Locations	Hand Hygiene	Gown and Gloves Use
	Facility-wide Inpatient (FacWIDEIn) ▼	<input type="checkbox"/>	<input type="checkbox"/>

Copy from Previous Month



Facility-wide Monthly Denominator Data

- Resident days: Resident census.
- Resident admissions: Number of new admissions (and readmissions when a resident was out of the facility for more than two calendar days).
- Must be entered every month, even when there are no CRE positives.

NHSN Home	
Alerts	
Reporting Plan	▶
Resident	▶
Event	▶
Summary Data	▶ Add
Surveys	▶ Find
Analysis	▶ Incomplete
Users	▶
Facility	▶
Group	▶
Logout	


Summary Data Entry

Facility ID *: State Memorial Long-term Care Facility (ID 30203) ▼
Month *: December ▼
Year *: 2018 ▼

Denominators for Long Term Care Locations

- No long term care locations selected on monthly reporting plan

MDRO & CDI LabID Event Reporting

	Location Code	
	Facility-wide Inpatient (FacWIDEIn) ▼	Resident Admissions: 18 * Resident Days: 1097 *

Prevention Process Measures

- No long term care locations selected on monthly reporting plan

Report No Events

	Specific Organism Type							
	MRSA	VRE	CephR-Klebsiella	CRE-Ecoli	CRE-Enterobacter	CRE-Klebsiella	C. difficile	MDR-Acinetobacter
LabID Event (All specimens)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Report No Events	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> **	<input checked="" type="checkbox"/> **	<input checked="" type="checkbox"/> **	<input type="checkbox"/>	<input type="checkbox"/>

NHSN CRE Definition

Any *Escherichia coli*, *Klebsiella oxytoca*, *Klebsiella pneumoniae*, or *Enterobacter* spp. testing resistant to imipenem, meropenem, doripenem, or ertapenem by standard susceptibility testing methods.

OR

Any organism producing a carbapenemase (specifically, KPC, NDM, VIM, IMP, OXA-48) demonstrated using a recognized test (examples: PCR, metallo- β -lactamase test, Carba-NP, Xpert® Carba-R).

Report carbapenem-resistant *Enterobacteriaceae* (i.e., carbapenemase-producing [CP] and non-CP) of the following species: *Escherichia coli*, *Klebsiella oxytoca*, *Klebsiella pneumoniae*, or *Enterobacter* spp.

Is this CRE?

Culture

>10,000 org/mL Enterobacter cloacae complex !

>10,000 org/mL Enterobacter cloacae complex !

Unable to rule out carbapenemase resistance (KPC/CRE/Oxa48/NDM1type). Patient requires isolation. Please see Policy #1074: Management of Patients with Carbapenem-Resistant Enterobacteriaceae (CRE). Isolate sent to State Laboratory for PCR confirmation. Please see separate report.

Report to follow

Susceptibility

	Enterobacter cloacae complex (1) MIC - VITEK 2		Enterobacter cloacae complex (2)		MIC - DISK DIFFUSION
	MIC	Interpretation	MIC	Interpretation	
AMIKACIN	<=2 ug/mL	Susceptible ^S	<=2 ug/mL	Susceptible ^S	
Caz/Clav Zone Difference					Susceptible ^S
CEFAZOLIN	>=64 ug/mL	Resistant ^S	>=64 ug/mL	Resistant ^S	
CEFEPIME	<=1 ug/mL	Susceptible ^S	<=1 ug/mL	Susceptible ^S	
CEFOTAXIME					Resistant ^S
CEFOXITIN	>=64 ug/mL	Resistant ^S	>=64 ug/mL	Resistant ^S	
CEFTAZIDIME	<=1 ug/mL	Susceptible ^S	>=64 ug/mL	Resistant ^S	Resistant ^S
CEFTRIAZONE	<=1 ug/mL	Susceptible	>=64 ug/mL	Resistant	
CIPROFLOXACIN	<=0.25 ug/mL	Susceptible	<=0.25 ug/mL	Susceptible	
Ctx/Clav Zone Difference					Susceptible ^S
ERTAPENEM	<=0.5 ug/mL	Susceptible ^S			
GENTAMICIN	<=1 ug/mL	Susceptible	<=1 ug/mL	Susceptible	
keyhole					Negative ^S
MEROPENEM	<=0.25 ug/mL	Susceptible ^S	<=0.25 ug/mL	Susceptible ^S	
NITROFURANTOIN	128 ug/mL	Resistant	64 ug/mL	Intermediate	
PIPERACILLIN/TAZOBACTAM	16 ug/mL	Susceptible ^S	>=128 ug/mL	Resistant ^S	

SENDING LAB *Wisconsin State Laboratory of Hygiene (52D0669558) 2601 Agriculture Dr Madison, WI 53718 (800) 862-1013	
ACCESSION # [REDACTED]	PLACER ORDER # [REDACTED]
SPECIMEN COLLECTED DATE 03/02/2019 11:42	SPECIMEN RECEIVED DATE 03/07/2019
SPECIMEN SOURCE Bacterial Isolate	RESULT
SPECIMEN NOTES Body Site: Urine	
REPORTED 03/13/2019 15:38	RESULTED 03/13/2019 15:38

TEST ORDERED: CARBAPENEMASE PCR

This test was developed and its performance characteristics determined by the Wisconsin State Laboratory of Hygiene. It has not been cleared by the U.S. Food and Drug Administration.

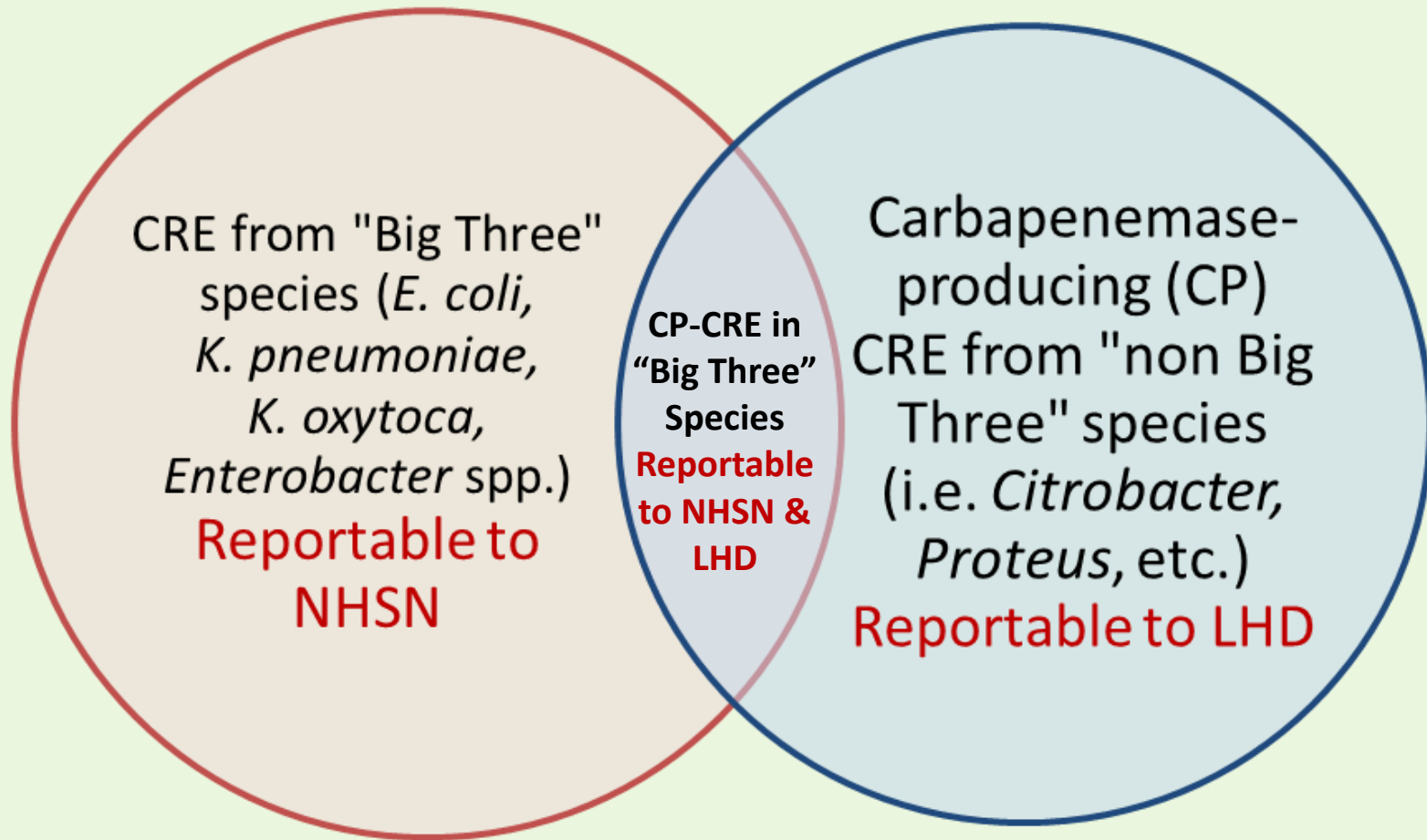
RESULT	VALUE	UNITS	REFERENCE RANGES	ABNORMAL	RESULT STATUS
KPC	KPC gene detected.			Abnormal	Final

blaKPC AnorectIIst QI PCR	KPC gene detected.			Abnormal	Final
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RESULT	VALUE	UNITS	REFERENCE RANGES	ABNORMAL	RESULT STATUS
NDM-1	No NDM-1 gene detected.				Final

blaNDM AnorectIIst QI PCR	No NDM-1 gene detected.				Final
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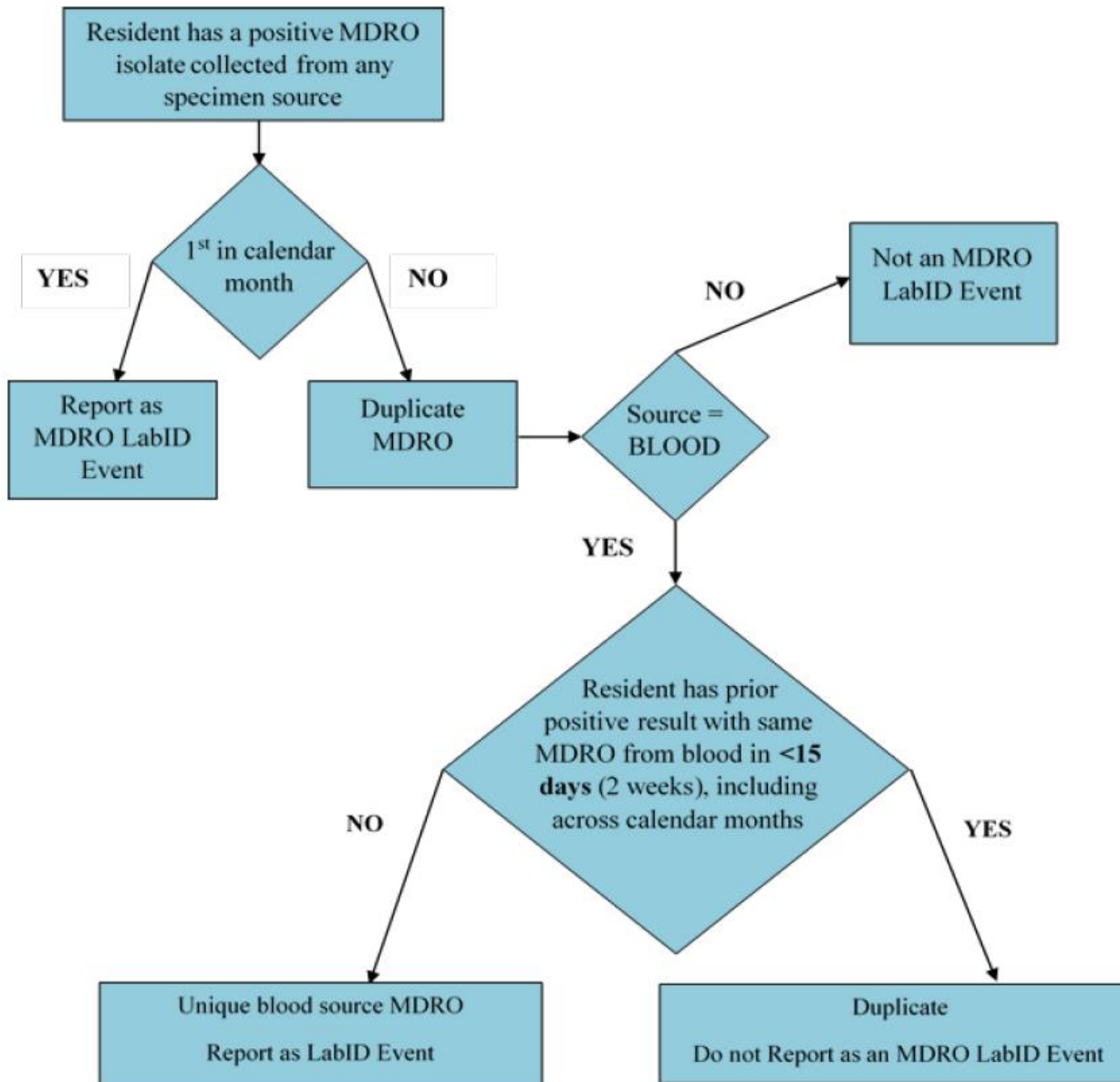
All Carbapenem-Resistant Enterobacteriaceae (CRE)



Location Matters

Counts	Does Not Count
Specimen collected in nursing home	Specimen collected before nursing home admission
Specimen collected in ED or outpatient setting during the resident's current admission	Specimen collected during admission to another facility (e.g., inpatient hospitalization)

Timing Matters



Numerator (LabID Event) Data

- All events start entry with Event > Add.
- Form adjusts based on information provided.
- LabID form requests specimen collection information.

NHSN Home	
Alerts	
Reporting Plan	▶
Resident	▶
Event	▶ Add
Summary Data	▶ Find
Surveys	▶ Incomplete
<hr/>	
Analysis	▶
Users	▶
Facility	▶
Group	▶
Logout	

Resident Information

Facility ID *: State Memorial Long-term Care Facility (ID 30203) ▼

Resident ID *: WI00001

Social Security #:

Medicare number (or comparable railroad insurance number):

Last Name:

First Name:

Middle Name:

Gender *: M - Male ▼

Date of Birth *:

Ethnicity:

Race: American Indian/Alaska Native Asian
 Black or African American Native Hawaiian/Other Pacific Islander
 White

Resident type *: LS - Long Stay ▼

Date of First Admission to Facility *:

Date of Current Admission to Facility *:

Event Information

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

Date Specimen Collected *:

Specific Organism Type *: CREECOLI - CRE-Ecoli ▼

Specimen Body Site/System *: GU - GenitoUrinary System ▼

Specimen Source *: URINARSPC - Urinary specimen ▼

Resident Care Location *: N WING - NORTH WING - GENERAL NURSING ▼

Primary Resident Service Type *: GENNUR - Long-term general nursing ▼

Has resident been transferred from an acute care facility in the past 4 weeks *? Y - Yes ▼

If Yes, date of last transfer from acute care to your facility *:

If Yes, was the resident on antibiotic therapy for this specific organism type at the time of transfer to your facility *? N - No ▼

Documented evidence of previous infection or colonization with this specific organism type from a previously reported LabID Event in any prior month? Y - Yes

Event Form Tables of Instruction = More Field Details

Found in online module resources by component

Data Field	Instructions for Form Completion
Event Details	
Date of Current Admission to Facility	<p>Required. The date of current admission is the most recent date the resident entered the facility. <i>If the resident enters the facility for the first time and has not left, then the date of current admission will be the same as the date of first admission.</i> Enter date using this format: MM/DD/YYYY.</p> <p>Notes:</p> <ul style="list-style-type: none"> • If the resident leaves the facility for > 2 calendar days (the day the resident left the facility = day 1) and returns, the date of current admission should be updated to the date of return to the facility. • If the resident has not left your facility for > 2 calendar days, then the date of current admission should not be changed. <p><i>Example:</i> A resident is transferred from your facility to an acute care facility on June 2, 2016 and returns on June 5, 2016, the current admission date would be 06/05/2016. One week later, the same resident goes to the ED for evaluation on June 12, 2016 and returns on June 13, 2016. The date of current admission stays 06/05/2016.</p>

Alerts

- Based on reporting plan entries (i.e., if you forget a reporting plan, you won't see missing data alerts for that month)
- Displayed upon login for every user in the facility and via “Alerts” navigation bar option

The screenshot displays the NHSN Long Term Care Facility Component Home Page. On the left is a navigation bar with the following items: NHSN Home, Alerts (highlighted with a red box), Reporting Plan, Resident, Event, Summary Data, Surveys, Analysis, Users, and Facility. The main content area features a header with a globe icon and the text 'NHSN Long Term Care Facility Component Home Page'. Below the header is a section titled 'COMPLETE THESE ITEMS' and 'ALERTS'. The Alerts section contains three cards: 'Missing Events' with a count of 2, 'Incomplete Event' with a count of 1, and 'Missing Summaries' with a count of 23.

Alert Type	Count
Missing Events	2
Incomplete Event	1
Missing Summaries	23

















Analysis Basics

- Data set generation
- Real-time availability
- Module-specific pre-configured reports
- Statistical testing built-in (p-values, confidence intervals)
- Risk adjustment
- Exportable results (Excel, SAS, Access, etc.)
- Report filtering/modification

Expand All

Collapse All

Search

- └─  MDRO/CDI Module - LABID Event Reporting
 - └─  All LabID Events
 - └─  All MRSA LabID Events
 - └─  All MSSA LabID Events
 - └─  All C. difficile LabID Events
 - └─  Line Listing - All CDI LabID Events
 - └─  Rate Tables for CDI LabID Event Data
 - └─  All VRE LabID Events
 - └─  All CephR-Klebsiella LabID Events
 - └─  All CRE LabID Events
 - └─  Line Listing for All CRE LabID Events
 - └─  Rate Tables for CRE LabID Data
 - └─  All CRE-Klebsiella LabID Events
 - └─  All CRE-Ecoli LabID Events
 - └─  All CRE-Enterobacter LabID Events
 - └─  All Acinetobacter LabID Events

Tips for Success

- Enter reporting plans and data monthly (practice makes this easier).
- Bookmark the protocol index (<https://www.cdc.gov/nhsn/ltc/index.html>)—you need the protocols in front of you for surveillance.
- Use NHSN FAQs and tables of instruction.
- Review surveillance protocol reporting notes and instructions.

Tips for Success, continued

- Review quarterly LTC NHSN newsletters.
- Attend annual NHSN LTC Component webstream training.
- Review notes or attend monthly DPH NHSN teleconferences.
- Contact DPH when you have questions. We are here to help!

What's Next?

- Get access to NHSN if you do not have it yet.
- Determine data sources. Ask questions.
- Start entering data.
- Reach out with questions. Don't struggle alone.

National Healthcare Safety Network (NHSN)

www.cdc.gov/nhsn

CDC's National Healthcare Safety Network is the nation's most widely used healthcare-associated infection tracking system. NHSN provides facilities, states, regions, and the nation with data needed to identify problem areas, measure progress of prevention efforts, and ultimately eliminate healthcare-associated infections.

In addition, NHSN allows healthcare facilities to track blood safety errors and important healthcare process measures such as healthcare personnel influenza vaccine status and infection control adherence rates.

Drug Resistance
 Superbugs ranked, CDC outlines four core actions to halt resistance

[Learn More>](#)



[Email page link](#)

[Print page](#)

[NHSN Login](#)

[Tips for navigating the new NHSN website](#) [PDF - 1.6 MB]

Contact NHSN:

- Centers for Disease Control and Prevention
 National Healthcare Safety Network
 MS-A24
 1600 Clifton Rd
 Atlanta, GA 30333
- [Contact NHSN@cdc.gov](mailto:NHSN@cdc.gov)

Contact Us:

- Centers for Disease Control and Prevention
 1600 Clifton Rd
 Atlanta, GA 30333
- 800-CDC-INFO (800-232-4636)
 TTY: (888) 232-6348
- New Hours of Operation
 8am-8pm ET/Monday-Friday
 Closed [Holidays](#)
- [Contact CDC-INFO](#)



About NHSN

CDC's NHSN is the largest HAI reporting system in the U.S.



Data & Reports

See national and state reports using NHSN data



Guidelines and Recommendations

Review CDC HAI prevention guidelines



New to NHSN? Enroll Facility Here.

For first time facility enrollment.



Reporting & Surveillance Resources for Enrolled Facilities

Training, protocols, forms, support materials, analysis resources, and FAQs



Group Users

View resources for group users here.



[Training / Demo](#)



[Newsletters / Members Meeting Updates](#)



[E-mail Updates](#)



[State-based HAI Prevention Activities](#)



[HIPAA Privacy Rule](#)

Questions?

Ashlie Dowdell

HAI Surveillance Coordinator

608-266-1122

ashlie.dowdell@wi.gov

More Info on NHSN

- Enrollment:
<https://www.cdc.gov/nhsn/ltc/enroll.html>
- Surveillance materials:
<https://www.cdc.gov/nhsn/ltc/index.html>
- DPH NHSN resources (tutorials, guides, enrollment memos, worksheets):
<https://www.dhs.wisconsin.gov/hai/nhsn-resources.htm>
- NHSN training modules:
<https://www.cdc.gov/nhsn/training/index.html>
- NHSN Help Desk: nhsn@cdc.gov