

## HEALTHCARE-ASSOCIATED INFECTION (HAI) MODULE Part Two

## Laboratory-identified Event (LabID) Module for Long-Term Care Facilities (LTCFs): MDRO Overview

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(DHQP)/Surveillance Branch
Centers for Disease Control and Prevention

#### **Learning Objectives**

- Explain multi-drug resistant organism (MDRO) LabID Event definitions and protocols.
- Define required monthly summary data for MDRO LabID Event reporting.
- Describe how to manually enter MDRO LabID event data and monthly summary data into the NHSN application.
- Explain the importance of, and steps for, resolving data quality alerts.

## Multi-drug Resistant Organisms (MDROs) Key Terms and Definitions

#### Multi-drug Resistant Organisms (MDROs) Options

#### A facility can chose to monitor one or more of the following organisms:

- Staphylococcus aureus, methicillin-resistant (MRSA)
- Staphylococcus aureus, methicillin-susceptible (MSSA) plus MRSA
- Vancomycin-Resistant Enterococcus spp. (VRE)
- Cephalosporin-Resistant Klebsiella spp.(CephR-Klebsiella)
- Carbapenem-Resistant Enterobacteriaceae (CRE)
  - Klebsiella spp. (CRE-Klebsiella)
  - *E coli*. (**CRE-***E. coli*)
  - Enterobacter (CRE-Enterobacter)
    - Multidrug-Resistant Acinetobacter spp. (MDR-Acinetobacter)



## Submit ALL MDRO LabID events for all specimen sources to NHSN

#### **Common Terms and Definitions used in LabID Event Module**

- MDRO Positive Isolate: Any specimen, obtained for clinical decision making, testing positive for a MDRO. *Note*: Excludes positive isolates collected for active surveillance testing.
- MDRO LabID Event: MDRO positive isolate from ANY specimen source collected while the resident is under the care of the reporting LTCF, which includes residents physically housed and cared for in the reporting LTCF, as well as residents being cared for during a brief outpatient visit (OP) in which the resident returns to the reporting LTCF on the day of the OP visit or the following calendar day.

## Which MDRO Specimens Should <u>NOT</u> be Reported to NHSN as a LabID Event?

- Negative MDRO lab results.
- Specimens collected as part of active surveillance testing.
- Specimens collected prior to admission to the LTCF or during an inpatient admission in another healthcare facility.

#### **NHSN** will Categorize MDRO LabID Events for Analysis

#### **Categorizations are determined by:**

- 1. Reported date of specimen collection (event date),
- 2. Reported specimen source (specifically blood sources),
- 3. Reported date of current admission to facility, and
- 4. Reported date of last transfer from acute care to your facility.



#### NHSN removes duplicate events when.....

 The same organism is subsequently collected from any non-blood source in the same calendar month.

#### AND

- The same organism is collected from a second blood source in the subsequent 14 calendar days.
  - Note: While these events are not further analyzed by NHSN, a facility user may opt to review a NHSN line list to view all submitted MDRO LabID events, including duplicate and non-duplicate events.

#### NHSN will Categorize Non-duplicate MDRO LabID Events for Analysis

- Community-onset (CO) LabID Event: LabID event date (collection date)occurs in 3 calendar days or less after date of current admission to the facility (i.e., days 1, 2, or 3 of admission).
- Long-term Care Facility-onset (LO) LabID Event: LabID event date (collection date) is more than 3 calendar days after current admission to the facility (i.e., on or after day 4).
  - LO Events are further sub-classified:
    - Acute Care Transfer-Long-term Care Facility-onset (ACT-LO): LO LabID
      events with a specimen collection date 4 weeks or less following date of
      last transfer from an acute care facility to the LTCF.

## **EXAMPLE: NHSN Classification of LabID Events a Community-onset (CO) or LTCF-onset (LO)**

Example	: NHSN Classification	on of Lab ID Event	s as <b>Community-onset or LTC</b>	F-onset
Admission date June 4th	June 5th	June 6th	June 7th	June 8th
Day 1	Day 2	Day 3	Day 4	Day 5
Comn	nunity-onset (CO)		Long-term Care Faci	lity-onset (LO)

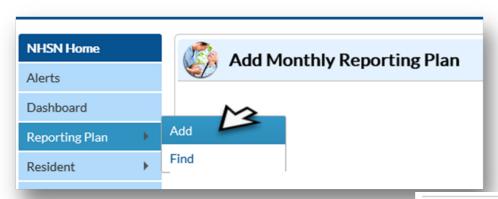
#### **EXAMPLE**

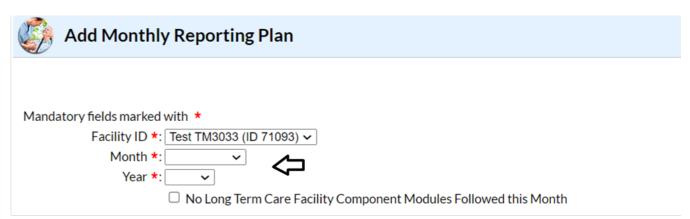
Ms. Smith was transferred to your SNF from an acute care facility on July 1st. A urine culture was collected on July 10th that tested positive for VRE. The SNF submitted a VRE LabID event to NHSN for July 10th.

- a. First, NHSN identified the submitted event as a non-duplicate since the application did not detect a prior VRE LabID event submitted for Ms. Smith in the month of July.
- b. Next, NHSN categorized the nonduplicate VRE LabID event as **Acute Care Transfer-Long-term Care Facility-onset (ACT-LO)** since the specimen was collected more than 3 calendar days after her current admission and the submitted event indicated a transfer from an acute care facility to your SNF in the previous 4 weeks.

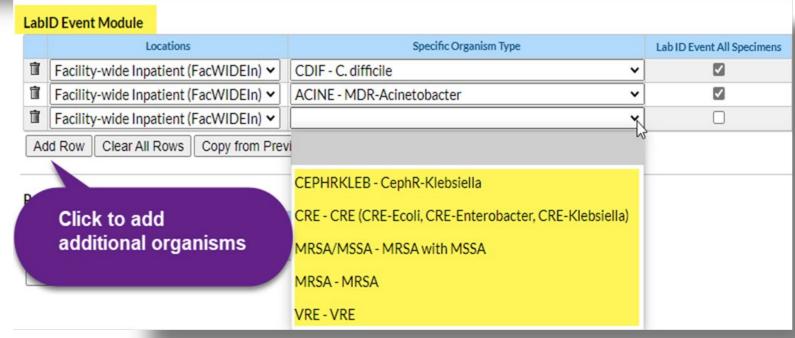
## **Submit MDRO Reporting Plan for Every Month of Participation to NHSN**

## Add Monthly Reporting Plan for MDRO LabID Event Module Participation





- Red asterisk = required to save page
- Click ADD ROW to add additional organisms for the LabID Event Module
- SAVE



## Submit all MDRO Events for <u>ALL</u> Specimen Sources to NHSN

### Reporting CDI or MDRO LabID Event: Customizable NHSN LabID Event form available for data collection NHSN NHSN

- Optional form
- Allows users to collect required information prior to submitting NHSN event
- Use one form for each LabID event
- Form may be customized for each facility
- Use accompanying Table of Instructions for helpful guidance

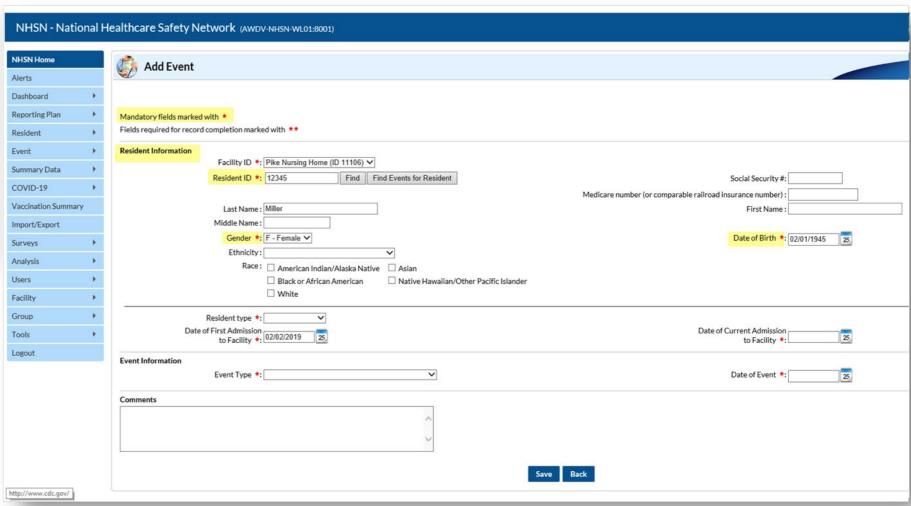
NHSN TIONAL HEALTHCARE SAFETY NETWORK	Form Approved OMB No. 0920-0666 Exp. Date: 12/31/22 www.cdc.gov/nhsn
Laboratory-identified MD	RO or CDI Event for LTCF
*required for saving	
Facility ID:	Event #:
*Resident ID:	
Medicare number (or comparable railroad insurance numbe	r):
Resident Name, Last: First:	Middle:
*Gender: M F Other	*Date of Birth://
Ethnicity (specify):   Hispanic or Latino	Race (specify):   American Indian/Alaska Native   Asian
□ Not Hispanic or Latino	Black or African American
□ Declined to respond □ Unknown	□ Native Hawaiian/Other Pacific Islander □ White □ Declined to respond □ Unknown
	2 Dodiniou to respond
*Date of First Admission to Facility:/_/	*Date of Current Admission to Facility:/_/
Event Details	
*Event Type: LabID	*Date Specimen Collected:/_/
*Specific Organism Type: (check one)	
□ MRSA □ MSSA □ VRE	☐ C. difficile ☐ CephR-Klebsiella
☐ CRE-E. coli ☐ CRE-Enterobacter ☐ CRE-Kl	ebsiella
*Specimen Body Site/System:	*Specimen Source:
*Resident Care Location:	
*Primary Resident Service Type: (check one)	
☐ Long-term general nursing ☐ Long-term deme	entia   Long-term psychiatric
☐ Skilled nursing/Short-term rehab (subacute) ☐ Vent	
*Has resident been transferred from an acute care facility in	·
If Yes, date of last transfer from acute care to your facility:	•
If Yes, was the resident on antibiotic therapy for this speci	fic organism type at the
time of transfer to your facility?	Yes No
Custom Fields	
Label	Label

**Laboratory-identified MDRO or CDI Event for LTCF Form** 57.138 (cdc.gov)

#### **Submitting a MDRO LabID Event to NHSN**



Red asterisk = required to save page

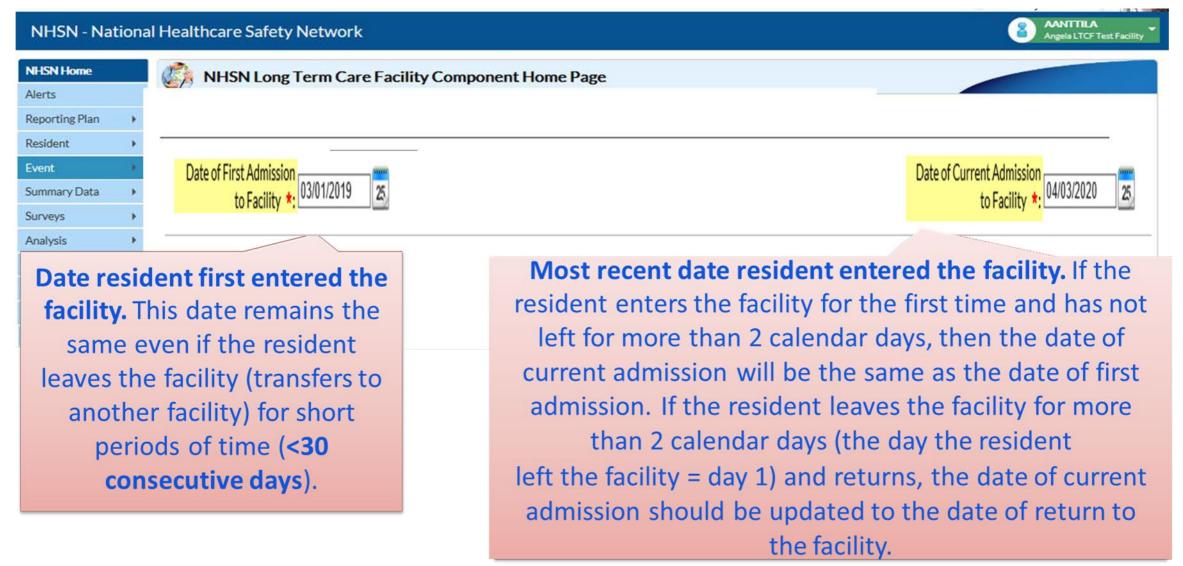


## Submitting a MDRO LabID Event to NHSN: Resident Type

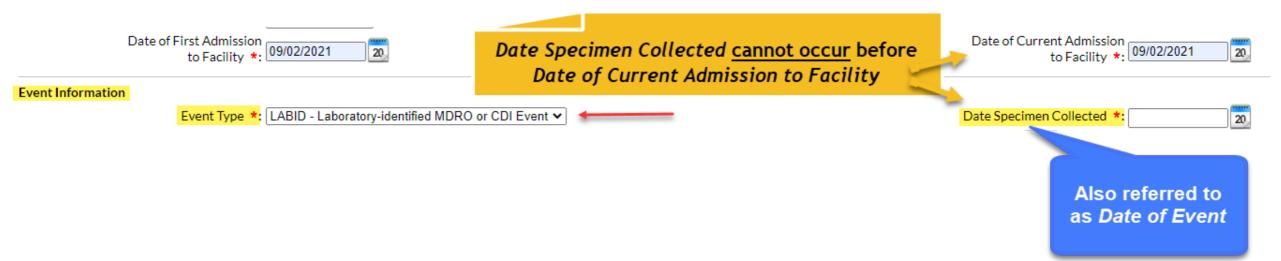
**Auto-populated by NHSN** as short stay or long-stay after user enters the *Date of First Admission to the Facility* and the *Date Specimen Collected* (specifically for LabID events).



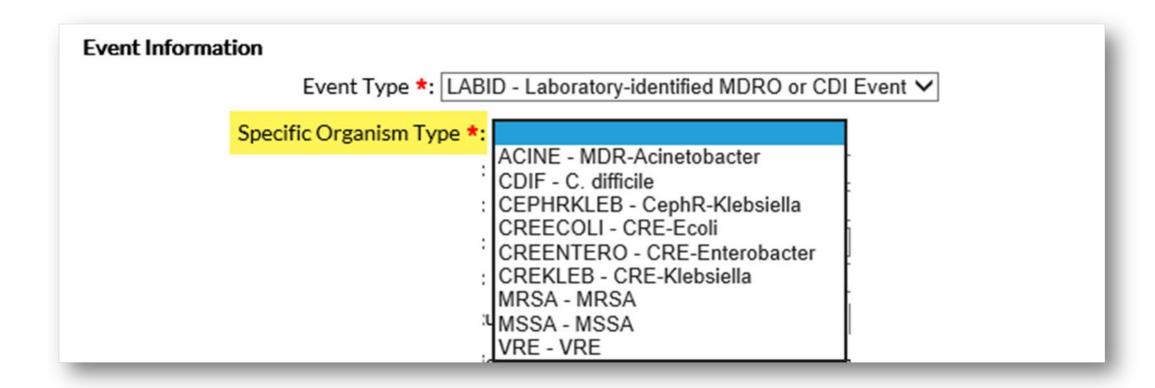
## Submitting a MDRO LabID Event to NHSN: Date of First and Current Admission to Facility



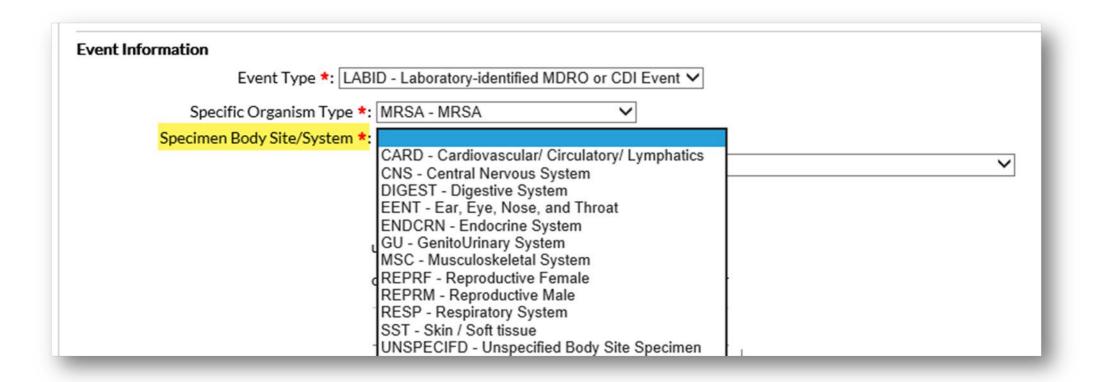
#### Submitting a MDRO LabID Event to NHSN: Event Type and Date Specimen Collected



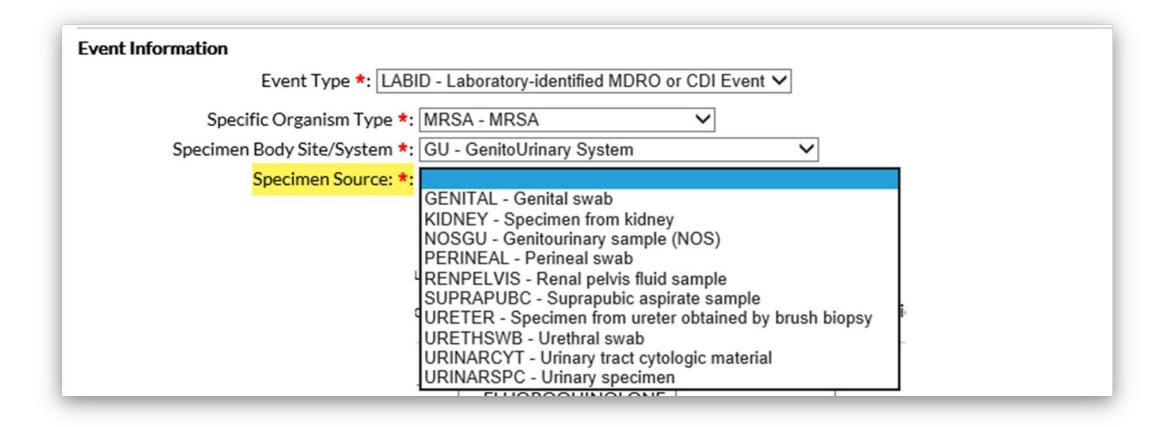
#### Submitting a MDRO LabID Event to NHSN: Specific Organism Type



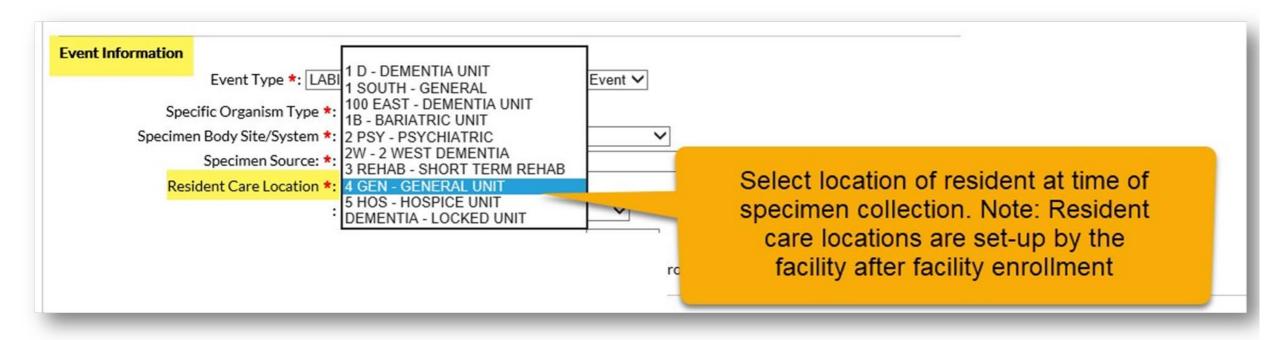
#### Submitting a MRSA LabID Event to NHSN: Specimen Body Site/System



#### Submitting a MRSA LabID Event to NHSN: Specimen Source



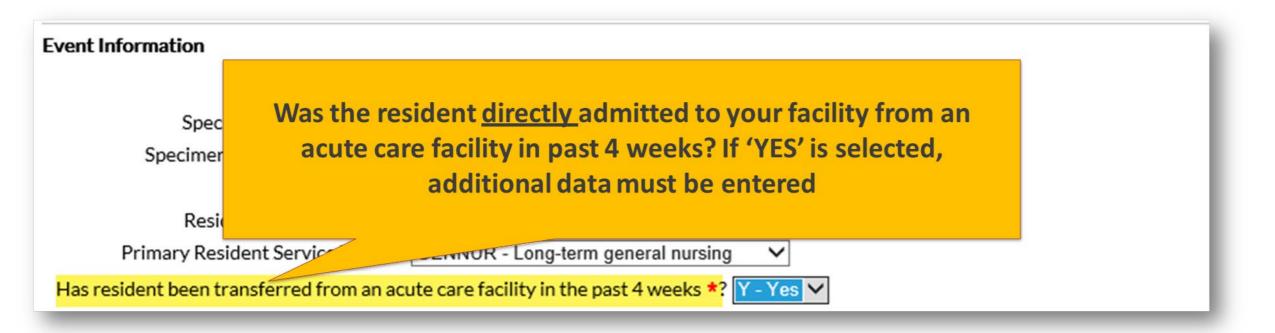
### Submitting a MDRO LabID Event to NHSN: Resident Care Location



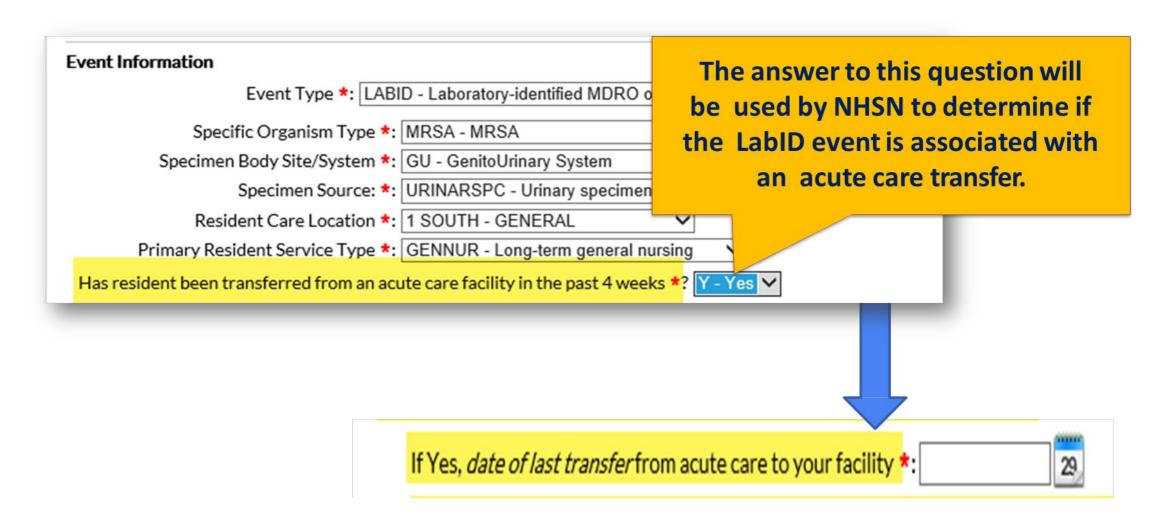
#### Submitting a MDRO LabID Event to NHSN: Primary Service Type



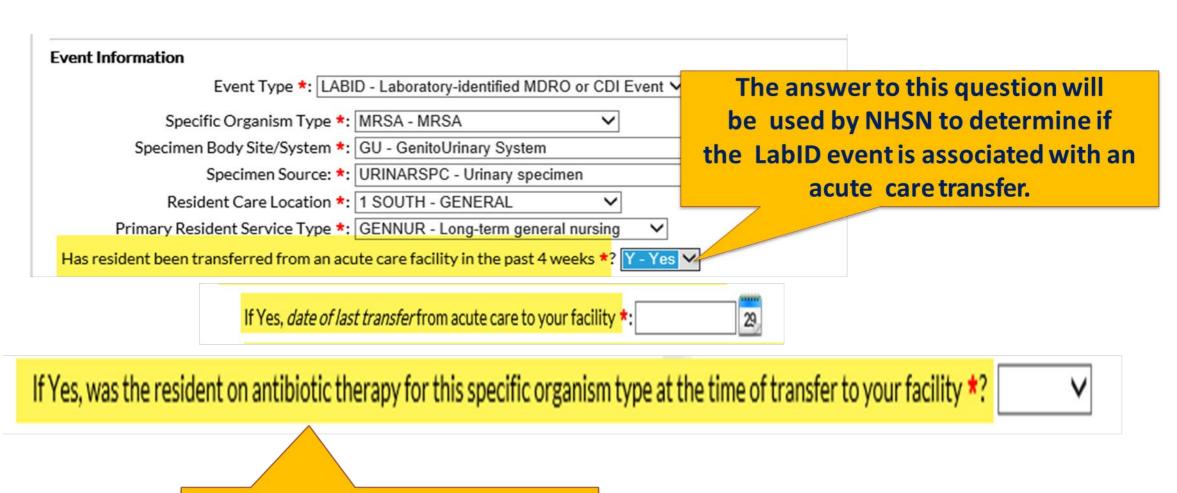
#### Submitting a MDRO LabID Event to NHSN: Transfer from Acute Care Facility



#### Submitting a MDRO LabID Event to NHSN: Transfer from Acute Care Facility, continued



#### Submitting a MDRO LabID Event to NHSN: Transfer from Acute Care Facility, continued



Informs burden of MDRO coming into facility

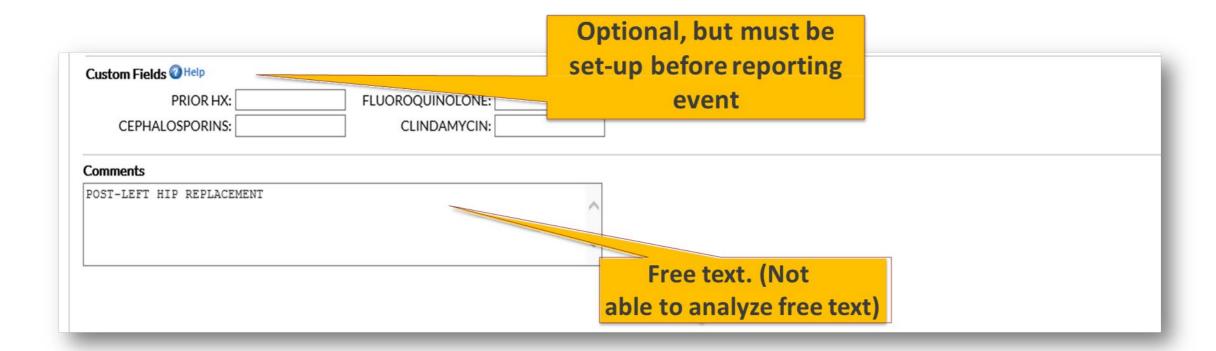
#### Submitting a MDRO LabID Event to NHSN: Documented Evidence Previous.....

Event Information
Event Type ★: LABID - Laboratory-identified MDRO or CDI Event ∨
Specific Organism Type ★: MRSA - MRSA
Specimen Body Site/System ★: GU - GenitoUrinary System ✓
Specimen Source: *: URINARSPC - Urinary specimen
Resident Care Location *: 1 SOUTH - GENERAL V
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 *?
Documented evidence of previous infection or colonization with this specific organism type from a previously reported LabID Event in any prior month? Y - Yes

Auto-populated by the NHSN.

Non-editable by users

## **Entering MDRO-MRSA LabID Event: Optional:** *Custom Fields and Comments*



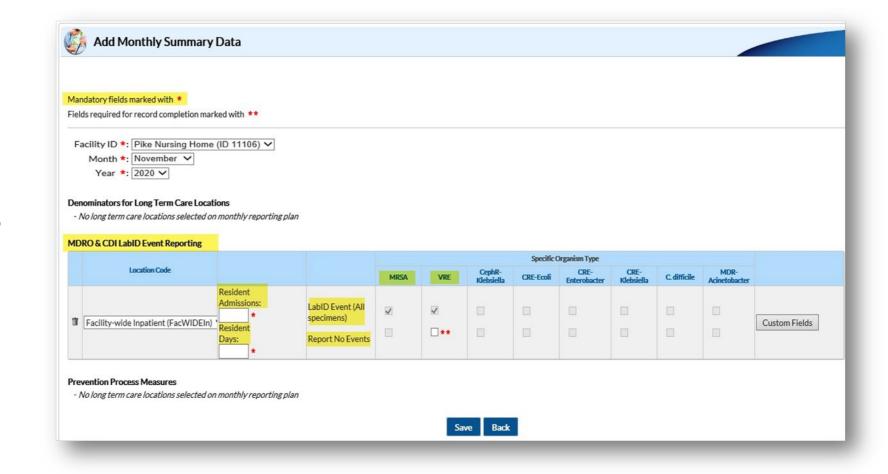
Medicare number (or comparable railroad insurance number)    Resident Information	Add Event	
Resident flormation    Facility   D * [Pise Nursing Home (ID 11106] \rightarrow   Resident (ID * [123455		
Resident ID *: [72845		
Resident ID * [123455   Find   Find Events for Resident    Last Name;   Williamson   First Name;   Anne		
Last Name:   Williamson		
Lat Name:		re number (or comparable railroad insurance number) :
Gender * FFemale   Date of Birth * 109/29/1935		
Ethnicity:		
Resident type *: LS-Long Stay Date of First Admission   Mative Hawaiian/Other Pacific Islander    Resident type *: LS-Long Stay   Date of First Admission   Mative Hawaiian/Other Pacific Islander		Date of Birth *: 09/29/1935 26
Black or African American   Native Hawaiian/Other Pacific Islander   White   White   White   Native Hawaiian/Other Pacific Islander   White   White		
Resident type *: LS-Long Stay Date of First Admission to Facility *: 10/19/2017   Event Information  Event Type *: LABID - Laboratory-identified MDRO or CDI Event V  Specific Organism Type *: [MRSA - MRSA V  Specimen Body Stet/System *: [GU - GenieUrinary System V  Specimen Source *: [URINARSPC - Urinary specimen Resident Care Location *: [DEMENTIA - TWESTDEMENTIA V  Primary Resident Service Type *: [GENUR - Long-term general nursing V  Has resident been transferred from an acute care facility in the past 4 weeks *? (Y - Yes V  Documented evidence of previous infection or colonization with this specific organism type from a previously reported LabID Event in any prior month?  Custom Fields * Help  TEST:  Comments  POST-LEFT HIP REPLACEMENT		
Date of First Admission to Facility *: 10/19/2017	□ White	
Event Type *: [ABID - Laboratory-identified MDRO or CDI Event V  Specific Organism Type *: [MRSA - MRSA V  Specimen Body Site/System *: [GU - GenitoUrinary System V  Specimen Source *: [ORIVARSPC - Urinary specimen V  Resident Care Location *: [DEMENTIA - IWESTDEMENTIA V  Primary Resident Service Type *: [GENDUR - Long-tem general nursing V  Has resident been transferred from an acute care facility in the past 4 weeks *? V - Ves V  If Yes, date of last transfer from acute care to your facility *: [12/24/2020] *  If Yes, was the resident on antibiotic therapy for this specific organism type at the time of transfer to your facility *? V - Yes V  Documented evidence of previous infection or colonization with this specific organism type from a previously reported LabID Event in any prior month?  Custom Fields * Help  TEST:	Resident type *: LS - Long Stay	
Event Type *: [LABID - Laboratory-identified MDRO or CDI Event V  Specific Organism Type *: MRSA - MRSA V  Specimen Body Site/System *: [@ U- GenitoUrinary System V  Specimen Source *: [WINARSPC - Urinary Specimen V  Resident Care Location *: [DEMENTIA - IWESTDEMENTIA V  Primary Resident Service Type *: GENNUR - Long-term general nursing V  Has resident been transferred from an acute care facility in the past 4 weeks *? [Y - Yes V  If Yes, date of last transfer from acute care to your facility *: [12/41/2020	Date of First Admission to Facility *: 10/19/2017	Date of Current Admission to Facility *: 01/12/2021 26
Specimen Body Site/System *: [GU - GenitoUrlinary System v]  Specimen Body Site/System *: [GU - GenitoUrlinary System v]  Specimen Source *: [URINARSPC - Urlinary specimen v]  Resident Care Location *: [DEMENTIA - 1WESTDEMENTIA v]  Primary Resident Service Type *: [GENNUR - Long-term general nursing v]  Has resident been transferred from an acute care facility in the past 4 weeks *? [V - Yes v]  If Yes, date of last transfer from acute care to your facility *: [12/24/2020 28]  If Yes, was the resident on antiblotic therapy for this specific organism type at the time of transfer to your facility *? [V - Yes v]  Documented evidence of previous infection or colonization with this specific organism type from a previously reported LabID Event in any prior month?  Custom Fields  Help  TEST:  FOST-LEFT HIP REPLACEMENT	Event Information	
Specimen Body Site/System *: GU - GenitoUrinary System  Specimen Source *: URINARSPC - Urinary specimen  Resident Care Location *: DEMENTIA - INVESTIDEMENTIA V  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 v  If Yes, date of last transfer from acute care to your facility *: 12/24/2020  If Yes, was the resident on antibiotic therapy for this specific organism type at the time of transfer to your facility *? Y - Yes v  Documented evidence of previous infection or colonization with this specific organism type from a previously reported LabID Event in any prior month?  Custom Fields Help  TEST:  Comments  FOST-LEFT HIP REPLACEMENT	Event Type *: LABID - Laboratory-identified MDRO or CDI Event 🗸	Date Specimen Collected *: 01/12/2021 28
Specimen Source *: URINARSPC - Urinary specimen  Resident Care Location *: DEMENTIA - 1WESTDEMENTIA V  Primary Resident Service Type *: GENNUR - Long-term general nursing V  Has resident been transferred from an acute care facility in the past 4 weeks *? Y - Yes V  If Yes, date of last transfer from acute care to your facility *: 12/24/2020   If Yes, was the resident on antibiotic therapy for this specific organism type at the time of transfer to your facility *? Y - Yes V  Documented evidence of previous infection or colonization with this specific organism type from a previously reported LabID Event in any prior month?  Custom Fields Help  TEST:  Comments  FOST-LEFT RIP REPLACEMENT		
Resident Care Location *: DEMENTIA - 1WESTDEMENTIA V Primary Resident Service Type *: GENNUR - Long-term general nursing V Has resident been transferred from an acute care facility in the past 4 weeks *? Y-Yes V  If Yes, date of last transfer from acute care to your facility *: 12/24/2020		
Has resident been transferred from an acute care facility in the past 4 weeks *? Y - Yes V  If Yes, date of last transfer from acute care to your facility *: 12/24/2020   If Yes, was the resident on antibiotic therapy for this specific organism type at the time of transfer to your facility *? Y - Yes V  Documented evidence of previous infection or colonization with this specific organism type from a previously reported LabID Event in any prior month?  Custom Fields Help  TEST:  Comments  POSI-LEFT HIP REPLACEMENT		
If Yes, date of last transfer from acute care to your facility *: 12/24/2020   If Yes, was the resident on antibiotic therapy for this specific organism type at the time of transfer to your facility *? Y - Yes V  Documented evidence of previous infection or colonization with this specific organism type from a previously reported LabID Event in any prior month?  Custom Fields Help  TEST:  Comments  POST-LEFT HIP REPLACEMENT	Primary Resident Service Type ★: GENNUR - Long-term general nursing ✓	
If Yes, was the resident on antibiotic therapy for this specific organism type at the time of transfer to your facility *? Y - Yes V  Documented evidence of previous infection or colonization with this specific organism type from a previously reported LabID Event in any prior month?  Custom Fields  Help  TEST:  Comments  POST-LEFT HIP REPLACEMENT	Has resident been transferred from an acute care facility in the past 4 weeks ★? Y - Yes ▼	
Documented evidence of previous infection or colonization with this specific organism type from a previously reported LabID Event in any prior month?  Custom Fields  Help  TEST:  POST-LEFT HIP REPLACEMENT		
Custom Fields Help  TEST:  Comments  POST-LEFT HIP REPLACEMENT		h2
TEST:  Comments  POST-LEFT HIP REPLACEMENT		
Comments  POST-LEFT HIP REPLACEMENT		
POST-LEFT HIP REPLACEMENT	TEST:	
Save Back Event 2740 created successfully.	POST-LEFT HIP REPLACEMENT	
Save Back Event 2740 created successfully.		
Save Back Event 2740 created successfully.		
	Save Back	Event 2740 created successfully.

## **Collect and Submit MDRO Monthly Summary Data to NHSN**

## Monthly Summary Requirements for MDRO LabID Event Module Participation

## Each Month of Participation, Facility Must Report the Following:

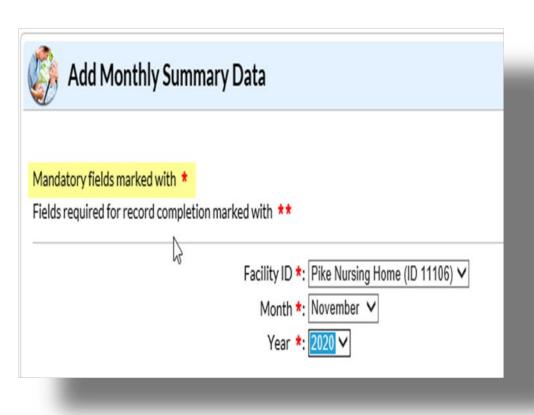
- Resident Admissions
- Resident Days
- Report No Events, if applicable



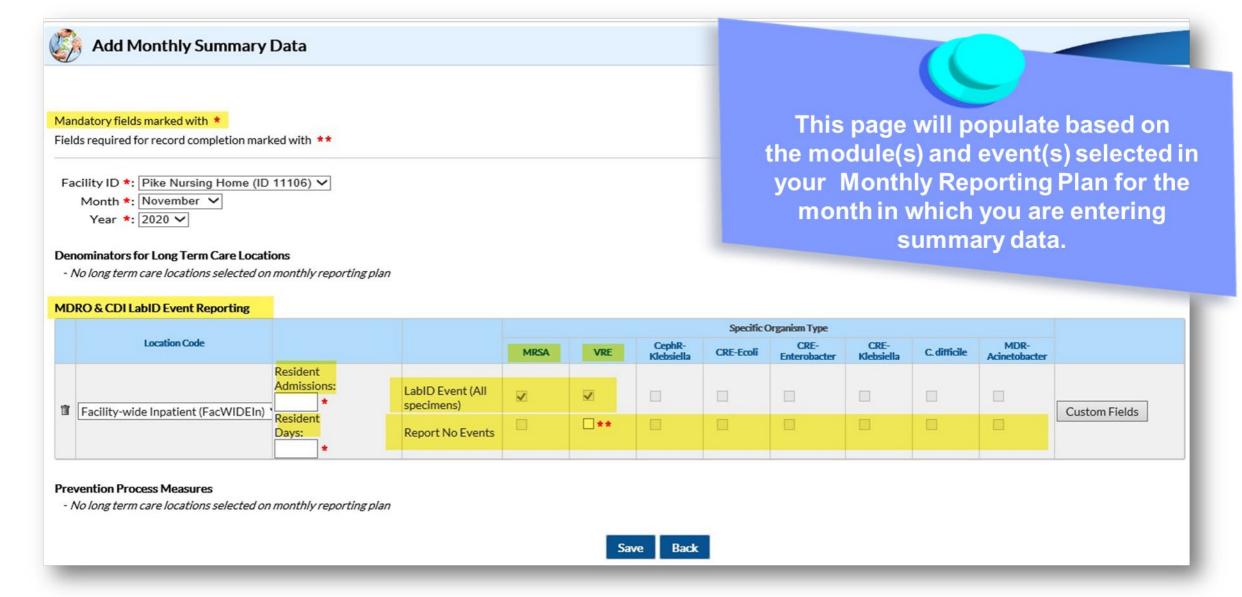
#### **Submitting Monthly Summary Data in NHSN**

- To submit summary data:
  - 1. Locate 'Summary Data' on left-hand navigation bar, and then 'Add'
  - 2. Enter the month and year for which summary data will be reported





#### **Submitting Monthly Summary Data in NHSN**



**Resident Admissions**: Only required if monthly surveillance includes LabID event surveillance.

The total number of residents admitted to the LTCF during the selected calendar month. Includes new admissions **and** re-admissions if a resident was out of the facility for more than 2 calendar days and returned.

	Location Code						Specific C	Organism Type				
				MRSA	VRE	CephR- Klebsiella	CRE-Ecoli	CRE- Enterobacter	CRE- Klebsiella	C. difficile	MDR- Acinetobacter	
Facility-wide Inpatient (FacWIDEIn)	Resident Admissions:	LabID Event (All specimens)	<b>✓</b>	V							Custom Field	
	Resident Days:	Report No Events		_ **							Custom len	

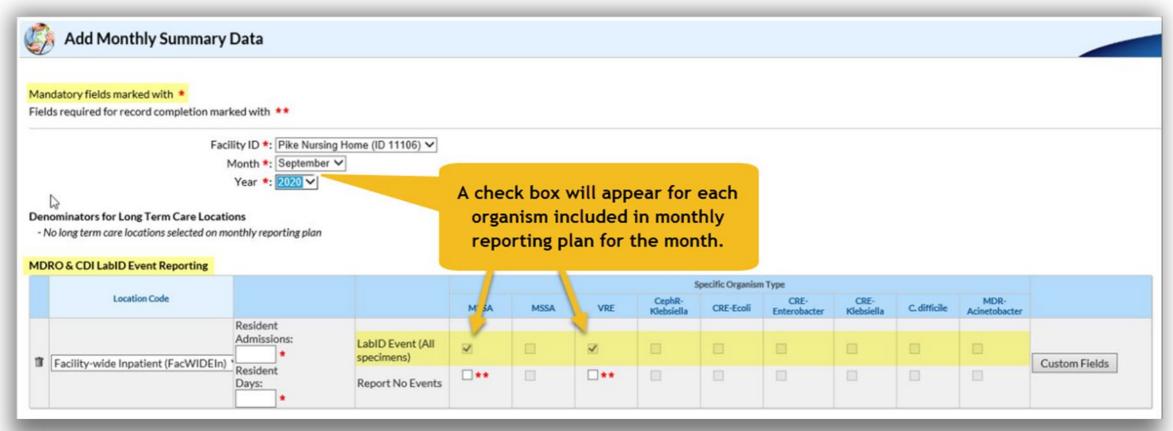
**Resident Days:** To calculate resident days, for each day of the month, record the total number of residents in the facility. At the end of the month, add the daily counts and enter the total as Resident Days.

- Data may come from electronic medical record, if available.
- Users may also calculate based on facility occupancy.
  - 100 bed facility at 100% occupancy for June: 100 residents x 30 days = 3,000 total resident days
  - 100 bed facility at 90% occupancy for June: 90 residents x 30 days = 2,700 total resident days

MDRO & CDI LabID Event Reporting						Specific C	Organism Type				
Location Code			MRSA	VRE	CephR- Klebsiella	CRE-Ecoli	CRE- Enterobacter	CRE- Klebsiella	C. difficile	MDR- Acinetobacter	
Facility-wide Inpatient (FacWIDEIn)	Resident Admissions:	LabID Event (All specimens)	V	✓							Custom Fiel
	Days:	Report No Events									

#### **LabID Events (All specimens)**

A grayed-out check-mark will appear for each organism under surveillance for the month (based on selections in the Monthly Reporting Plan)

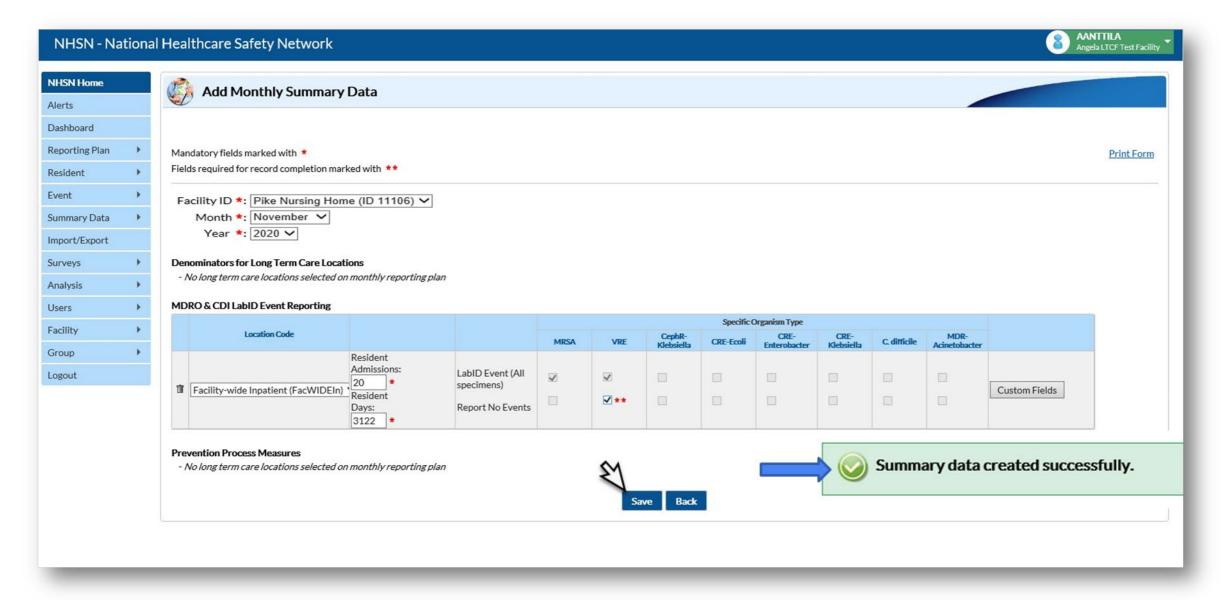


#### **Report No Events:**

- A red asterisk will appear next to boxes that require attention.
- User must put a check-mark in the box to validate that <u>no</u> LabID events were identified for the specified organism for the calendar month.
- The box will be grayed out and without red asterisks if at least one event was submitted for that organism during the calendar month.
- If a LabID event is entered for the organism after summary data submitted, the application will auto-update.

Location Code						Specific C	rganism Type				
			MRSA	VRE	CephR- Klebsiella	CRE-Ecoli	CRE- Enterobacter	CRE- Klebsiella	C. difficile	MDR- Acinetobacter	
Facility-wide Inpatient (FacWIDEIn)	Resident Admissions:	LabID Event (All specimens)	<b>V</b>	Z							Custom Field
	Resident Days:	Report No Events		**							Custom Field

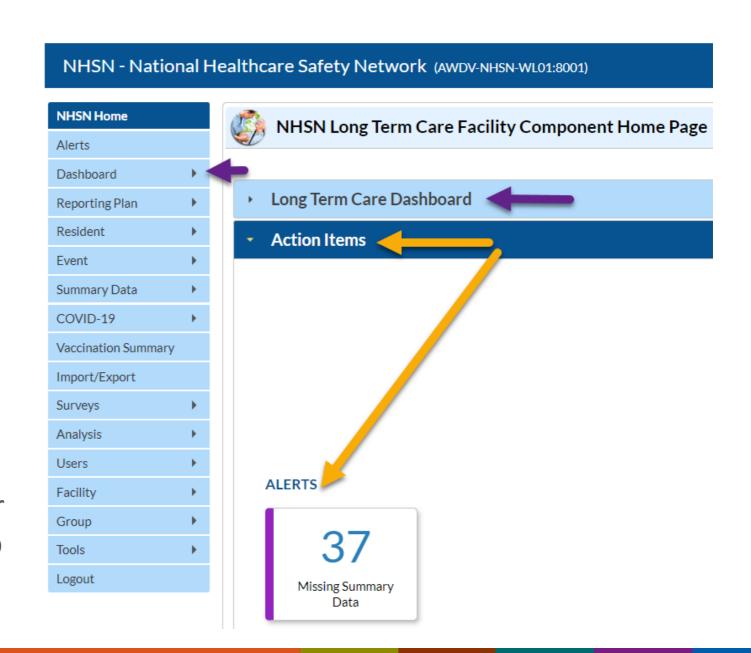
#### **Complete Monthly Summary for MDRO LabID Events**



#### **Common LabID Event Alerts on NHSN**

#### **Alerts**

- Automatic checks in NHSN that remind users of incomplete or missing data.
- Incomplete monthly data will be excluded from any analysis reports until resolved by user.
- Before using the analysis function, make sure to clear all relevant alerts.
- Found on the Home Page, or by clicking on the 'Alerts' tab on the sidebar.

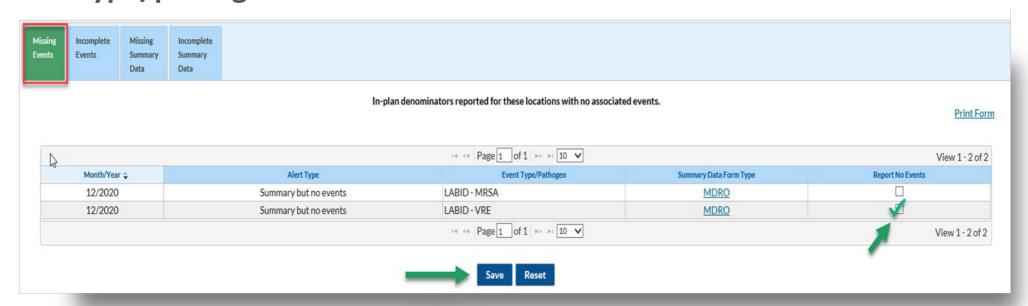


#### Common Alerts for LabID Event Reporting: Missing Events

LabID event module selected in the Monthly Reporting Plan, but no selected MDRO or CDI events submitted for the month and the "Report No Events" box was not selected on the Monthly Summary page for that calendar month.

#### To resolve alert:

- ✓ Submit CDI and/or selected MDRO event(s) for calendar month.
- ✓ If no events to report for the month, click box to indicate Report No Events by each event type/pathogen.

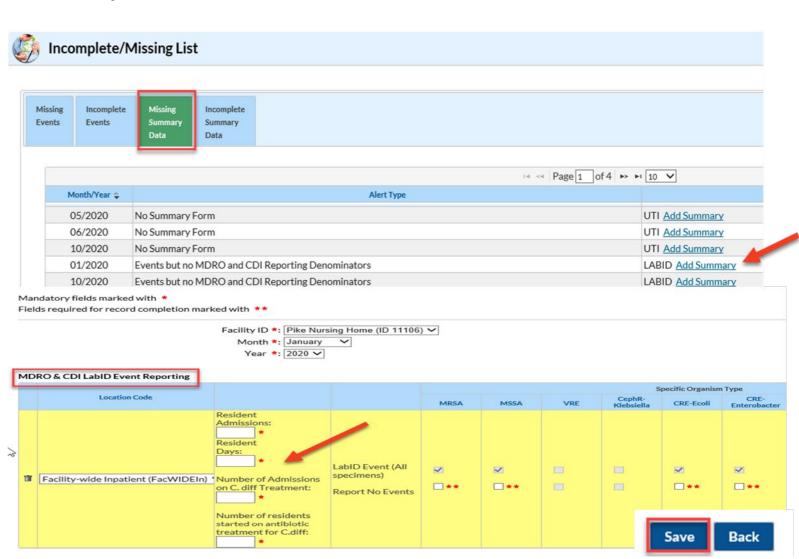


#### Common Alerts for LabID Event Reporting: Missing Summary Data

Summary Data has not been completed for the calendar month

#### To Resolve:

- Click "Add Summary" hyperlink
- Enter Summary Data under "MDRO & CDI LabID Event Reporting"
- Remember to click "SAVE" before exiting

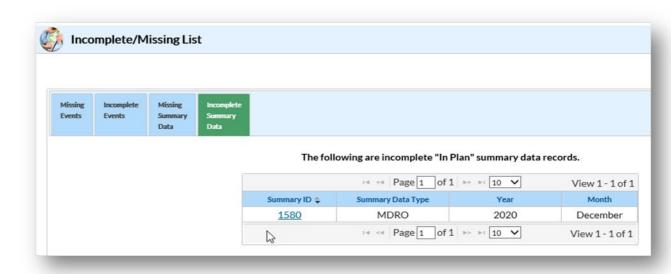


#### Common Alerts for LabID Event Reporting: Incomplete Summary Data

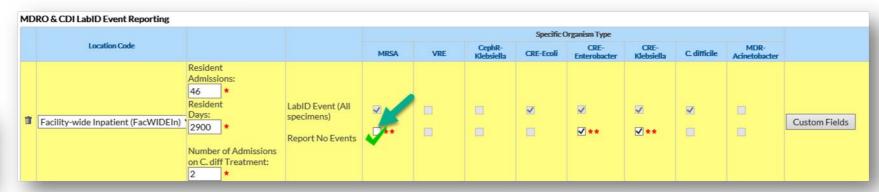
Summary Data page is missing required data for the calendar month

#### To resolve alert:

- ✓ Click on Summary ID
- Complete missing data fields, as indicated by red asterisk(s)
- **✓** Remember to SAVE before exiting







#### National Center for Emerging and Zoonotic Infectious Diseases



# THANK YOU Questions? <a href="mailto:nbsn@cdc.gov">nbsn@cdc.gov</a>

Add "LabID Reporting"
to the subject line in
order to have your
inquiry routed to the
appropriate subject
matter expert

For more information please contact Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30333

Telephone: 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348

E-mail: NHSN@cdc.gov

Web: http://www.cdc.gov/nhsn

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.