



## MDRO/CDI Case Studies for LTC Facilities

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### Case 1

You are conducting surveillance for *C. difficile* LabID events using NHSN.

- A 68 YO male is a long-time resident of your facility. He returned 2 days ago from a hospital admission for pneumonia. While there a central line was inserted for antibiotics.
- Today the resident developed a fever of 38.2°C and complained of lower abdominal pain. He had two loose stools which were collected for *C. difficile* toxin assay.



## Case 1

Lab results are positive for *C. difficile* toxin. Would you enter this into NHSN as a CDI LabID event?

1. No. His symptoms started less than 4 days after returning from the hospital.
2. Yes. This is the first positive CDI test result on this resident within 14 days.
3. No. *C. difficile* toxin assay is not an accurate test for CDI.

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## Case 2

- 2/15: 55 YO individual with end stage pancreatic cancer is admitted to the nursing home from an acute care facility. The resident has no history of previous admission to this nursing home.
- On day of admission the resident has three episodes of loose stools during a 24-hour period. An unformed specimen was collected and tested positive for *C. difficile* toxin.

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## Case 2

Should this be entered in to NHSN as a LabID event?

1. Yes. The specimen was collected while the resident was housed in the nursing home.
2. No. This infection belongs to the acute care facility.



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## Case 2

How will NHSN categorize this CDI event?

1. Community-onset (CO)
2. Long-term care facility onset (LO)
3. Acute care transfer-LTC facility onset (ACT-LO)
4. NHSN will not categorize the event, the user will need to make the decision.



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## Case 2

What if the stool specimen were collected 4 days after admission from the hospital?

1. Community onset (CO) because the resident was admitted with symptoms.
2. LTC facility onset because the specimen was collected > 3 days after admission.
3. Acute care transfer-LTC facility onset (ACT-LO) because the specimen was collected  $\leq$  4 weeks following date of transfer from acute care.



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## Case 3

What denominator data are entered for CDI facility-wide LabID event monitoring?

1. Resident admissions by each unit and total resident days by each unit.
2. Facility-wide resident admissions and resident days.
3. Facility-wide resident admissions only.



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## Case 4

7/28: A stool specimen on a long-time resident of the 4 East Wing is positive for *C. difficile* toxin. The resident is treated with metronidazole for 10 days.

8/8: A second specimen collected on 8/8 is also *C. difficile* toxin positive.

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## Case 4

How many *C. difficile* LabID events should be reported on this resident?

1. Not sufficient information to determine.
2. None. The 4 East Wing is not included in your CDI surveillance plan.
3. Two. There were two positive lab results on this resident.
4. One. The second specimen was collected within 14 days after the first specimen. 

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## Case 4

What if the resident had been moved from the 4 East Wing to 2 North on 8/1?

1. Report 1 LabID event.
2. Report 2 Lab ID events, one for each unit.
3. Report 0 LabID events.
4. Report 3 LabID events, one on 4 East and two for 2 North, since the resident had *C. difficile* when transferred to 2 North.



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## Case 5

You are conducting surveillance for MRSA using the NHSN MDRO LabID event module.

- 6/16: A 70 YO female resident requests a bedside commode and complains of frequent and painful urination. A urine culture is collected via a straight catheter. The resident is afebrile.
- 6/18: Urine culture is positive for *E. coli* and MRSA. Antibiotic treatment is begun.

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## Case 5

What should be reported to NHSN?

1. One *E. coli* LabID event should be reported.
2. One MRSA LabID event should be reported.
3. Definition of a UTI is not met, therefore do not report any event.
4. Insufficient information to determine.



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## Case 5

- 6/21: The resident spikes a fever of 101°F and blood cultures x 2 are collected.
- 6/22: Two of two blood cultures are positive for MRSA.

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## Case 5

What should be reported to NHSN?

1. No event. A MRSA LabID event has already been reported for this resident in June.
2. No event. The definition of a bloodstream infection was not met.
3. One MRSA bacteremia event. This is the first positive blood culture on this resident for June.



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## Case 5

What if a blood culture had also been collected on 6/18, in addition to the urine culture, and was also positive for MRSA?

1. Report the 6/22 results as a MRSA LabID event.
2. Do not report the 6/22 results as a MRSA LabID event.



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## Case 6

- 6/1: Mr. Weedam is admitted to the nursing home with a stage 4 sacral ulcer. Upon admission, a nasal swab is collected to screen for MRSA. Blood cultures are also collected. The nasal specimen is positive for MRSA. Should this be entered into NHSN?
  1. Yes
  2. No



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## Case 6

What if the blood cultures are also positive for MRSA?

1. This is not a LabID event because the resident had a MRSA positive nasal screen.
2. This is a LabID event, since the blood culture was taken for clinical purposes. It should be reported as MRSA bacteremia LabID event.



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## Case 7

Identify the LabID events

	Pt	Admit Date	Specimen Collection Date	Source	Lab Result	LabID Event	Explanation
1	Jack	6/01/12	06/01/12	Stool	C. diff. + toxin	Y N	
2	Jack	6/01/12	06/02/12	Blood	MRSA	Y N	
3	Jack	6/01/12	06/12/12	Blood	MRSA	Y N	
4	Jack	6/01/12	06/20/12	Blood	MRSA	Y N	
5	Jack	6/01/12	07/10/12	Blood	MRSA	Y N	
6	Jack	6/01/12	07/15/12	Blood	MRSA	Y N	

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## Case 8

Identify the LabID events

	Pt	Admit Date	Specimen Collection Date	Source	Lab Result	LabID Event	Explanation
1	Bill	06/15/12	06/16/13	Blood	MRSA	Y N	
2	Bill	06/15/12	06/20/13	Blood	MRSA	Y N	
3	Eve	07/02/12	07/01/13	Stool	C. diff + toxin	Y N	
4	Eve	07/02/12	07/06/13	Stool	C. diff + toxin	Y N	
5	Eve	07/02/12	07/10/13	Stool	C. diff + toxin	Y N	
6	Joe	06/01/12	06/06/13	Stool	C. diff equiv. toxin	Y N	

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## Case 9

Identify the LabID events

	Pt	Admit Date	Specimen Collection Date	Source	Lab Result	LabID Event	Explanation
1	Jim	06/15/12	06/16/13	Blood	MRSA	Y N	
2	Jim	06/15/12	06/20/13	Wound	MRSA	Y N	
3	Sam	07/02/12	07/01/13	Skin	MRSA	Y N	
4	Sam	07/02/12	07/06/13	Blood	MRSA	Y N	
5	Mary	07/02/12	07/30/13	Blood	MRSA	Y N	
6	Mary	06/01/12	08/02/13	Blood	MRSA	Y N	
7	Mary	06/01/12	08/03/13	Blood	VRE	Y N	

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