

APIC Surveillance SIG Surveillance Answers September 2020

Utilizing the NHSN definitions in the following two scenarios determine: The Infection Window Period, Date of Event, Repeat Infection Timeframe, Secondary BSI Attribution Period, and what type of HAI criteria are met.

Scenario #1

<u>Date</u>	<u>Clinical Observation</u>
1/12	48-year-old male came to ED; Foley Catheter inserted
1/13	Patient admitted to Med/Surg; Temp 100.5°F
1/14	Temp 100.7°F
1/15	Urine culture <i>Staphylococcus epidermidis</i> 50-100,000 CFU/ml
1/16	Temp 100.1°F
1/17	Temp 100.6°F
1/18	Foley Catheter removed; Temp 100.4°F
1/19	Temp 100.9°F
1/20	Temp 100.2°F
1/21	Urine culture <i>Staphylococcus epidermidis</i> >100,000 CFU/ml
1/22	Temp 99.9°F

Does the patient have a Catheter-Associated Urinary Tract Infection (CAUTI)? Yes
 What National Healthcare Safety Network (NHSN) criteria is met (example LCBI 3, SIP b, IAB 3b)? SUTI 1a
 What is the Infection Window Period (IWP)? 1/18-1/24
 What is the Date of Event (DOE)? 1/19
 What is the Repeat Infection Timeframe (RIT)? 1/19-2/1
 What would be the Secondary BSI Attribution Period (SBAP) for this scenario? 1/18-2/1

Rationale: The patient had a Foley Catheter inserted on 1/12. The 1/15 urine culture cannot be used to set the IWP as there is no bacterium $\geq 100,000$ CFU/ml. The 1/21 urine culture sets the IWP: 1/18-1/24. The 1/19 fever of 100.9 is in the IWP and is the first acceptable element used to meet SUTI 1a with a DOE of 1/19. The Foley Catheter was in place for more than 2 consecutive days in an inpatient location on the DOE which makes this a CAUTI.

Admit date: 1/12/2019

Hospital Day/Date	First Diagnostic Test	Infection Window Period (*)	Date of Event	Repeat Infection Timeframe (*)	Secondary BSI Attribution Period (*)
7. - 1/18/2019		<input type="checkbox"/>	-		
8. - 1/19/2019		<input checked="" type="checkbox"/> Temp 100.9	- HAI		
9. - 1/20/2019		<input type="checkbox"/>	-		
10. - 1/21/2019	✓	<input checked="" type="checkbox"/> Urine culture: S.epi >100k	-		
11. - 1/22/2019		<input type="checkbox"/>	-		
12. - 1/23/2019		<input type="checkbox"/>	-		
13. - 1/24/2019		<input type="checkbox"/>	-		
14. - 1/25/2019			-		
15. - 1/26/2019			-		
16. - 1/27/2019			-		
17. - 1/28/2019			-		
18. - 1/29/2019			-		
19. - 1/30/2019			-		
20. - 1/31/2019			-		
21. - 2/1/2019			-		

Scenario #2

<u>Date</u>	<u>Clinical Observation</u>
1/15	54-year-old female admitted to intensive care unit (ICU)
1/16	Central line inserted
1/17	Patient has a new onset of cough
1/18	Chest x-ray: consolidation; WBC 450 cells/mm ³
1/19	Chest x-ray: consolidation; Temp 100.5°F
1/20	Bronchoalveolar lavage (BAL) culture <i>Enterococcus faecalis</i> ; WBC 498 cells/mm ³
1/21	Blood culture <i>Enterococcus faecalis</i> ; patient has crackles/rales

Does the patient have a Central Line-Associated Bloodstream Infection (CLABSI)? Yes

What National Healthcare Safety Network (NHSN) criteria is met (example SUTI 1b, SIP b, IAB 3b)? MBI-LCBI 1

What is the Infection Window Period (IWP)? 1/18-1/24

What is the Date of Event (DOE)? 1/21

What is the Repeat Infection Timeframe (RIT)? 1/21-2/3

What would be the Secondary BSI Attribution Period (SBAP) for this scenario? n/a

Rationale: The patient had a Central Line inserted on 1/16. The 1/21 blood culture sets the IWP: 1/18-1/24. *Enterococcus faecalis* is a recognized pathogen not included on the NHSN common commensal list, therefore no signs or symptoms are needed to meet LCBI 1 criteria with a DOE of 1/21. The patient is neutropenic and meets Mucosal Barrier Injury (MBI) criteria, defined as at least two separate days with ANC and/or WBC values <500 cells/mm³ collected within a 7-day time period which includes the collection date of the positive blood specimen, the 3 calendar days before and the 3 calendar days after. The 1/18 and 1/20 WBC are used to meet MBI criteria (Note: Abnormal ANC and WBC values reflect risk factors for acquiring an MBI-LCBI, not symptoms of infection and therefore are not used in DOE determinations). The 1/20 BAL with *Enterococcus faecalis* cannot be used to meet PNEU with a secondary BSI. Pathogens excluded from specific infection definitions (for example, yeast in UTI, or *Enterococcus* spp. for PNEU) are also excluded as pathogens for BSIs secondary to that type of infection. The Central Line was in place for more than 2 consecutive days in an inpatient location on the DOE which makes this a CLABSI.

Admit date: 1/15/2019

Hospital Day/Date	First Diagnostic Test	Infection Window Period (*)	Date of Event	Repeat Infection Timeframe (*)
4. - 1/18/2019		<input type="checkbox"/> WBC 450	-	
5. - 1/19/2019		<input type="checkbox"/>	-	
6. - 1/20/2019		<input type="checkbox"/> WBC 498	-	
7. - 1/21/2019	✓	<input checked="" type="checkbox"/> Blood culture: E.faecalis	- HAI	
8. - 1/22/2019		<input type="checkbox"/>	-	
9. - 1/23/2019		<input type="checkbox"/>	-	
10. - 1/24/2019		<input type="checkbox"/>	-	
11. - 1/25/2019			-	
12. - 1/26/2019			-	
13. - 1/27/2019			-	
14. - 1/28/2019			-	
15. - 1/29/2019			-	
16. - 1/30/2019			-	
17. - 1/31/2019			-	
18. - 2/1/2019			-	
19. - 2/2/2019			-	
20. - 2/3/2019			-	