Moving Forward Using Lessons Learned to Prevent Central Line-Associated Bloodstream Infections (CLABSI)

Part 2 of the HAI Prevention Webinar Series

Thank you for registering for and/or attending the CLABSI webinar (watch here)! View the slide deck here. This webinar reviewed proactive strategies and tools for preventing all-cause harm related to CLABSI. Successful hospitals shared their strategies for engaging leaders, providers and frontline staff in a hospital-wide initiative to drive down device utilization, increase bundle compliance and improve outcomes. **Now, it is time to act!**

Why Now

According to the Centers for Disease Control and Prevention (CDC) the incidence of Central Line Associated Bloodstream Infections (CLABSI) as well as many other hospital-acquired infections (HAIs) are on the rise. In 2020, National Healthcare Safety Network (NHSN) data showed that CLABSIs saw a 47% increase in Q4 across all location types (inpatient and intensive care units) as compared to 2019 (CDC, 2021). Furthermore, a retrospective study on the impact of COVID-19 on HAIs revealed that during the months in which >10% of admissions were active COVID-19 patients, the CLABSI standardized infection ratio (SIR) was 2.38 times higher than the months when COVID-19 represented less than 5% of admissions (Fakih, et al., 2021). It is apparent that in the wake of the pandemic, key aspects of CLABSI prevention such as line maintenance, sterile insertion and auditing may have lapsed. An increase in CLABSI rates because of the COVID-19 pandemic further asserts the need to refocus on CLABSI best practices and reinvigorate prevention efforts at the unit and hospital level.

Review the Data – COVID-19 National Impact on CLABSI

	2020 Q1	2020 Q2	2020 Q3	2020 Q4
CLABSI	↓ −11.8%	↑ 27.9%	↑ 46.4%	↑ 47.0%
CAUTI	↓ −21.3%	No Change[1]	↑ 12.7%	↑ 18.8%
VAE	↑ 11.3%	↑ 33.7%	↑ 29.0%	↑ 44.8%
SSI: Colon surgery	↓ −9.1%	No Change[1]	↓ −6.9%	↓ −8.3%
SSI: Abdominal hysterectomy	↓ −16.0%	No Change[1]	No Change[1]	↓ −13.1%
Laboratory-identified MRSA bacteremia	↓ −7.2%	↑ 12.2%	↑ 22.5%	↑ 33.8%
Laboratory-identified CDI	↓ −17.5%	↓ −10.3%	↓ −8.8%	↓ −5.5%

**National data from the National Healthcare Safety Network. Please contact your respective HQIC quality improvement partner to assist you in analyzing your data.*

Consider Common Barriers

Review common barriers identified during the webinar and brainstorm ways to mitigate challenges to implementation in your organization.

- Lack of building resiliency into infection prevention programs to withstand future pandemics
- Lack of hard-wiring essential evidence-based infection control practices to prevent CLABSI
- Difficulty communicating the value of CLABSI improvement projects to hospital leadership
- Difficulty having the front-line staff involvement and buy-in

Perform a Root Cause Analysis

Fill in the Five Whys template to identify the cause of your hospital's device utilization rate and/or CLABSI rate. Optional: Use the CLABSI Exploration form to take an in-depth look at a recent CLABSI event.

Fill in the PDSA Worksheet to identify your goal and complete the Plan-Do-Study-Act cycle for test of change and improvement.

Identify Promising Practices

BEGINNER	INTERMEDIATE	EXPERT
• Assess the current state of your central line care by completing this central line audit.	• Consider using NHSN to run TAP report, analyze your unit's cumulative attributable difference to set your CLABSI improvement goal.	• Consider implementing CDC guidelines for the prevention of intravascular line infections (updates).
• Consider implementing a CHG bathing protocol for all patients with a central line (page 40).	• Use the SUR calculator to monitor central line utilization and compare your facility to the national benchmark.	• Implement an interdisciplinary "Line Rounds" process to be conducted on weekdays.
• Implement a competency check-off and periodic review for all new/existing staff who will be inserting/ managing central lines.	• Consider implementing a checklist for clinicians to use to prevent CLABSI.	• Assess line necessity during this time *(reference the webinar PPT slides and recording for a hospital example).*

Patient and Family Engagement & Health Equity Promising Practices

- Provide central line education to patient and families using the teach-back method
- Provide infection prevention patient and family education using the CDC CLABSI Resources for Patients and Healthcare Providers

Craft Your AIM Statement

Identify your organization's goals related to CLABSI prevention. Fill in the blanks.

» By (*date*), the team at (*hospital*) will implement (*intervention*) to improve (*the problem*) by (*how much*) to benefit (*for whom*).

Example AIM

» By July 31, 2022, the team at my hospital will establish a central line surveillance schedule and audit at least five central lines each month to reduce central line utilization rates by 10%.

Next Steps

Not sure how to identify your organization's root cause? Need help getting started on implementing your selected intervention? Seeking feedback on your AIM statement?

Reach out to your HQIC quality improvement partner for assistance!

Resources & References

1. CDC TAP Strategy Resource Page
2. AHRQ Apply CUSP
3. AHRQ CLABSI Toolkit
4. IHI How to Guide: Prevent Central Line-Associated Bloodstream Infection
5. CDC BSI Guideline
6. CDC CLABSI Resource for Patients and Healthcare Providers
7. SHEA HAI: Compendium to Prevention Recommandations
8. APIC Guide to Preventing CLABSI
9. HQIC CLABSI Gap Assessment Tool
10. HQIC CLABSI Audit Tool
11. HSAG Observation Tool
12. CDC Central Line Observation Tool
13. CDC CLABSI Resources
14. The Joint Commission CLABSI Resources
15. NHSN Training Checklist Divided Into Patient Safety Components
16. CDC Checklist for the Prevention of CLABSI
17. NHSN SUR Guide Updated April 2022
18. CDC Locations and Descriptions and Instructions for Mapping Patient Care Locations
19. Alliant CLABSI Coaching Package
20. The impact of coronavirus disease 2019 (COVID-19) on healthcare-associated infections in 2020: A summary of data reported to the National Healthcare Safety Network | Infection Control & Hospital Epidemiology | Cambridge Core