Reducing and Eliminating CLABSI and CAUTI: A New Toolkit to the Rescue

Kristen Hayes, MS, RN, CPHQ
William S. Miles, MD, FCCM
Patricia J. Posa, RN, BSN, MSA, CCRN-K, FAAN
Kathleen M. Vollman, MSN, RN, CCNS, FCCM
Agenda

• Introduce new toolkit to address CLABSI and CAUTI reduction in ICUs
• Discuss key components of the toolkit that will help you in your work
• Discuss common barriers encountered in ICUs that are addressed with the toolkit
The AHRQ Toolkit for Preventing CLABSI and CAUTI in ICUs

• This toolkit was developed based on the experience of participants in the AHRQ Safety Program for ICUs: Preventing CLABSI and CAUTI, which was funded and guided by AHRQ and led by AHA with the support of national experts and partners including: Society of Critical Care Medicine, American Organization for Nursing Leadership, Association for Professions in Infection Control and Epidemiology, and University of Michigan.

• [www.ahrq.gov/icuhai](http://www.ahrq.gov/icuhai)
Toolkit To Prevent CLABSI and CAUTI in ICUs

Today’s intensive care unit (ICU) teams understand the importance of providing high-quality care that relies on a culture of safety and evidence-based clinical practices to help prevent infections. This customizable, educational toolkit aims to help ICUs reduce rates of central line-associated bloodstream infection (CLABSI) and catheter-associated urinary tract infection (CAUTI). Access the materials in one of three ways:

Assess
Looking to understand your ICU’s current clinical and safety practices to prevent CLABSI and CAUTI?

Implement
Looking for guidance throughout the implementation of CLABSI and CAUTI prevention?

Overcome
Struck on a particular challenge and need support to find actionable solutions?

By including the Comprehensive Unit-based Safety Program (CUSP) and other evidence-based practices, the toolkit provides the clinical and cultural guidance to make changes needed to decrease CLABSI and CAUTI rates. The first access point, Assess, supports leaders to assess current practices and create a plan to move forward. The second access point, Implement, is a guide that explains various resources to support the implementation process of decreasing infections in your unit. The last entry point, Overcome, acknowledges common challenges that ICU teams face when attempting to decrease the rate of CLABSIs and CAUTIs, and will quickly connect you with resources that you need at that moment. ICU staff can reference the “Overcome” section multiple times as they work through lowering infections in their unit.

Threat of CLABSI, CAUTI, and HAI

Healthcare-associated infections affect 1 in 31 hospitalized patients and these infections are largely preventable

Catheter-associated urinary tract infections account for 75% of all healthcare-associated urinary tract infections

Catheter-associated bloodstream infections significantly increase risk of death

About the Toolkit

The AHRQ Safety Program for ICUs: Preventing CLABSI and CAUTI was developed over a 5-year period. This large-scale implementation project was designed to reduce central line-associated bloodstream infection (CLABSI) and catheter-associated urinary tract infection (CAUTI) in ICUs with persistently elevated infection rates.

[Additional content not visible in the image]
Comprehensive Unit-based Safety Program
CAUTI Tiered Interventions $^{1-4}$

**Tier 1: Standardize products, procedures, and bedside processes**
Assure Tier 1 interventions are standardized across the team through CUSP implementation

- Place indwelling urinary catheter only for appropriate reasons
- Use alternatives to indwelling urinary catheters
- Ensure proper aseptic insertion technique and maintenance procedures
- Promptly remove unnecessary catheters
- Urine culture stewardship: Culture only if symptoms of UTI are present

**Tier 2: Enhance progress with team-based improvement practices**
Use the strategies below to troubleshoot barriers and to implement additional interventions

- To help troubleshoot barriers and identify next steps, use CAUTI GPS tool
- Conduct catheter rounds with targeted education to optimize appropriate use
- Feed CAUTI and indwelling urinary catheterization data back to frontline staff in real-time
- Observe and document competency of catheter insertion: Education and observed behavior
- Perform full root-cause analysis or focused review of infections

Abbreviations: CAUTI = catheter-associated urinary tract infection; CUSP = Comprehensive Unit-based Safety Program; GPS = Guide to Patient Safety; UTI = urinary tract infection

These materials were expanded, enhanced, and adapted from tiered interventions implemented in Cohorts 1 and 2 of the AHRQ Safety Program for ICUs: Preventing CLABSI and CAUTI from materials developed for CAUTI prevention by faculty and staff at the Department of Veterans Affairs and the University of Michigan.
Ensure proper aseptic insertion techniques and maintenance procedures

**DEMONSTRATION OF CUSP CONCEPTS** applied to this intervention:

- **Understanding the Science of Safety:** emphasizes the use of two person insertion and assures staffing supports are created to ensure a system to support aseptic technique

- **Implement Teamwork and Communication:** communication tools from TeamSTEPPS® can be used to promote the consistent use of catheter insertion checklists or to speak up if approved practice not followed

- **Identifying Defects:** review cases for ensuring aseptic technique for insertion

- **Learn From Defects:** if aseptic techniques are not followed consistently perform return demonstration competency of this technique

- **Engage the Senior Executive:** assure unit has access to kits/carts of insertion products and stock is maintained
Making It Work Tip Sheet

Engaging Senior Leaders in Preventing Healthcare Associated Infections

This “Making It Work” tip sheet provides additional information to help intensive care unit (ICU) team leaders implement effective strategies and achieve goals to reduce central line-associated bloodstream infections (CLABSI) and catheter-associated urinary tract infections (CAUTI) and improve safety culture at the unit level.

Issue

Senior leaders play an essential role in building staff engagement and accountability and creating the infrastructure for safe care by providing necessary resources. Their support to frontline healthcare workers that provide direct care can have a dramatic impact on accelerating the prevention of catheter-associated infections in the ICU. However, senior leaders’ time is limited, so engaging them can be challenging. A demonstration of how powerful senior leader involvement can be is the landmark investigation on CLABSI prevention spearheaded by Pronovost and colleagues within a multifacility collaborative. They found that after communication occurred with senior executives to enroll their hospital in a quality improvement project that included a multimodal intervention, the incorporation of chlorhexidine gluconate skin antiseptic into the central venous catheter dressing increased from 19 percent to 69 percent after 6 weeks. Subsequent investigations of CLABSI prevention have shown use of this antiseptic and maximal sterile barrier are now universal, core practices for prevention of CLABSI. This is one example of how increasing senior executive engagement can bolster technical and adaptive work of change in your patient safety program.

Barriers

Lack of clinical background: A senior leader may not possess clinical knowledge and will need more background about specific challenges the team may encounter. If your initiative involves leadership beyond the executive team, such as the hospital board, they may have even less clinical background, but their contribution may be valuable when it comes to obtaining a different perspective such as those from a business leader, process improvement expert, or consumer of healthcare.

Limited availability and competing priorities: Senior leaders have limited availability and competing priorities. Addressing these challenges ties back into ensuring that your senior executive really understands the goals of your program and recognizes the larger value that comes with achieving those outcomes. Engage a senior executive who is able to align or connect your program’s goals with other strategic efforts across the organization. Educate them on your program’s goals and the value of its outcomes as well as directly connect it to other strategic priorities.

Lack of meaningful recognition: A senior leader may not directly recognize the value of patient safety or more specifically your patient safety program’s efforts. Make it meaningful so they recognize the importance of your efforts and provide buy-in and support. To do this, educate and inform them on how
Making It Work Tip Sheet
Engaging Physician Champions in Preventing CLABSI and CAUTI

This “Making It Work” tip sheet provides additional information to help intensive care unit (ICU) team leaders implement effective strategies and achieve goals to reduce central line-associated bloodstream infections (CLABSI) and catheter-associated urinary tract infections (CAUTI) and improve safety culture at the unit level.

Issue
One of the most important roles physicians play in performance improvement is that of physician champion to support clinicians’ engagement and drive success of clinical improvement work. What makes this engagement a challenge is multifactorial and often includes factors such as:

- Time limitations due to clinical workload;
- Physicians’ formal education, which often does not prepare them to address the challenges of leading or championing healthcare process improvement; and
- Prior, unfavorable experiences. This could be due to lack of engagement in the decision-making process, lack of awareness of broader patient safety initiatives within the unit, and lack of feedback on progress toward quality improvement goals.

Suggested Strategies
- Look for a physician champion who is influential and is respected by their peers; has good working relationships with staff; uses effective communication, leadership, and social skills; and has the courage to speak up when needed.
  - In some cases, there may already be a physician champion from other projects. If this is the case, leverage the working relationship and ensure capacity to take part in another project as the physician champion.
  - If needed, consider asking physicians and nurses in the unit, the ICU medical director, and the chief medical officer who they would recommend as a physician champion and why.
  - Work with senior leadership and your champion to establish clear objectives and a shared mental model for this role, including what the expectations are and what success looks like.
    - Acknowledge needs and expectations of time commitment for quality work.
    - Attempt to align professional priorities as a way to integrate this work into existing commitments.
Toolkit To Prevent CLBSI and CAUTI in ICUs

Today's intensive-care unit (ICU) teams understand the importance of providing high-quality care that relies on a culture of safety and evidence-based clinical practices to help prevent infections. This customizable, educational toolkit aims to help ICUs reduce rates of central line-associated bloodstream infection (CLBSI) and catheter-associated urinary tract infection (CAUTI). Access the modules in one of three ways:

**Assess**
- Looking to understand your ICU's current clinical and safety practices to prevent CLBSI and CAUTI?

**Implement**
- Looking for guidance throughout the implementation of CLBSI and CAUTI prevention?

**Overcome**
- Stuck on a particular challenge and need support to find actionable solutions?

By including the Comprehensive Unit-based Safety Program (CUSP) and other evidence-based practices, this toolkit provides the clinical and cultural guidance to make changes needed to decrease CLBSIs and CAUTIs rates. The first access point, **Assess**, supports teams to assess current practices and create a plan to move forward. The second access point, **Implement**, is a guide that explains various resources to support the implementation process of decreasing infections in your unit. The last entry point, **Overcome**, acknowledges common challenges that ICU teams face when attempting to decrease the rate of CLBSIs and CAUTIs, and will quickly connect you with resources that you need at that moment. ICU staff can reference the “Overcome” section multiple times as they work through lowering infections in their unit.

**Threat of CLBSI, CAUTI, and HAI**

Healthcare-associated infections affect 1 in 31 hospitalized patients and these infections are largely preventable

Catheter-associated urinary tract infections account for 75% of all healthcare-associated urinary tract infections

Catheter-associated bloodstream infections significantly increase risk of death

**About the Toolkit**

The AHRQ Safety Program for ICUs: Preventing CLBSI and CAUTI was developed over a 5-year period. This large-scale implementation project was designed to reduce central line-associated bloodstream infection (CLBSI) and catheter-associated urinary tract infection (CAUTI) in ICUs with persistently elevated infection rates.

---

Page last reviewed: February 2022
Page originally created: February 2022

---

**Connect With Us**

[Facebook](#)
[Twitter](#)
[YouTube](#)
[LinkedIn](#)

**Sign up for Email Updates**

To sign up to receive our e-mail newsletter, please enter your e-mail address below:

[Sign Up](#)

---

**Agency for Healthcare Research and Quality**

1800 Independence Ave.
Washington, DC 20201
Phone: (888) 282-9897
References


Thank you

- Kristen Hayes, MS, RN, CPHQ
  - khayes@aha.org
- William S. Miles, MD, FCCM
  - Will.Miles@atriumhealth.org
- Patricia J. Posa, RN, BSN, MSA, CCRN-K, FAAN
  - pposa@med.umich.edu
- Kathleen M. Vollman, MSN, RN, CCNS, FCCM
  - kvollman@comcast.net

#AHRQNews #SCCM2022