

CENTRAL LINE-ASSOCIATED BLOODSTREAM INFECTIONS (CLABSI)

IMPLEMENTATION GUIDE: LINKS TO RESOURCES*

*Disclaimer: The links in the domains below are not mutually exclusive nor do they represent an exhaustive list of all the possible resources available. Furthermore, the links presented do not constitute an endorsement of these organizations or their programs by the Centers for Disease Control and Prevention (CDC) or the federal government, and none should be inferred.

For the most current version of this tool, please visit [Targeted Assessment for Prevention \(TAP\) Strategy Toolkit | HAI's | CDC](#). This site also provides additional Implementation Guides for *Clostridioides difficile* infection (CDI) and catheter-associated urinary tract infection (CAUTI), as well as accompanying tools and resources for the TAP Strategy.

See also the [CDC 2011 Guidelines for the Prevention of Intravascular Catheter-Related Infections](#) and the Society for Healthcare Epidemiology of America (SHEA) [Strategies to Prevent Central Line-Associated Bloodstream Infections in Acute-Care Hospitals: 2022 Update](#)

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I. General Infrastructure, Capacity, and Processes

Engagement of Leadership, Champions, and Healthcare Personnel

[Comprehensive Unit-based Safety Program \(CUSP\) Board Checklist](#)

Checklist of CUSP activities for board members and senior leaders to prevent healthcare-associated infections (HAI), from the Armstrong Institute for Patient Safety and Quality at Johns Hopkins Medicine

[Engage the Senior Executive Module](#)

Module with multiple tools focused on the roles and responsibilities of senior executives, including checklists for senior leaders and board members, from the Agency for Healthcare Research and Quality (AHRQ)

[Accountability of Health Care Personnel in Preventing CLABSIs](#)

Framework of personnel accountability and responsibilities in prevention of CLABSIs, from The Joint Commission

[Back to Basics: 12 Tenets to Reduce CLABSIs](#)

List of 12 tenets of collaboration to reduce CLABSIs, from AHRQ

[Steps in Developing a Business Case Analysis](#)

A framework listing nine steps that healthcare personnel can use to build a business case for CLABSI prevention, from The Joint Commission

[HAI Cost Calculator](#)

Downloadable Excel files that allow hospitals to calculate facility specific costs of healthcare-associated infections and savings realized by preventing them, from the Association for Professionals in Infection Control and Epidemiology (APIC)

[Toolkit for Reducing Central Line-Associated Bloodstream Infections](#)

Tools to engage, educate, execute, and evaluate CLABSI prevention efforts, including “Weeks without CLABSI Banner”, fact sheet, guidelines, cart inventory, insertion checklist, maintenance audit, event report template, investigation nurse letter, and tenets for reducing CLABSIs, from AHRQ

[Lessons Learned from Keystone ICU Project](#)

Guidance for large-scale improvement projects based on lessons learned from a successful ICU collaborative to reduce CLABSI rates, from The Joint Commission

[Infection Prevention Champion](#)

Informational webpage and accompanying PDF to aid partners in the identification and guidance of infection prevention champions, from the Centers for Disease Control and Prevention (CDC)

[Physician Champion Summary](#)

Summary of traits, skills, and actions of successful physician champions, from Compass

[Roles and Responsibilities Table](#)

Example implementation team roles and responsibilities, from bladdersafe.org

[TeamSTEPPS 3.0](#)

Training course for healthcare professionals designed to improve collaboration and communication within the healthcare institution, from AHRQ

[Presentation to Nurse Manager & Case Manager \(or Unit Leader\)](#)

Presentation addressing the role of the nurse manager, from AHRQ

[Building Business Case for Infection Prevention Training Module](#)

Training on developing a business case for infection prevention, including rationale, resources, and a plan for presenting to leadership, from Health Research & Educational Trust (HRET) and CDC's STRIVE Infection Control Training

[Strategies for Preventing HAIs Training Module](#)

Training on engaging leadership, physicians, nurses, and environmental services managers in infection prevention ("Strategies for Preventing HAIs"), from HRET and CDC's STRIVE Infection Control Training

[CLABSI Guide to Patient Safety \(GPS\)](#)

Tool for examining and improving CLABSI prevention resources and activities, including champions (pgs. 6 and 11) and leadership support (pg. 12), from States Targeting Reductions in Infections via Engagement (STRIVE)

Tools for the CLABSI Workgroup

[APIC Implementation Guide to Preventing Central Line-Associated Bloodstream Infections](#)

Compilation of guidance on topics including CLABSI surveillance, central line bundle, catheter maintenance, and prevention of infections among the pediatric population and in the renal setting, from the Association for Professionals in Infection Control and Epidemiology (APIC)

[Toolkit for Preventing CLABSI and CAUTI in ICUs](#)

Toolkit with resources and strategies focusing on prevention of CLABSI and CAUTI in ICUs, including an ICU Assessment, Response Guide and Action Plan Template, from the Agency for Healthcare Research and Quality (AHRQ)

[Joint Commission CLABSI Toolkit](#)

Toolkit including background information along with strategies and tools for the prevention of CLABSI, from the Joint Commission

[Assessment of Program for Prevention of Central Line-Associated Bloodstream Infections](#)

Worksheet that provides a method to measure the level of implementation of an organization's CLABSI prevention program, from the Pennsylvania Patient Safety Authority

[Eliminate Harm Across the Board](#)

Checklist of CLABSI Prevention Strategies, from the Hospital Quality Institute, in partnership with the American Hospital Association, Partnership for Patients, and the Health Research & Educational Trust

[CLABSI Event Report Template for Defect Analysis](#)

Template report for the review of incident CLABSI, from AHRQ

[Toolkit for Reducing Central Line-Associated Blood Stream Infections](#)

Tools to engage, educate, execute, and evaluate CLABSI prevention efforts, including "Weeks without CLABSI Banner", fact sheet, guidelines, cart inventory, insertion checklist, maintenance audit, event report template, investigation nurse letter, and tenets for reducing CLABSIs, from AHRQ

[Central Venous Catheter Quick Observation Tool \(QUOTS\)](#)

Central venous catheter observation tool. From the suite of Quick Observation Tools (QUOTS) arranged by themes (e.g. transmission-based precautions, device-associated infections, high-level disinfection, etc.) that can be used by healthcare providers primarily responsible for infection prevention at the location being assessed, from CDC and APIC

[CLABSI Case Review](#)

Form to assist with unit-based interdisciplinary root cause analysis, from Quality Reporting Center

[The NHSN Standard Utilization Ratio \(SUR\): A Guide to the SUR](#)

Guidance on use of the Standardized Utilization Ratio (SUR), the primary summary measure used to by the National Healthcare Safety Network (NHSN) to compare device utilization, from CDC

[Building Business Case for Infection Prevention Training Module](#)

Training on developing a business case for infection prevention, including rationale, resources, and a plan for presenting to leadership, from Health Research & Educational Trust (HRET) and CDC's STRIVE Infection Control Training

[CLABSI Prevention Strategies Training Modules](#)

Training modules on the prevention of CLABSI, including information and resources on CVC appropriateness, proper insertion, maintenance, and removal, from Health Research & Educational Trust (HRET) and CDC's STRIVE Infection Control Training

Prevention Bundles

[CDC Checklist for Prevention of CLABSI](#)

Checklist based on 2011 CDC Guideline for Prevention of Intravascular Catheter-Associated Bloodstream Infections, from the Centers for Disease Control and Prevention

[How-to Guide: Prevent Central Line-Associated Bloodstream Infections](#)

Guide describing key evidence-based care components of a CLABSI Prevention Bundle, from the Institute for Healthcare Improvement (IHI)

[CVC Maintenance Bundles](#)

Guidelines and components of a central line maintenance bundle, from The Joint Commission

[Preventing Harm from CLABSI](#)

A change package or set of changes that can produce a desired result, with components built from practices of high performing health organizations and includes a menu of strategies, change concepts, and specific actionable items, from Health Research & Educational Trust (HRET) Hospital Improvement Innovation Network (HIIN) team, and Cynosure Health

Staff Training and Competency/Skills Assessments – Insertion

[Certification for the Insertion of Central Venous Access Devices](#)

Sample policy related to certification of graduate medical students to insert central lines, from Stony Brook University Hospital

[Vascular Catheter Insertion Checklist](#)

Checklist to be completed by the inserter and assistant to document steps before, during, and after central line insertion, from BJC Healthcare

[Central Venous Catheter Medical Education Policy](#)

Example facility policy for standardized education for medical trainees on the insertion of central venous catheters (CVCs), from Carilion Clinic

[Central Line Placement Training](#)

An example of the implementation of a standardized central line placement training course for residents, from the University of North Carolina (UNC)

[Johns Hopkins Hospital Central Line Insertion Checklist](#)

A central line insertion checklist for the care team, from Johns Hopkins Health System

[Central Line Insertion Care Team Checklist](#)

Checklist providing sequential critical steps that have shown to reduce infections, from the Agency for Healthcare Research and Quality (AHRQ)

[Videos in Clinical Medicine: Central Venous Catheterization](#)

Video demonstrating proper technique during the placement of an internal jugular central venous catheter, from the New England Journal of Medicine (NEJM)

[Videos in Clinical Medicine: PICC Placement in the Neonate](#)

Video demonstrating proper technique during the placement of a peripherally inserted central catheter in a neonate, from NEJM

[Videos in Clinical Medicine: Central Venous Catheterization in the Subclavian Vein](#)

Video demonstrating proper technique during the placement of central venous catheter in the subclavian vein, from NEJM

[Competency Check versus Observational Audit](#)

Fact sheet describing the differences between competency/skills assessments and observational audits, from AHRQ

[CLABSI Prevention Strategies Training Modules- Insertion](#)

Training modules on the prevention of CLABSI, including information and resources on proper insertion ("Prevention of Central Line-Associated Bloodstream Infections: Aseptic Insertion and Site Selection"), from Health Research & Educational Trust (HRET) and CDC's STRIVE Infection Control Training

[Competency Based Training, Audits and Feedback Modules](#)

Training modules covering the design of competency-based training ("Competency-Based Training for IP"), use of audits ("Using Audits to Monitor IP Practices"), and giving effective feedback ("Giving IP Feedback"), from Health Research & Educational Trust (HRET) and CDC's STRIVE Infection Control Training

Documentation of Insertion

[Central Line Insertion Procedure Note](#)

Sample procedure note for documentation of central line insertion, from Roxborough Memorial Hospital and the Pennsylvania Patient Safety Authority

[Vascular Access Procedure Note](#)

Sample procedure note for documentation of central line insertion, from Beth Israel Medical Center

Staff Training and Competency/Skills Assessments – Maintenance

[Competency Check versus Observational Audit](#)

Fact sheet describing the differences between competency/skills assessments and observational audits, from AHRQ

[Competency Based Training, Audits and Feedback Modules](#)

Training modules covering the design of competency-based training ("Competency-Based Training for IP"), use of audits ("Using Audits to Monitor IP Practices"), and giving effective feedback ("Giving IP Feedback"), from Health Research & Educational Trust (HRET) and CDC's STRIVE Infection Control Training

[CLABSI Prevention Strategies Training Modules- Maintenance](#)

Training modules on the prevention of CLABSI, including information and resources on CVC maintenance (“Maintenance and Removal of Central Venous Catheters”), from Health Research & Educational Trust (HRET) and CDC’s STRIVE Infection Control Training

Routine Audits

[Central Line Insertion Practices \(CLIP\) Training Module](#)

National Healthcare Safety Network (NHSN) training course on the collection of data about central line insertion practices, from the Centers for Disease Control and Prevention (CDC)

[Central Line Insertion Practices Adherence Monitoring](#)

Example form for monitoring central line insertion practices, from the CDC

[Central Line Maintenance Audit Form](#)

Audit form to assess central line maintenance practices, from the Agency for Healthcare Quality and Promotion (AHRQ)

[Monitoring Adherence to Health Care Practices that Prevent Infection](#)

Adherence monitoring tools for measuring practices; tools for CLABSI prevention located under “Central Line Adherence Monitoring”, from the California Department of Public Health (CDPH)

[Dressing Integrity Observation Audit Form](#)

Audit tool for central line dressings and appropriate changes of administration sets, from the University of Rochester

[Nursing Practice Observation Audit Form](#)

Audit tool to collect observations when nurses are changing central line dressings, from the University of Rochester

[Central Line Outcome and Process Measures Worksheet](#)

Worksheet to assist with calculation of outcome and process measures related to central line insertion, care, and maintenance, from the Joint Commission

[Bloodstream Infection Event, Device-associated Module](#)

Surveillance guidance with the current National Healthcare Safety Network (NHSN) CLABSI definition (revised January 2016), from the CDC

[CLABSI Review Form](#)

Fillable worksheet for the review of incident CLABSIs, from the University of Rochester

[Competency Check versus Observational Audit](#)

Fact sheet describing the differences between competency/skills assessments and observational audits, from AHRQ

[Competency Based Training, Audits and Feedback Modules](#)

Training modules covering the design of competency-based training (“Competency-Based Training for IP”), use of audits (“Using Audits to Monitor IP Practices”), and giving effective feedback (“Giving IP Feedback”), from Health Research & Educational Trust (HRET) and CDC’s STRIVE Infection Control Training

Feedback for Providers

[Providing Timely and Effective Feedback: Tips and Scripts](#)

Informational packet that provides tips on how to deliver effective feedback with scripted examples of common scenarios that may occur when observing hand hygiene, personal protective equipment use, and contact precautions compliance, from CDC

[CLABSI Investigation Nurse Letter](#)

Letter Template to assist in investigation of breaches that may be associated with CLABSIs, from AHRQ

[Weeks Without CLABSI Banner](#)

Downloadable PowerPoint slide to inform staff of number of weeks since last CLABSI, from AHRQ

[Eliminate Harm Across the Board: Days Since Last CLABSI Checklist and Poster](#)

Poster to inform staff of the days since the last CLABSI, including a list of prevention measures, from the Hospital Quality Institute

[Having Difficult Conversations About Preventing Infections in the ICU](#)

Video highlighting the importance of speaking up to prevent infections in the ICU, including examples of how team members can have difficult conversations, from AHRQ

[Competency Based Training, Audits and Feedback Modules](#)

Training modules covering the design of competency-based training ("Competency-Based Training for IP"), use of audits ("Using Audits to Monitor IP Practices"), and giving effective feedback ("Giving IP Feedback") from Health Research & Educational Trust (HRET) and CDC's STRIVE Infection Control Training

II. Appropriate Use of Central Venous Catheters

[Daily Central Line Maintenance Checklist](#)

A checklist for maintenance that begins by assessing necessity of central line, from The Joint Commission

[Central Line Removal Considerations](#)

List of questions to determine the presence of an indication to remove a central line, from The Joint Commission

[Improve PICC](#)

Collection of resources and guidelines for Peripherally Inserted Central Catheter (PICC), from the University of Michigan

[CLABSI Prevention Course](#)

Course on the insertion and maintenance of central lines and how to prevent CLABSIs; review of central line necessity on pages 25-26, from Novant Health

[CLABSI Prevention Strategies Training Modules- CVC Appropriateness](#)

Training modules on the prevention of CLABSI, including information and resources on CVC appropriateness ("Central Line-Associated Bloodstream Infection (CLABSI): Central Venous Catheter Appropriateness"), from Health Research & Educational Trust (HRET) and CDC's STRIVE Infection Control Training

III. Insertion Practices for Central Venous Catheters

[CDC Checklist for Prevention of CLABSI](#)

Checklist based on 2011 CDC Guideline for Prevention of Intravascular Catheter-Associated Bloodstream Infections, from the Centers for Disease Control and Prevention (CDC)

[Vascular Catheter Insertion Checklist](#)

Checklist to be completed by the inserter and assistant to document steps before, during, and after central line insertion, from BJC Healthcare

[Johns Hopkins Hospital Central Line Insertion Checklist](#)

A central line insertion checklist for the care team, from Johns Hopkins Health System

[Central Line Insertion Care Team Checklist](#)

Checklist providing sequential critical steps that have shown to reduce infections, from the Agency for Healthcare Research and Quality (AHRQ)

[Recommendations for Propofol Infusion](#)

Guide to aseptic technique and timelines for propofol infusion on pages 26-27, from the U.S. Food and Drug Administration (FDA)

[Central Line Insertion Practices Adherence Monitoring](#)

Example form for monitoring central line insertion practices, from the CDC

[Recommendations on the Use of CHG-Impregnated Dressings](#)

Updated recommendations on the use of chlorhexidine-impregnated dressings for prevention of catheter-related infections, from the CDC

[CLABSI Prevention Strategies Training Modules- Proper Insertion](#)

Training modules on the prevention of CLABSI, including information and resources on proper insertion ("Prevention of Central Line-Associated Bloodstream Infections: Aseptic Insertion and Site Selection"), from Health Research & Educational Trust (HRET) and CDC's STRIVE Infection Control Training

Empowering Staff to Communicate During Insertion

[Stop the Line for Patient Safety](#)

Video from the "Stop the Line" initiative empowering healthcare personnel to speak up when safety concerns are observed, from the U.S. Department of Veterans Affairs (VA)

[Speaking Up During Central Line Insertion to Prevent Infections in ICUs](#)

Training video explaining how to create an environment where staff feel comfortable speaking up when they observe breaks in aseptic technique during central line insertion, from AHRQ

[Having Difficult Conversations About Preventing Infections in the ICU](#)

Video highlighting the importance of speaking up to prevent infections in the ICU, including examples of how team members can have difficult conversations, from AHRQ

[Model Stop the Line Policy](#)

A sample policy that requires staff to speak up if unsafe conditions are observed, from the Minnesota Hospital Association

[CLABSI Guide to Patient Safety \(GPS\)](#)

Tool for examining and improving CLABSI prevention resources and activities, including information on empowering staff to communicate (pg 8), from States Targeting Reductions in Infections via Engagement (STRIVE)

IV. Maintenance Practices for Central Venous Catheters

[CDC Checklist for Prevention of CLABSI](#)

Checklist based on 2011 CDC Guideline for Prevention of Intravascular Catheter-Associated Bloodstream Infections, from the Centers for Disease Control and Prevention (CDC)

[CVC Maintenance Bundles](#)

Guidelines and components of a central line maintenance bundle, from The Joint Commission

[Scrub The Hub!](#)

Flyer that instructs personnel charged with maintaining central lines in proper disinfection before accessing the hub, from The Joint Commission

[Monitoring Adherence to Health Care Practices that Prevent Infection](#)

Adherence monitoring tools for measuring practices; tools for CLABSI prevention located under “Central Line Adherence Monitoring”, from the California Department of Public Health (CDPH)

[Standardized Procedure for Central Line Removal](#)

Example procedure for the removal of central lines by Nurse Practitioners, from University of California San Diego Health (UCSDH)

[CLABSI Prevention Strategies Training Modules- Maintenance](#)

Training modules on the prevention of CLABSI, including information and resources on CVC maintenance (“Maintenance and Removal of Central Venous Catheters”), from Health Research & Educational Trust (HRET) and CDC’s STRIVE Infection Control Training

[CLABSI Guide to Patient Safety \(GPS\)](#)

Tool for examining and improving CLABSI prevention resources and activities, including information on maintenance practices (pg. 10), from States Targeting Reductions in Infections via Engagement (STRIVE)

Education of Patients and Families

[American Thoracic Society: Central Venous Catheter](#)

Patient information about central line indications and symptoms to report to care givers, from the American Thoracic Society

[CLABSI Basics](#)

Information about CLABSIs and how hospitals and patients can prevent them, from the Centers for Disease Control and Prevention (CDC)

[Patient and Family Engagement Training Module](#)

Training on engaging patients and families in infection prevention, from Health Research & Educational Trust (HRET) and CDC’s STRIVE Infection Control Training

V. Supplemental Strategies

[Antimicrobial- or Antiseptic-Impregnated Catheters Utilization Algorithm](#)

Algorithm to assist in determining when to use antimicrobial or antiseptic catheters, from The Joint Commission

[Chlorhexidine Bathing Procedure](#)

A procedure that illustrates the use of chlorhexidine bathing, from the Agency for Healthcare Research and Quality (AHRQ)

[Chlorhexidine Bathing Skills Assessment](#)

A competency assessment to ensure appropriate implementation of chlorhexidine bathing, from AHRQ

[CLABSI Prevention Strategies Training Modules- Advanced Approaches](#)

Training modules on the prevention of CLABSI, including information and resources on advanced approaches to prevent CLABSI, such as use of antimicrobial impregnated catheters ("Advanced Approaches to Prevent CLABSI"), from Health Research & Educational Trust (HRET) and CDC's STRIVE Infection Control Training