

Surgical Care Safety Resources

Learn more about best practices in surgical care and resources to inform your work in surgical quality improvement.

Central Line-Associated Bloodstream Infections

Central venous catheters (CVCs) disrupt the integrity of the skin, leaving the patient susceptible to infection with bacteria or fungi. Central Line-Associated Bloodstream Infections (CLABSI) may spread to the bloodstream, potentially causing hemodynamic changes and organ dysfunction, possibly leading to death. You can reduce CLABSIs with two bundles of evidence-based steps¹:

- Central line insertion bundle
- Central line care bundle

Additional Resources

- Agency for Healthcare Research and Quality (ARHQ): [Tools for Reducing Central Line-Associated Blood Stream Infections](#)
- Canadian Patient Safety Institute (CPSI): [Central Line Infection \(CLI\)](#)
- Center for Disease Control and Prevention (CDC): [Central Line–Associated Bloodstream Infections](#)
- Institute for Healthcare Quality Improvement (IHI): [How-to Guide: Prevent Central Line–Associated Bloodstream Infection](#)

¹Canadian Patient Safety Institute (CPSI). Central line infections [Internet]. Edmonton, AB: CPSI: 2016 [cited 2017 May 31]. Available from: [Central Line-Associated Bloodstream Infection \(CLABSI\): Getting Started Kit \(patientsafetyinstitute.ca\)](#)

Enhanced Recovery After Surgery

Enhanced Recovery After Surgery (ERAS) pathways are designed to improve recovery times and outcomes in patients having elective surgery. They were initially used in patients having elective colorectal surgery, but over time they have been adopted for a range of surgical procedures. Implementing ERAS can decrease peri-operative stress, post-operative pain, gut dysfunction, and infection and promote early recovery in Ontario's surgical patients.

Additional Resources

- [Best Practice in Surgery](#) - Preoperative, Intraoperative, and Postoperative Recommendations
- [ERAS Society Guidelines](#) – Comprehensive list of guidelines
- [Canadian Patient Safety Institute](#) – Clinical Pathways Resources

Pneumonia

Pneumonia is one of the most common hospital-acquired infections. Hospital-acquired pneumonia, including ventilator-associated pneumonia (VAP), can contribute to prolonged hospital stays and serious patient morbidity and mortality. There are proven interventions that can help prevent pneumonia².

Additional Resources

- Boston University: [iCOUGH](#) pulmonary care program
- Healthcare Excellence Canada: [Pneumonia Overview](#) and [Resources](#)
- Center for Diseases Control and Prevention (CDC): [Ventilator-associated Pneumonia \(VAP\)](#)
- Institute for Healthcare Quality Improvement (IHI): [How-to Guide, Prevent Ventilator Associated Pneumonia](#)

²Healthcare Excellence Canada. Pneumonia: Introduction. Edmonton, AB; 2016 [cited 2017 May 4]. Available from: <https://www.healthcareexcellence.ca/en/what-we-do/all-programs/hospital-harm-is-everyones-concern/hospital-harm-improvement-resource/pneumonia-introduction/>

Surgical Safety Checklist

The Surgical Safety Checklist provides a list of the most common tasks operating room teams carry out during the perioperative period. The checklist improves teamwork and communication, increasing efficiency and reducing complications. Using the checklist, the surgical team performs key safety checks at three distinct phases of any surgical procedure:

- The period before induction of anesthesia (“Briefing”)
- The period after induction and before surgical incision (“Time Out”)
- The period during or immediately after wound closure but before the patient is transferred from the operating room (“Debriefing”)

Organizations across Canada have created regional versions of the Surgical Safety Checklist, which are often a combination of the checklists developed by the [Canadian Patient Safety Institute \(CPSI\)](#) and the [World Health Organization \(WHO\)](#).

Surgical Site Infections

Surgical site infection (SSI) is the most common health care–associated infection among surgical patients, with 77% of patient deaths related to infection. You can help to reduce SSIs with four key components of perioperative care³:

- Perioperative antimicrobial coverage
- Appropriate hair removal
- Maintenance of perioperative glucose control
- Perioperative normothermia

Additional Resources

- Surgical Site Infection [Quality Standard](#)
- Best Practice in Surgery: [Surgical Site Infection Prevention Guideline](#)
- Centers for Disease Control and Prevention (CDC): [Surgical Site Infection \(SSI\)](#)
- Institute for Healthcare Quality Improvement (IHI): [How-to Guide, Prevent Surgical Site Infection for Hip and Knee Arthroplasty](#)
- Safer Healthcare Now! [Prevent Surgical Site Infections: Getting Started Kit](#)

³Safer Healthcare Now! Prevent surgical site infections—getting started kit [Internet]. Edmonton, AB: Canadian Patient Safety Institute (CPSI); 2014 [cited 2017 May 4]. Available from: <http://www.patientsafetyinstitute.ca/en/toolsResources/Documents/Interventions/Surgical%20Site%20Infection/SSI%20Getting%20Started%20Kit.pdf>

Urinary Tract Infections

Health care–associated urinary tract infection (UTI) is one of the most common healthcare associated infections. Approximately 80% of UTIs are attributed to indwelling urinary catheters (catheter-associated UTI, or CAUTI) and have been associated with increased morbidity, mortality, hospital cost and length of stay. You can prevent CAUTIs by using evidence-based practices.⁴

Additional Resources

- Canadian Patient Safety Institute: [UTI: Evidence Informed Practices](#)
- Center for Diseases Control and Prevention (CDC): [Catheter-Associated Urinary Tract Infections \(CAUTI\)](#)
- Choosing Wisely Canada: [Lose the Tube](#) (A toolkit for appropriate use of urinary catheters in hospitals)
- Institute for Healthcare Improvement (IHI): [Urinary Tract Infection Bundle Compliance Audit tool](#)

⁴ Healthcare Excellence Canada. UTI: introduction. Edmonton, AB; 2016 [cited 2017 May 4]. Available from: <https://www.healthcareexcellence.ca/en/what-we-do/all-programs/hospital-harm-is-everyones-concern/hospital-harm-improvement-resource/uti-introduction/>

Venous Thromboembolism

Venous thromboembolism (VTE), including deep vein thrombosis (DVT) and pulmonary embolism (PE), are common preventable complications of hospitalization and surgery. The prevention of VTE requires evidence-based thromboprophylaxis.

Additional Resources

- Agency for Healthcare Research and Quality (AHRQ): [Preventing Hospital-Associated Venous Thromboembolism \(A Guide for Effective Quality Improvement\)](#)
- BC Patient Safety and Quality Council: [Venous Thromboembolism Resources](#)
- Healthcare Excellence Canada: [Venous Thromboembolism Overview and Resources](#)