



Science is on your side to help you prevent bloodstream infections

# Bloodstream infections: A critical issue for patients and healthcare facilities

Every IV catheter poses potential for serious and costly complications, including bloodstream infections (BSIs) which are associated with significant increases in care and costs. They are more common than you think and, in some cases, they can be deadly.<sup>1</sup>

The average cost associated with a CLABSI is

**\$25k**

CAD per person.<sup>2</sup>



Catheter-related bloodstream infections (CRBSIs) are associated with

**1.57x**

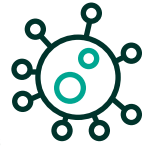
higher risk of mortality in critically ill adults.<sup>1</sup>



Short-term peripheral venous catheters (PVCs) accounted for

**22%**

of hospital-acquired CRBSIs.<sup>3</sup>

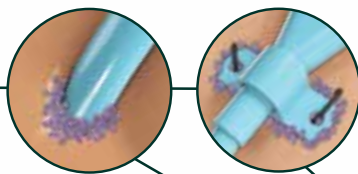


## Sources of infection. Taking a closer look at points of access

While vascular catheters provide the advantage of prolonged venous access, they present a risk of infectious complications. In fact, 60% of all hospital-acquired bloodstream infections originate from some form of vascular access.<sup>4</sup> These infections can be acquired at the time of the initial insertion or anytime throughout the duration of the venous access, with the majority of infections happening after insertion.<sup>5</sup>

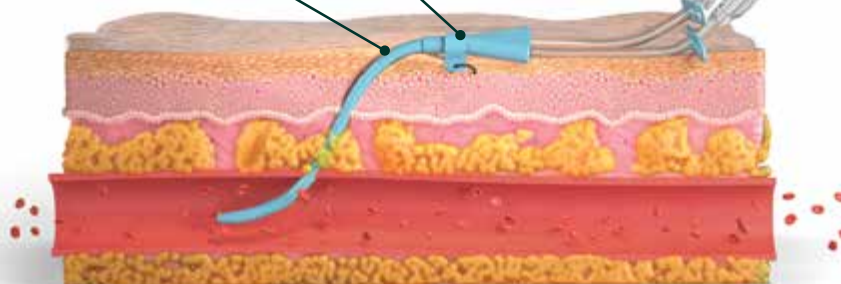
### Extraluminal contamination

Bacteria originates on the surface of the skin.



### Intraluminal contamination

Bacteria enters via the catheter hub or IV access point.





## Factors to consider to help reduce the risk of BSIs

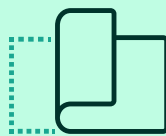
In addition to the risk of extraluminal and intraluminal contamination, BSIs can be introduced anytime during patient care. That's why it's important to consider additional solutions that meet best practices and help reduce risk throughout the process.



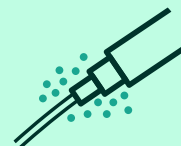
Hand hygiene



Skin preparation



Skin protection



Extraluminal protection



Intraluminal protection






# Best practices for helping prevent BSIs



CVAA  
CDC  
APIC  
INS  
ONS  
SHEA

Many well-regarded organizations have studied how to help prevent bloodstream infections. Following established evidence-based standards and best practice guidelines can aid you in your mission to help protect patients from BSIs.

Organizations include: The Canadian Vascular Access Association (CVAA), The Centers for Disease Control and Prevention (CDC), Association for Professionals in Infection Control and Epidemiology (APIC), The Infusion Nurses Society (INS), Oncology Nursing Society (ONS), and The Society for Healthcare Epidemiology of America (SHEA).

Prepare		<b>CDC:</b> Washing hands with non-antimicrobial or antimicrobial soap and water may help to physically remove spores from the surface of hands. <sup>6</sup>
		<b>INS:</b> Perform skin antisepsis with an agent of alcoholic chlorhexidine solution. <i>Std. 33, pg. S96 (Level I)</i> <sup>7</sup>
Protect		<b>INS:</b> Protect at-risk skin from irritation and breakdown with a sterile, alcohol-free skin barrier that is compatible with the antiseptic solution and when using an adhesive-based securement method. <i>Std. 42, pg. S120 (Level II)</i> <sup>7</sup>
Secure		<b>INS:</b> Use chlorhexidine-impregnated dressings for all patients 18 years and older with short-term, nontunneled central vascular access devices (CVADs). Use for arterial catheters and other CVADs when other catheter-associated bloodstream infection (CABSI) prevention strategies are not effective. <i>Std. 50, pg. S154 (Level I)</i> <sup>7</sup>
Manage		<b>INS:</b> Perform passive disinfection by applying a cap or covering containing a disinfection agent. Disinfection caps create a physical barrier to contamination between uses. <i>Std. 36, pg. S105 (Level I)</i> <sup>7</sup>

Solventum solutions can play a role in supporting government and industry guidelines aimed at infection and transmission control. Solventum does not make any claims that its products prevent or reduce the incidence of infection or the transmission of disease. For specific Solventum products, please refer to the intended use.

# Where science meets best practices

When it comes to reducing the risk of BSIs, adhering to best practice guidelines is simpler when you have access to the solutions that align with them. From hand hygiene to securement devices and more, Solventum can help you deliver the best possible patient care.



**3M™ Avagard™ D Instant Hand Antiseptic with Moisturizers (61% w/w ethyl alcohol)** provides rapid, broad-spectrum bacterial kill.

Prepare



**3M™ SoluPrep™ Skin Prep Solution** are available in multiple formulations that include chlorhexidine gluconate and isopropyl alcohol.



**3M™ Cavilon™ No Sting Barrier Film**  
A sterile\*, alcohol-free skin barrier film is designed to protect skin.  
\*Wipes and swabs only.

Protect



**3M™ Tegaderm™ CHG Chlorhexidine Gluconate I.V. Securement Dressings**  
A chlorhexidine gluconate gel pad provides antimicrobial protection for up to 7 days.<sup>8</sup>

Secure



**3M™ Curoc™ Disinfecting Port Protectors**  
Caps contain 70% isopropyl alcohol to disinfect and protect ports.

Manage

Prepare:

# Hand hygiene

Clean hands.  
Protected patients

**3M™ Avagard™ D Instant Hand Antiseptic with Moisturizers (61% w/w ethyl alcohol)** combats dry hands with cosmetic grade emollients to help prevent dryness, maintain skin integrity and in turn enhance hand hygiene compliance. Evidence shows that this uniquely moisturizing formula really works. In fact, clinical studies have shown that Avagard D Instant Hand Antiseptic actually enhanced skin hydration.<sup>9</sup>



 Kills **99%** of bacteria in 15 seconds (in vitro)<sup>10</sup>

Prepare:

# Skin preparation

A few minutes of preparation can improve patient outcomes

Using **3M™ SoluPrep™ Brand Skin Antiseptics** products is one way you can prepare skin and help reduce the risk of infection at IV sites. Available in multiple formulations and delivery formats, including wipes, swabs and applicators, 3M™ SoluPrep™ Skin Prep Solution are designed for use on intact skin prior to medically invasive procedures to help protect patients against the risk of infection.



**Protects** patients against microorganisms and helps reduce the risk of infection or reduce bacteria on skin to diminish the risk of surgical site infection.



**1st** skin antiseptic authorized in Canada for professional healthcare use.<sup>11</sup>



Used by healthcare professionals over **1 billion times.**<sup>12</sup>

Protect:

# Skin protection

## Make clinically-supported skin protection part of your protocols

Adding **3M™ Cavilon™ No Sting Barrier Film** to catheter insertion and dressing changes provides a unique terpolymer barrier solution to help promote skin protection. Be confident knowing it's the only barrier film supported by vascular access-specific data.<sup>13-15</sup>



In a study with patients with Peripherally Inserted Central Catheter (PICC) lines:<sup>13</sup>

# 62%

of patients experienced skin complications when gauze or tape was applied.

While only

# 6%



of patients experienced skin complications with Cavilon No Sting Barrier Film applied before gauze and tape protocol.



### Aligns to best practices



- ▶ CHG compatible<sup>16</sup>
- ▶ Sterile wands and wipes
- ▶ Unique easy-to-open, peel-down packaging allows aseptic delivery to the area that will be covered by the adhesive dressing/device



### Effective yet gentle

- ▶ Waterproof barrier
- ▶ Breathable
- ▶ Fast-drying<sup>17</sup>
- ▶ Alcohol-free<sup>18</sup>
- ▶ Sting-free<sup>18</sup>



Secure:

# Extraluminal protection

Antimicrobial protection. Innovative securement.  
All in one

Extraluminal contamination, a potential cause of catheter-associated bloodstream infections (CABSI), happens when bacteria on the surface of the skin move along the outside of the catheter and enter through the insertion site. To help reduce this risk, **3M™ Tegaderm™ CHG Chlorhexidine Gluconate I.V. Securement Dressings** provide immediate and continuous antimicrobial protection to an IV site.



## Infection reduction

Tegaderm CHG Dressings are cleared and clinically proven to reduce catheter-related bloodstream infections (CRBSI).<sup>19</sup>

**60%** reduction of CRBSIs

in a randomized controlled trial (RCT) of 1,879 critically ill adult subjects with 4,163 catheters.<sup>20</sup>



## Site visibility

Transparent dressing and gel pad enable early identification of potential complications at IV site and meet INS recommendation to assess the IV site and surrounding area by visual inspection.<sup>7</sup>

Tegaderm CHG I.V. Securement Dressing



BioPatch® Disk with CHG



## Catheter securement

Designed to minimize catheter movement and dislodgement and meets the INS definition of an integrated securement device (ISD) or adhesive securement device (ASD).<sup>19</sup>



7.90 lb

### Greater pull force

Tegaderm CHG I.V. Securement Dressing 1657 can withstand 7.90 lb pull force on average, which is an average 1.09 lb greater pull force vs. SorbaView® SHIELD + BIOPATCH® 7 days after application.<sup>21</sup>

## Ease of use

Integrated CHG gel pad and dressing design ensures standardized, correct application.<sup>22</sup>

Tegaderm CHG I.V. Securement Dressing



n=120

BioPatch Disk with CHG



n=128

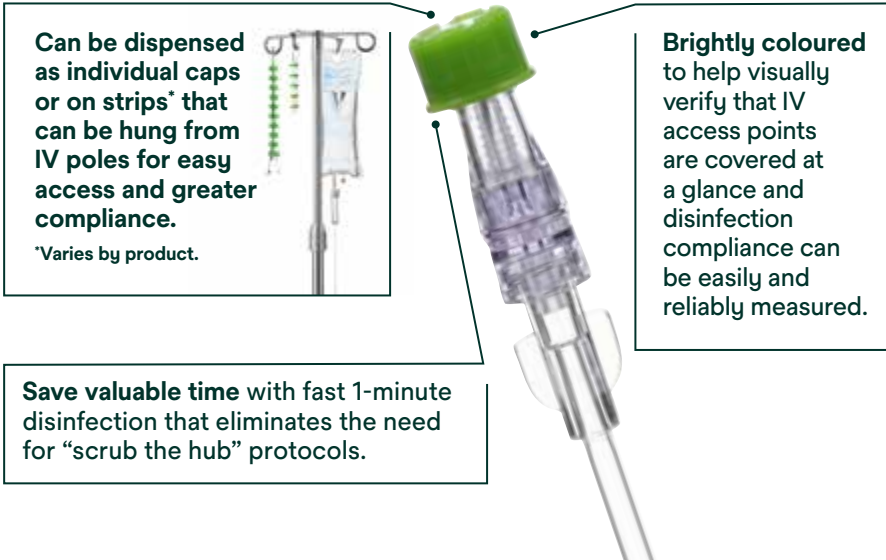
**Important Safety Information for Tegaderm CHG Dressings.** Do not use Tegaderm CHG Dressings on premature infants or infants younger than two months of age. Use of this product on premature infants may result in hypersensitivity reactions or necrosis of the skin. The safety and effectiveness of Tegaderm CHG Dressings has not been established in children under 18 years of age. For full prescribing information, see the Instructions for Use (IFU). Rx only.

Manage:

# Intraluminal protection

## Small, yet mighty to help the fight against BSIs

Intraluminal contamination occurs when bacteria migrate through the catheter post insertion, typically via contamination of the lumen through the catheter port. The family of **3M™ Curo™ Disinfecting Port Protectors** contain isopropyl alcohol and twist onto ports for effective passive disinfection and protection to all IV access points.




**Can be dispensed as individual caps or on strips\* that can be hung from IV poles for easy access and greater compliance.**  
\*Varies by product.

**Brightly coloured to help visually verify that IV access points are covered at a glance and disinfection compliance can be easily and reliably measured.**

**Save valuable time with fast 1-minute disinfection that eliminates the need for “scrub the hub” protocols.**

### Antimicrobial protection

Curo Disinfecting Port Protectors achieved



**99.99%**  
reduction in six microbes commonly associated with CLABSI (*in vitro*).<sup>23,24</sup>

Effective disinfection of needleless connectors and male luer lockers on peripheral lines has been associated with a significant decrease in peripheral line-associated bloodstream infections (PLABSI).<sup>25</sup>

### 1-minute disinfection



Cap contains **70%** isopropyl alcohol (IPA) which bathes the surface of the IV access point and disinfects in 1 minute.<sup>26</sup>

### Long lasting protection


Protects IV access points for up to 7 days if not removed. Passive disinfection removes human technique variance, providing consistent disinfection every time.<sup>26</sup>



Protects up to **7 days** if not removed.

### Stays securely in place

Twists on easily and stays in place on commonly used IV access points – meeting INS standards for add-on devices. The Luer-lock design works with a wide range of open female luer lockers.



# Education and training to stay ahead of the curve

The clinical resources and education provided by Solventum are designed to support you in each of the following areas, with a focus on your unique needs and challenges.



## Identify

Identify the areas where you have the biggest opportunity to drive impact at your facility.



## Learn

Learn about industry best practices, clinical evidence, and new ways to improve outcomes.



## Improve

Improve or implement new work processes and protocols through a variety of tools and approaches.



## Maintain

Maintain the progress you've made and continue to keep staff educated and engaged.

## Solventum solutions

We understand every journey toward zero complications is unique. That's why our program includes customized assessment tools that:

- Empower you to drive compliance
- Streamline the auditing process
- Provide customized guidance and feedback
- Help define success

### Tools include:

- IV care and maintenance
- Temperature management
- Perioperative care
- Sterilization monitoring






For more information, contact  
your Solventum representative  
or go to [3M.ca/VascularAccess](https://www.3m.ca/VascularAccess)

1. Siempos I, Kopterides P, Tsangaris I, Dimopoulou I, Armaganidis A. Impact of catheter-related bloodstream infections on the mortality of critically ill patients: A meta-analysis. *Crit Care Med*. 2009;37(7):2283-2289.
2. Laupland K, Lee H, Gregson D, Manns B. Cost of intensive care unit-acquired bloodstream infections. *J Hosp Infect*. 2006;63(2):124-32
3. Mermel L. Short-term Peripheral Venous Catheter-Related Bloodstream Infections: A Systematic Review. *Clin Infect Dis*. 2017;65(10):1757-1762.
4. Scheithauer S, Lewalter K, Schröder J, et al. Reduction of central venous line-associated bloodstream infection rates by using a chlorhexidine-containing dressing. *Infection*. 2014;42(1):155-159.
5. Association for Professionals in Infection Control and Epidemiology, Inc. APIC Implementation Guide: Guide to Preventing Central Line-Associated Bloodstream Infections. 2015. [https://apic.org/Resource\\_/TinyMceFileManager/2015/APIC\\_CLABSI\\_WEB.pdf](https://apic.org/Resource_/TinyMceFileManager/2015/APIC_CLABSI_WEB.pdf).
6. <https://www.cdc.gov/handhygiene/providers/guideline.html>
7. Gorski L, Hadaway L, Hagle ME, et al. Infusion Therapy Standards of Practice, 8th Edition. *J Infus Nurs*. 2021;44 (suppl 1):S1-S224. doi:10.1097/NAN.0000000000000396. Refer to the document to view verbatim, comprehensive standards and practice recommendations.
8. Rupp ME, Cavalieri J, Delaney K, Lundgren K, Stammers L, Beach S. Prospective, randomized, controlled trial assessing the clinical performance of a transparent chlorhexidine gel pad intravascular catheter dressing. Poster presented at 18th Annual Scientific Meeting of the Society for Healthcare Epidemiology of America (SHEA); April 2008; Orlando, FL.
9. 3M data on file. LIMS 7780.
10. 3M data on file.
11. Health Canada Drug Product Database. Accessed January 1, 2017.
12. Based on 3M™ SoluPrep™ Brand sales data.
13. George M, Ujwala P, Guduri, V, Smith G. Use of a barrier film (3M™ Cavilon™ No Sting Barrier Film) to reduce local skin complications around peripherally inserted central catheter lines: A randomised prospective controlled study. *WCET Journal*. 2016; 36(4):8-13.
14. Pivkina A, Gusarov V, Blot S, et al. Effect of an acrylic terpolymer barrier film beneath transparent catheter dressings on skin integrity, risk of dressing disruption, catheter colonisation and infection. *Intensive Crit Care Nurs*. 2018; 46: 17-23.
15. Chen Y-H, Hsieh H-L, Shih W-M. Applying skin barrier film for skin tear management in patients with central venous catheterization. *Adv Skin Wound Care*. 2020; 33(11): 582-586.
16. 3M data on file. EM-05-005732 and EM-05-002049.
17. 3M data on file. EM-05-001563, EM-05-289804 (dry time).
18. Campbell K, Woodbury M, Whittle H, Labate T, Hoskin A. A clinical evaluation of 3M™ Cavilon™ No Sting Barrier Film. *Ostomy Wound Management*. 2000;46(1):24-30.
19. U.S. Food and Drug Administration, Department of Health & Human Services. 3M™ Tegaderm™ CHG Chlorhexidine Gluconate I.V. Securement Dressing 510(k) K153410 approval letter, May 15, 2017. Retrieved September 1, 2021 from [https://www.accessdata.fda.gov/cdrh\\_docs/pdf15/K153410.pdf](https://www.accessdata.fda.gov/cdrh_docs/pdf15/K153410.pdf)
20. Timsit JF, Mimoz O, Mourvillier B, et al. Randomized controlled trial of chlorhexidine dressing and highly adhesive dressing for preventing catheter-related infections in critically ill adults. *Am J Respir Crit Care Med*. 2012;186(12):1272-1278.
21. 3M data on file. EM-05-014359.
22. Kohan C, Boyce J. A Different Experience with Two Different Chlorhexidine Gluconate Dressings for Use on Central Venous Devices. *Am J Infect Control*. 2013;41(6):S142-S143.
23. Data reflects in vitro findings on 3M™ Curox™ Disinfecting Port Protectors.
24. Weiner L, Webb A, Limbago B, et al. Antimicrobial-Resistant Pathogens Associated With Healthcare-Associated Infections: Summary of Data Reported to the National Healthcare Safety Network at the Centers for Disease Control and Prevention, 2011–2014. *Infect Control Hosp Epidemiol* 2016;1-14.
25. Duncan M, Warden P, Bernatchez B, Morse D. A Bundled Approach to Decrease Primary Bloodstream Infections Related to Peripheral Intravenous Catheters. 2018, *Journal of the Association of Vascular Access*, 23(1), 15-22.
26. 3M data on file. CLAIM-SHEET-US-05-263340.






# Ordering information

## Prepare

### Hand hygiene


	3M™ Avagard™ D Instant Hand Antiseptic with Moisturizers (61% w/w ethyl alcohol)		
	Personal size	9221C	88 mL
	Pump bottle	9222C	500 mL

### Skin preparation

	3M™ SoluPrep™ QD Swab, Small Swab, Clear, 0.5% w/v CHG/70% v/v IPA	102.02	1.6 mL
	3M™ SoluPrep™ Swab, Small Swab, Clear, 2% w/v CHG/70% v/v IPA	102.03	1.6 mL
	3M™ SoluPrep™ AQ Swab, Small Swab, Clear (Alcohol Free), 2% w/v CHG	102.07	1.6 mL
	3M™ SoluPrep™ Swab, Large Swab, Clear, 2% w/v CHG/70% v/v IPA	102.08	5.2 mL
	3M™ SoluPrep™ Swab, Large Swab, Tinted, 2% w/v CHG/70% v/v IPA	102.09	5.2 mL




## Protect

### Skin protection




	3M™ Cavilon™ No Sting Barrier Film		
	Wand	3343E	1 mL
	Wipe	3344E	1 mL

## Secure

### Extraluminal protection







	3M™ Tegaderm™ CHG Chlorhexidine Gluconate I.V. Securement Dressing	1657R	CHG pad: 1 1/8 in x 1 1/2 in 3 cm x 4 cm Dressing: 3 1/2 in x 4 1/2 in 8,5 cm x 11,5 cm
	3M™ Tegaderm™ CHG Chlorhexidine Gluconate I.V. Securement Dressing	1659R	CHG pad: 1 1/8 in x 2 3/4 in 3 cm x 7 cm Dressing: 4 in x 6 1/2 in 10 cm x 15,5 cm
	3M™ Tegaderm™ CHG Chlorhexidine Gluconate I.V. Securement Dressing	1660R	CHG pad: 4/5 in x 4/5 in 2 cm x 2 cm Dressing: 2 3/4 in x 3 3/8 in 7 cm x 8,5 cm

### Extraluminal protection

	3M™ PICC/CVC Securement Device + Tegaderm™ CHG Chlorhexidine Gluconate I.V. Securement Dressing	1877R-2100	CHG pad: 1 1/2 in x 1 3/8 in 3 cm x 4 cm Dressing: 3 1/2 in x 4 1/2 in 8,5 cm x 11,5 cm
	3M™ PICC/CVC Securement Device + Tegaderm™ CHG Chlorhexidine Gluconate I.V. Securement Dressing	1879R-2100	CHG pad: 1 1/2 in x 2 1/8 in 3 cm x 7 cm Dressing: 4 in x 6 1/2 in 10 cm x 15,5 cm
	3M™ Tegaderm™ Antimicrobial I.V. Advanced Securement Dressing	9132	3 3/8 in x 2 3/8 in 8,5 cm x 7 cm

## Manage

### Intraluminal protection

	3M™ Curoso™ Disinfecting Caps for Needleless Connectors	CFF1-270R	Individuals
	3M™ Curoso™ Disinfecting Caps for Needleless Connectors	CFF10-250R	Strips (10 count)
	3M™ Curoso™ Tips™ Disinfecting Cap for Male Luers	CM5-200R	Strips (5 count)
	3M™ Curoso™ Stopper Disinfecting Cap for Open Female Luers	CSA1-270R	Individuals
	3M™ Curoso™ Stopper Disinfecting Cap for Open Female Luers	CSA5-250R	Strips (5 count)
	3M™ Curoso™ Disinfecting Caps for Tego® Hemodialysis Connectors	CTG1-270R	Individuals



### Available in Canada from

**Solventum Medical Surgical**  
75 Courtneypark Dr. W, Unit #4  
Mississauga, ON L5W 0E3  
Canada

**Phone** 1-800-364-3577  
**Web** solventum.com/en-ca

**Note:** Specific indications, contraindications, warnings, precautions and safety information exist for these products and therapies. Please consult a clinician and product Instructions For Use prior to application.

© Solventum 2026. Solventum and the S logo are trademarks of Solventum or its affiliates. 3M, the 3M logo and other 3M owned and/or licensed trademarks are trademarks of 3M. Other trademarks are the property of their respective owners.

2202-23103-EN