



3M

Curos™

Disinfecting Port
Protectors

**When their ports are
protected, so is your
peace of mind.**

3M™ Curos™ Disinfecting Port Protectors

CLABSI

is a serious threat

Every I.V. catheter presents potential for central line-associated bloodstream infections (CLABSI).



UP TO
1 IN 4 PATIENTS
WHO CONTRACT CLABSI DIE.¹

**EVEN WHEN NOT
FATAL, CLABSIs CAN
PROGRESS TO OTHER
SERIOUS CONDITIONS,
WHICH CAN LEAD
TO EXTENDED
HOSPITAL STAYS.²**

71,900
PREVENTABLE CENTRAL LINE
INFECTIONS ANNUALLY.³

1. www.vdh.virginia.gov/epidemiology/surveillance/hai/documents/pdf/CDC_VitalSignsReportMarch2011.pdf

2. Maki DG, Kluger DM, Crnich CJ. The risk of bloodstream infection in adults with different intravascular devices: a systematic review of 200 published prospective studies. *Mayo Clin Proc.* 2006;81(9):1159–1171

3. Mermel LA. Prevention of Intravascular Catheter-Related Infections. *Ann Intern Med.* 2000; 132:391-402.



Nationwide, the annual cost to treat CLABSI exceeds

\$2.3 BILLION.⁴

\$\$\$

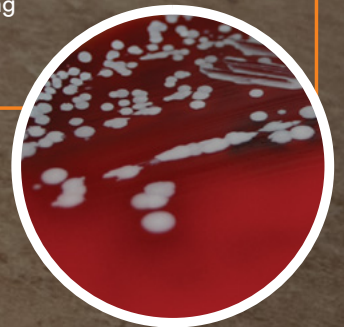
Average cost to treat CLABSI

\$45,000

PER INFECTION⁵

Are all of your ports protected?

This is a picture of a culture taken from an unprotected port. Unprotected ports can touch floors, armpits, bed linens and other unsterile surfaces adding to their bioburden.⁶



4. Provonost P, Needham D, Berenholtz S, et al. An intervention to decrease catheter-related bloodstream infections in the ICU. *N Engl J Med.* 2006; 355(26): 2725.

5. Zimlichman, E; Henderson, D et al. Health Care–Associated Infections: A Meta-analysis of Costs and Financial Impact on the US Health Care System. *JAMA Intern Med.* Published online September 02, 2013

6. Kaler, W. Making it easy for nurses to reduce the risk of CLABSI. *Patient Safety & Quality Healthcare.* 2014; 11(6), 46–49.

CLABSI is common, but it doesn't have to be.

After implementing Curos disinfecting caps in one hospital, the rate of CLABSI decreased by more than

40%⁷

After implementation of a peripheral I.V. maintenance bundle, including Curos™ Disinfecting Caps for Needleless Connectors and Curos Tips™ Disinfecting Caps for Male Luers, PLABSI rates at one institution decreased by more than

80%⁸

Each Curos disinfecting port protector contains 70% isopropyl alcohol (IPA). The IPA bathes the surface of the port and disinfects it in 1 minute.

Consistent use of Curos disinfecting caps on I.V. needleless connectors is associated with decreased CLABSI.* Curos disinfecting port protectors are alcohol-impregnated caps that twist onto ports for disinfection and protection. They disinfect prior to line access and act as a physical barrier to contamination between accesses.

Using a peripheral line bundle that included 3M™ Curos™ Disinfecting Caps and 3M™ Curos Tips™ Disinfecting Caps provides effective disinfection. Effective disinfection of needleless connectors and male luers on peripheral lines has been associated with a significant decrease in primary peripheral bloodstream infections (PLABSI).

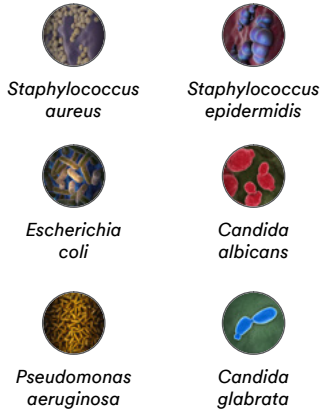
7. Merrill KC, Sumner S, Linford L, Taylor C, and Macintosh C. Impact of universal disinfectant cap implementation on central line-associated bloodstream infections. *American Journal of Infection Control* 42 (2014) 1274-7.

*See clinical evidence on pages 6-7

8. Duncan M, Warden P, Bernatchez B, and 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.

3M™ Curos™ Disinfecting Port Protectors achieved a 99.99% reduction in 6 microbes commonly associated with CLABSI^{9,10}

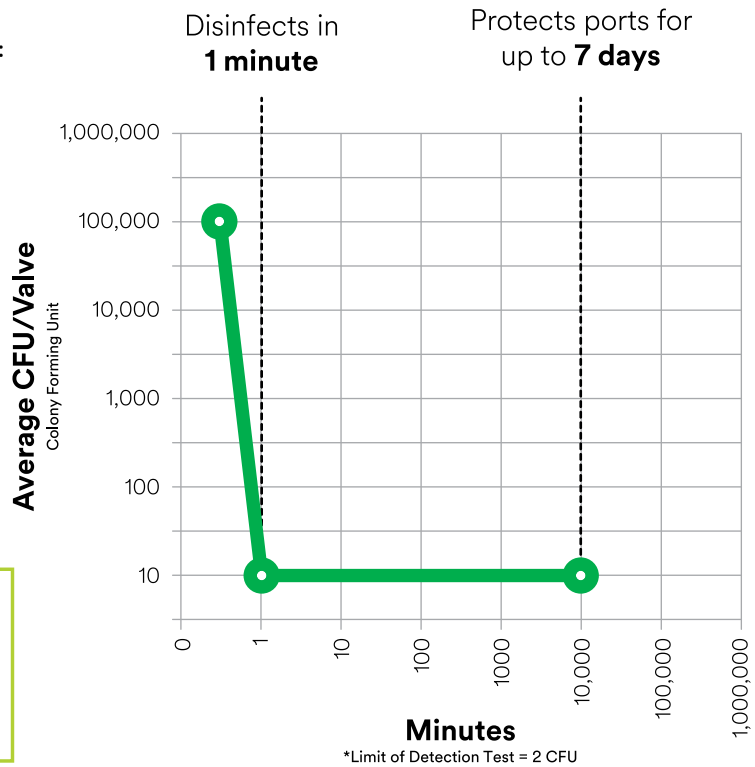
The effectiveness of Curos disinfecting port protectors was tested *in vitro* against¹⁰:



STUDY CONCLUSION:

All test samples exceeded the minimum 4-log reduction after one minute.

3M data on file.



How do Curos disinfecting port protectors compare with the “scrub the hub” method?

For more than a decade, the standard of care in port disinfection has been a thorough 15-30 second (plus drying time) manual scrub of the port with an alcohol pad, often referred to as scrubbing the hub. Curos disinfecting port protectors provide several advantages over the scrub the hub protocol.

A U.S. HOSPITAL OBSERVATIONAL STUDY SHOWED LESS THAN 10% COMPLIANCE WITH THE DISINFECTION PROTOCOL FOR CATHETER HUBS.¹¹

1 Save time

Curos alcohol-impregnated caps provide fast passive disinfection, saving nurses valuable time compared to most scrub the hub protocols. In addition, no drying time is required to achieve disinfection.

2 Provide a physical barrier

They provide a physical barrier to contamination between accesses, for up to 7 days.

3 Remove user technique variation

They remove the user technique variation found in manual scrubbing the hub procedure.

4 Provide visual compliance confirmation

Their bright color also provides quick visual confirmation that a port is clean, giving nurses peace of mind and empowering facilities to audit and improve disinfection compliance.

9. Weiner 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.

10. Data reflects *in vitro* findings on Curos™ Disinfecting Port Protectors

11. J. Lee, “Disinfection cap makes critical difference in central line bundle for reducing CLABSIs,” in Proceedings of the APIC Annual Conference, vol. 39, p. E64, Fort Lauderdale, Fla, USA, 2013.

All patients, all access points, all the time.

According to the 2016 Infusion Nurses Society Standards of Practice, "Use of passive disinfecting caps containing disinfecting agent (IPA) have been shown to reduce intraluminal microbial contamination and reduce rates of CLABSIs."¹² (Level II)

Use the entire family of Curoso disinfecting port protectors to help reduce risks across all intraluminal access points.



3M™ Curoso™ Disinfecting Cap for Needleless Connectors



3M™ Curoso Jet™ Disinfecting Cap for Needleless Connectors



3M™ Curoso™ Stopper Disinfecting Cap for Open Female Luers



3M™ Curoso™ Disinfecting Cap for Tego® Hemodialysis Connectors



3M™ Curoso Tips™ Disinfecting Cap For Male Luers

12. Gorski L, Hadaway L, Hagle ME, McGoldrick M, Orr M, Doellman D. Infusion Therapy Standards of Practice. Journal of Infusion Nursing. 2016; 39(suppl 1):S1-S159.



Where you need them, when you need them.

Curois disinfecting port protectors can be dispensed as individual caps or on strips. Strips of Curois disinfecting port protectors can be hung from I.V. poles for easy access and greater compliance.

Powerful 1 minute disinfection

Curois disinfecting port protectors contain 70% isopropyl alcohol (IPA). The IPA disinfects the surface of the port in 1 minute. They're proven effective disinfecting against *Staphylococcus aureus*, *Staphylococcus epidermidis*, *Escherichia coli*, *Pseudomonas aeruginosa*, *Candida glabrata*, and *Candida albicans*^{9,10}.

Protects for up to 7 days

Curois disinfecting port protectors protect the port for up to 7 days if not removed. Passive disinfection removes human technique variance, providing consistent disinfection every time.

Colored bright to disinfect right

Brightly colored Curois disinfecting port protectors verify that a port is clean at a glance and disinfection compliance can be easily and reliably measured.

Protection that stays put

Curois disinfecting port protectors twist on easily and stay securely in place on commonly used ports — meeting Infusion Therapy Standards of Practice (ITSP) for add-on devices.

STRIPS ARE CONSISTENT
WITH THE ITSP STANDARDS:

“Ensure disinfecting
supplies are readily
available at bedside to
facilitate staff compliance
with port disinfection.”¹³

13. Gorski L, Hadaway L, Hagle ME, McGoldrick M, Orr M, Doellman D. Infusion Therapy Standards of Practice. Journal of Infusion Nursing. 2016; 39(suppl 1):S1-S159.

Clinical studies back us up

3M™ Curo™ Disinfecting Port Protectors have been included in several clinical studies by leading researchers in infection prevention and infusion therapy.

The use of antiseptic barrier cap to disinfect and protect was associated with a

41% REDUCTION IN CLABSI (P < 0.001)

International Journal of Nursing Studies: Volume 69; January 2017

Antiseptic barrier cap effective in reducing central line-associated bloodstream infections: A systematic review and meta-analysis

Anne F. Voor in 't holt, Onno K. Helder, Margreet C. Vos, Laura Schafthuizen, Sandra Sülz, Agnes van den Hoogen, Erwin Ista

- A total of 1537 articles defined as potentially relevant; eventually, 9 studies were included in the systematic review, and 7 of the 9 in the random effect meta-analysis.
- Median compliance rate with antiseptic barrier caps was 82.5% (range 73-85%).
- Antiseptic barrier caps studied (Curo™ Disinfecting Caps for Needleless Connectors and SwabCap® Disinfecting Caps for Needle-free Connectors) were associated with a reduction in CLABSIs by 41% (IRR = 0.59, 95% CI = 0.45–0.77, P < 0.001).
- Net cost savings from the studies ranged from \$39,050 to \$3,268,990.

Unacceptable “looping” of I.V. tubing went from

51% to 2%

during the study intervention

Journal of the Association of Vascular Access: Volume 23 Number 1; March 2018

A Bundled Approach to Decrease Primary Bloodstream Infections Related to Peripheral Intravenous Catheters

Mary Duncan RN, MSN, CIC, Patricia Warden RN, MS, Stephanie F. Bernatchez PhD, Dan Morse

- Implemented and monitored compliance to a PIV bundle that included using Curo™ Disinfecting Cap for Needleless Connectors, Curo Tips™ Disinfecting Cap for Male Luers, changing all I.V. tubing every 96 hours and prohibiting the disconnection of IV tubing for convenience.
- Compliance to the use of disinfecting caps and disinfecting tips was monitored, and a compliance rate near 90% was achieved.
- The PLABSI bundle successfully reduced primary bloodstream infections due to PIVs by 80%, from 0.57 infections per 1000 patient-days (pre-intervention) to 0.11 infections per 1000 patient-days (p<0.001).

10% INCREASE

in nurse compliance resulted in a statistically significant

7% DECREASE

in infection rates

American Journal of Infection Control: Volume 40 Number 12; December 2014

Impact of Universal Disinfectant Cap Implementation on Central Line-Associated Bloodstream Infections

Katreena Collette Merrill RN, PhD, Sharon Sumner RN, BS, Lorraine Linford RN, BS, CNSC, Carrie Taylor RN, MS, CIC, Christopher Macintosh RN, BS.

- The rate of CLABSI infections decreased by >40% following implementation of the 3M™ Curo™ Disinfecting Cap for Needleless Connectors within an existing standard central-line bundle (IRR = .557, P = .004).
- Curo Cap use was associated with an estimated savings of almost \$282,840 per year in the hospital studied.
- Weekly audits of compliance demonstrated that a 10% increase in nurse compliance resulted in a statistically significant 7% drop in infection rate.

3M™ Curoso™ Caps were estimated to provide a potential clinical time savings of

82.4 WORKING DAYS PER YEAR

Port Protectors in Clinical Practice: an Audit

Corinne Cameron-Watson, Barking Havering and RedBridge NHS Trust

- The study measured the effect on compliance and incidence of vascular access device (VAD)-related bacteremia following the introduction of a passive disinfection device (Curoso Caps) for 6 months.
- As compared to data collected in a benchmark scrub the hub with CHG/IPA wipe audit, data post Curoso cap implementation showed VAD-related bacteremia rates reduced by 69% when staff compliance with Curoso cap placement onto VADs was 80% or more.
- The use of Curoso caps was estimated to provide a potential clinical-time saving of 659.4 hours per year, which equates to 82.4 working days per year (based on an 8-hour day).
- Of the 86 staff trained to use a port protector, 70% returned completed questionnaire, and of these 100% preferred the Curoso disinfecting caps to manual scrubbing.

American Journal of Critical Care, Vol. 25, No. 2: 165-172, March 2016

Use of a Central Catheter Maintenance Bundle in Long-term Care Hospitals

Anthony M. Grigoris, PhD, Amanda M. Dawson, PhD, Mary Burkett, DNP, CNS, Arthur Dylag, MA, MBA, Matthew Sears, BS, Betty Helber, RN, MS, ANE-BC, and Lisa K. Snyder, MN, MPH

- A central catheter maintenance bundle was implemented in 30 LTACHs, and compliance with the bundle was tracked for six months. CLABSI rates were monitored for 14 months before and 14 months after the bundle was implemented.
- In addition to the CDC guidelines, the bundle protocol included education on the protocol, mandatory use of Curoso™ Disinfecting Caps on all needleless connectors, Tegaderm™ CHG I.V. Securement Dressings, and a formation of a central catheter team of nurses.
- A mean reduction of 4.5 CLABSIs per LTACH occurred for the LTACHs studied for 14 months after the bundle was implemented. This infection reduction could translate to a savings of approximately \$3.7 million annually for the 30 LTACHs studied and could have potentially saved 20 patients' lives, assuming a 15% mortality rate from CLABSIs.

Estimated potential savings of approximately

\$3.7 MILLION
for the LTACHs studied

The Journal of the Association for Vascular Access: Volume 17 Number 4; December 2012

Central Venous Catheter Protective Connector Caps Reduce Intraluminal Catheter-Related Infection

*Chuck Ramirez, BA, RRT, VA-BC, Antonina M. Lee, MEd, MPH, RN, CIC, Ken Welch, MD
Banner Estrella Medical Center, Phoenix, AZ*

- During 2010, the CLABSI rate reduced from 1.9 in 2010 to 0.5 during the one-year trial period.
- The implementation of 3M™ Curoso™ Disinfecting Cap Strip for Needleless Connectors during month five of the trial increased compliance rates from 63% to 80%.

COMPLIANCE INCREASED from 63% to 80%

from single caps to strips of caps hanging on I.V. pole for bedside access

American Journal of Infection Control: Volume 40 Number 10; December 2012

Impact of Alcohol Impregnated Port Protectors and Needleless Neutral Pressure Connectors on Central Line-Associated Bloodstream Infections and Contamination of Blood Cultures in an Inpatient Oncology Unit

Michael A. Sweet, PharmD; Aaron Cumpston, PharmD; Frank Briggs, PharmD; MPH, Michael Craig MD and Mehdi Hamadani, MD

- A total of 6,851 central line-days and 16 CLABSIs (2.3 infections/1,000 central line days) were documented during the control period, compared with 3,005 central line days and one CLABSI (a rate of 0.3 infections/1,000 central line days) during the intervention period (relative risk, 0.14; 95% confidence interval [CI], 0.02-1.07; P = .03).
- This 32-bed study showed \$500,000 in annualized savings (Sweet MA, et al. SHEA Product Evaluation 2011).
- The rate of contaminated blood cultures from central lines was 2.5% (17 of 692) during the control period, but only 0.2% (1 of 470) during the intervention period (relative risk, 0.09; 95% CI, 0.01-0.65; P = .002).
- The rate of adherence to the intervention was 85.2% (228 of 269 patients with catheter protectors).

32-bed study showed

ANNUAL SAVINGS of \$500,000

The entire family of Curos Disinfecting Port Protectors

Disinfects in 1 minute

Protects ports for up to 7 days

Twists on, stays on

Brightly colored for visual verification and auditing

Single use only

3M Curos disinfecting port protectors is the only brand on the market that has offerings to help reduce risks across all I.V. access points.



3M™ Curos™ Disinfecting Cap for Needleless Connectors

Disinfects

Use as a disinfecting device for needleless connectors.

Protects

Acts as a barrier to contamination while in place.

Where you need them, when you need them

Strips of Curos products can be hung from I.V. poles for easy access and greater compliance.

Dispensing options

- Individual caps
- Strips (5 count)



3M™ Curos Jet™ Disinfecting Cap for Needleless Connectors

Easy to handle

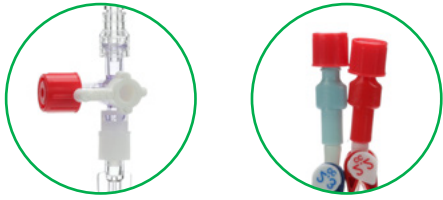
A high profile makes the Curos Jet disinfecting cap easy to handle when wearing gloves.

Designed for patient comfort

The Curos Jet disinfecting cap's rounded edges were designed to increase patient comfort.

Dispensing options

- Individual caps
- Strips (5 count)



3M™ Curos™ Stopper Disinfecting Cap for Open Female Luers

Thoughtful design

Curos Stopper disinfecting caps are designed to luer lock onto a wide range of stopcocks and catheter hubs. They utilize 70% isopropyl alcohol (IPA) to disinfect the critical surfaces of open female luers, prior to line access.

The unique cap design will hold pressure to maintain a closed system.

Dispensing options

- Individual caps
- Strips (5 count)



3M™ Curos™ Disinfecting Cap For Tego® Hemodialysis Connectors

Compatible

This specially designed Curos disinfecting cap is compatible* with Tego® Needlefree Hemodialysis Connector.

**ICU Medical. "Tego Swab Recommendations and Compatibility with Disinfecting Caps," October, 2012.*

Custom colored

White Curos caps for Tego hemodialysis connectors are easily distinguished from green caps for dedicated use on the Tego connectors.

Dispensing options

- Individual caps



3M™ Curos Tips™ Disinfecting Cap For Male Luers

Protection where it's needed

Curos Tips disinfecting caps disinfect critical surfaces and protect the distal end of I.V. tubing and other male luer devices.

Optimal alcohol placement

A unique design shields excess alcohol from entering lumen while providing sufficient flow of alcohol precisely where it is needed – on the exposed exterior male luer.

Dispensing options

- Strips (5 count)



Need help incorporating Curos Disinfecting Port Protectors into processes at your facility?

We want everyone who uses Curos disinfecting port protectors to be successful. That's why we created the 3M™ PEAK™ Clinical Outcomes Program — a collaborative approach to successfully implementing solutions and sustaining clinical outcomes. The PEAK Program follows a proven process for successful change implementation: Prepare, Educate, Assess and Keep it up.

3M™ PEAK™ Clinical Outcomes Program:

- 1 Prepare**
 3M Clinical Outcomes Specialists and 3M Sales Representatives collaborate with facility leadership to design site-specific implementation plans that set the stage for long-term success.
- 2 Educate**
 We offer highly effective, in-depth training plans and work together with your facility champions to maximize knowledge retention.
- 3 Assess**
 We offer customizable tools and metrics for you to monitor, analyze and improve progress, because if you can measure it, you can improve it.
- 4 Keep it up**
 Working as your partner in achieving positive outcomes, we stay engaged as you follow your program's path to success — providing access to compliance tools, reference materials and engaging continuing education opportunities.

Product	Dispenser	3M Product Order #	Boxes Per Case	Units Per Box	Total Caps or Tips Per Case
3M™ Curos™ Disinfecting Caps for Needleless Connectors	Individuals	CFF1-270	20	270	5,400
	Strips (5 count)	CFF10-250	20	50 Strips	5,000
3M™ Curos Jet™ Disinfecting Caps for Needleless Connectors	Individuals	CFJ1-270	20	270	5,400
	Strips (5 count)	CFJ5-250	20	50 Strips	5,000
3M™ Curos Tips™ Disinfecting Caps for Male Luers	Strips (5 count)	CM5-200	10	40 Strips	2,000
3M™ Curos™ Disinfecting Caps for Tego® Hemodialysis Connectors	Individuals	CTG1-270	8	270	2,160
3M™ Curos™ Stopper Disinfecting Caps for Open Female Luers	Individuals	CSA1-270	8	270	2,160
	Strips (5 count)	CSA5-250	8	50 Strips	2,000

To order call: 800-228-3957

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 70-2011-5723-0

To learn more about how 3M can help you and your facility protect clinician and patient safety, prevent costly I.V. site complications, and improve patient satisfaction, contact your 3M Medical Solutions Division representative or call the 3M Health Care Customer Helpline at 1-800-228-3957. Outside of the United States, contact the local 3M subsidiary.
 For more information, go to 3M.com/Medical