



ClearGuard™ HD

Antimicrobial Barrier Caps for Hemodialysis Catheters

Clinically proven to reduce the rate of CLABSIs in hemodialysis catheter patients

icumedical
human connections

Reduce hemodialysis catheter infections with clinically proven technology^{1,2}

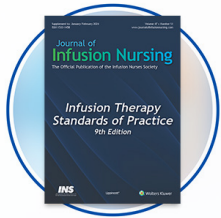


Catheter infections are frequent, costly, and deadly

Catheters cause 70% of vascular access-related BSIs and central venous catheters are used in only 19% of all dialysis procedures in the United States. Not only are central line-associated bloodstream infections (CLABSIs) a leading cause of hospitalization and the second leading cause of death in hemodialysis patients but they also increase healthcare costs by an average of \$48,108 per infection.^{3,4,5}

Reduce hemodialysis catheter infections by up to 63%¹

Multiple large, prospective, cluster-randomized multicenter open-label trials demonstrated a significant reduction in the rate of positive blood cultures (PBCs) and CLABSIs using ClearGuard HD caps vs. control groups.



Recommended in Infusion Therapy Standards of Practice 9th edition: 2024

INS SOP, 27. Vascular Access and Hemodialysis, Section C3
INS SOP, 47. Vascular Access Device-Related Infection, Section J



Recommended in the UK's NICE National Guidance for hemodialysis catheter-related bloodstream infections: 2021**

<https://www.nice.org.uk/guidance/mtg62/>



Special Report published by Global Business Media exclusively features ClearGuard HD

Titled: *Reducing Catheter Related Bloodstream Infections in Hemodialysis Patients*



Recommended in NKF's KDOQI Clinical Practice Guideline for Vascular Access: 2019⁶

21.3 KDOQI considers it reasonable to use an antimicrobial barrier cap to help reduce CRBSI in high-risk patients or facilities; the choice of connector should be based on clinician's discretion and best clinical judgment. (Expert Opinion)

A simple, intuitive design

The ClearGuard HD antimicrobial barrier cap is the first and only device for sale designed to kill infection-causing bacteria inside a hemodialysis catheter hub.* ClearGuard HD features a rod that extends into the hemodialysis catheter hub. The rod and cap threads are coated with chlorhexidine, a well-known broad-spectrum antimicrobial agent.

*Designed to kill microorganisms, not intended to be used for treatment of existing infections.



Contact us today to find out how ClearGuard HD can play a large role in your infection control practices. Visit www.icumed.com or call 866.488.6088

1. Brunelli, SM et al. Cluster-randomized trial of devices to prevent catheter-related bloodstream infection. J Am Soc Nephrol. 2018 Apr;29(4):1336-1343. 2. Hymes, JL et al. Dialysis catheter-related bloodstream infections: a cluster-randomized trial of the ClearGuard HD antimicrobial barrier cap. Am J Kidney Dis. 2017 Feb;69(2):220-227. 3. Nguyen OB, Shugart A, Lines C, Shah AB, Edwards J, Pollock D, Sievert D, Patel PR. National healthcare safety network (NHSN) dialysis event surveillance report for 2014. Clin J Am Soc Nephrol 12(7), 1139-1146, 2017. 4. United States Renal Data System. 2018 USRDS annual report: Epidemiology of kidney disease in the United States. National Institutes of Health, Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2018. 5. Results. Content last reviewed November 2017. Agency for Healthcare Research and Quality, Rockville, MD. <https://www.ahrq.gov/hai/pfp/haccost2017-results.html>. 6. Lok CE, Huber TS, Lee T, et al; KDOQI Vascular Access Guideline Work Group. KDOQI clinical practice guideline for vascular access: 2019 update. Am J Kidney Dis. 2020;75(4)(suppl 3):S1-S164.

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