

NOW you hold the power
to fight for your patients



INTRODUCING

V-Link with **VitalShield**
Luer Activated Device
Protective Coating

The first antimicrobial
IV connector

Kills on average 99.9% or more of specific
common pathogens known to cause catheter-
related bloodstream infections (CR-BSIs)^{1*}

*These *in vitro* test results of typical devices have not been shown
to correlate with a reduction in infections.

To learn more about the new V-Link device or any of our other products,
contact your Baxter representative or the Baxter Product Information
Center at 1-800-933-0303, or visit www.baxter.com.

The antimicrobial agent is not intended to be used as a treatment for existing infections. Rx only.
For safe and proper use of this device, please refer to the complete instructions for use.



Options at work.

MEDICATION DELIVERY

Baxter

Reference: 1. Data on file. Baxter Healthcare Corporation.

Baxter, Committed to a Safer Healthcare Environment, V-Link, and VitalShield are trademarks of Baxter International Inc.
Baxter Healthcare Corporation, Route 120 and Wilson Road, Round Lake, IL 60073 www.baxter.com 213236 01/08

INFECTION CONTROL & HOSPITAL EPIDEMIOLOGY

VOLUME 29, NUMBER 4

APRIL 2008

CONTENTS CONTINUED FROM COVER

CONCISE COMMUNICATIONS

- 358 **Surveillance for Catheter-Associated Bloodstream Infection in Hematology Units: Quantifying the Characteristics of a Practical Case Definition** • Leon J. Worth, MBBS, FRACP; James Black, MBBS, PhD; John F. Seymour, MBBS, FRACP, PhD; Karin A. Thursky, MBBS, FRACP; Monica A. Slavin, MBBS, FRACP
- 361 **Outbreak of *Enterococcus gallinarum* Infections After Total Knee Arthroplasty** • Michael P. Cooper, MD, MS; Fernanda Lessa, MD, MPH; Bob Brems, MS; Rivka Shoulson, BS; Steve York, MS; Alicia Peterson, MS; Judith Noble-Wang, PhD; Rosemary Duffy, DDS, MPH; L. Clifford McDonald, MD
- 364 **Investigation of an Outbreak of Central Venous Catheter-Associated Bloodstream Infection Due to Contaminated Water** • Richard W. Douce, MD; Jeannete Zurita, MD; Olga Sanchez, RN; Paul Cardenas Aldaz, MD
- 367 **Efficient Recovery of Fluoroquinolone-Susceptible and Fluoroquinolone-Resistant *Escherichia coli* Strains From Frozen Samples** • Ebbing Lautenbach, MD, MPH, MSCE; Evelyn Santana, BS; Abby Lee, BS; Pam Tolomeo, MPH, CCRP; Nicole Black, CCRP; Andrew Babson, BS; Eli N. Perencevich, MD, MS; Anthony D. Harris, MD, MPH; Catherine A. Smith, BS; Joel Maslow, MD, PhD
- 370 **Inappropriate Use of Antifungal Medications in a Tertiary Care Center in Thailand: A Prospective Study** • Apisada Suteppavarnon, MD; Anucha Apisarnthanarak, MD; Bernard Camins, MD; Kristin Mondy, MD; Victoria J. Fraser, MD
- 374 **Epidemiology of Enterococci in a Neonatal Intensive Care Unit** • Jennifer Duchon, MD, CM; Philip Graham III, MD, MSc; Phyllis Della-Latta, PhD, MSc; Susan Whittier, PhD; Diane Carp, RN, MSN; David Bateman, MD, MPH; Lisa Saiman, MD, MPH

LETTERS TO THE EDITOR

- 377 **Outbreak of *Burkholderia cepacia* Bacteremia Caused by Contaminated Chlorhexidine in a Hemodialysis Unit** • M. P. Romero-Gómez, MD; M. I. Quiles-Melero, MD; P. Peña García, MD; A. Gutiérrez Altes, MD; M. A. García de Miguel, MD; C. Jiménez, MD; Sylvia Valdezate, PhD; J. A. Sáez Nieto, PhD
- 378 **Outbreak of *Pseudomonas aeruginosa* Infections Associated With Contaminated Water in a University Hospital in Tunisia** • Wejdene Mansour, PhD; Olfa Bouallegue; Houyem Said, MD; Safia Dahmen, PhD; Nouredine Boujaafar
- 380 **Modified Measles in a Healthcare Worker After Return From Travel** • Nan-Yao Lee, MD; Hsin-Chun Lee, MD; Chia-Ming Chang, MD; Chi-Jung Wu, MD; Nai-Ying Ko, RN, PhD; Wen-Chien Ko, MD
- 381 **Risk Assessment in Infection Control: Which Risks?** • Michael Millar, FRCPath

ERRATUM

- 383 **Mah et al. (2008; 29:262-270)**

An Official Publication of the Society for Healthcare Epidemiology of America

EDITOR

Suzanne F. Bradley, MD • Ann Arbor, MI

DEPUTY EDITOR

Carol A. Kauffman, MD • Ann Arbor, MI

SENIOR ASSOCIATE EDITORS

C. Glen Mayhall, MD • Galveston, TX
Gina Pugliese, RN, MS • Chicago, IL
William Schaffner, MD • Nashville, TN

ASSOCIATE EDITORS

Ebbing Lautenbach, MD, MPH • Philadelphia, PA
Preeti N. Malani, MD, MSJ • Ann Arbor, MI
David Weber, MD, MPH • Chapel Hill, NC

STATISTICS CONSULTANT

Rodney L. Dunn, MS • Ann Arbor, MI

**SECTION EDITOR FOR GUIDELINES,
POSITION PAPERS, AND INVITED REVIEWS**

Carol Chenoweth, MD • Ann Arbor, MI

MANAGING EDITOR

Gordon Rudy, PhD, ELS • Chicago, IL

PAST EDITORS

Infection Control

Richard P. Wenzel, MD, 1980–1990 (vols. 1–11)

Infection Control and Hospital Epidemiology

Richard P. Wenzel, MD, 1991–1992 (vols. 12 and 13)

Michael D. Decker, MD, 1993–2001 (vols. 14–22)

Barry M. Farr, MD, 2002–2004 (vols. 23–25)

William R. Jarvis, MD, 2005–2006 (vols. 26 and 27)

EDITORIAL ADVISORY BOARD

Miriam Alter, PhD, MD • Atlanta, GA
Lennox Archibald, MD, FRCP • Alachua, FL
Hilary Babcock, MD • St. Louis, MO
Elise M. Beltrami, MD, MPH • Decatur, GA
David Birnbaum, PhD, MPH • Sidney, BC
Christian Brun-Buisson, MD • Creteil, France
John P. Burke, MD • Salt Lake City, UT
David P. Calfee, MD, MS • New York, NY
Yehuda Carmeli, MD, MPH • Tel Aviv, Israel
Sara E. Cosgrove, MD, MS • Baltimore, MD
Donald E. Craven, MD • Burlington, MA
Burke A. Cunha, MD • Mineola, NY
Erika D'Agata, MD, MPH • Boston, MA
Patch Dellinger, MD • Seattle, WA
Daniel Diekema, MD • Iowa City, IA
Charles E. Edmiston, Jr., PhD • Milwaukee, WI
Theodore C. Eickhoff, MD • Denver, CO
Martin S. Favero, PhD • Irvine, CA
Richard A. Garibaldi, MD • Farmington, CT
Petra Gastmeier, MD • Hanover, Germany
Dale N. Gerding, MD • Hines, IL
Donald A. Goldmann, MD • Boston, MA
Anthony D. Harris, MD, MPH • Baltimore, MD
David K. Henderson, MD • Bethesda, MD
Loreen A. Herwaldt, MD • Iowa City, IA
Peter N. R. Heseltine, MD • San Juan, CA
Karen Hoffmann, RN, CIC, MS • Chapel Hill, NC
Janine Jagger, MPH, PhD • Charlottesville, VA
John A. Jernigan, MD, MS • Atlanta, GA
James T. Lee, MD, PhD • St. Paul, MN
L. Clifford McDonald, MD • Atlanta, GA
Allison McGeer, MD • Toronto, ON

Leonard A. Mermel, DO, ScM • Providence, RI
Robert R. Muder, MD • Pittsburgh, PA
Carlene A. Muto, MD, MS • Pittsburgh, PA
Joseph M. Mylotte, MD, CIC • Buffalo, NY
David L. Paterson, MBBS, FRACP • Pittsburgh, PA
Jan Evans Patterson, MD • San Antonio, TX
Sindy M. Paul, MD • Yardley, PA
David A. Pegues, MD • Los Angeles, CA
Didier Pittet, MD, MS • Geneva, Switzerland
Michael A. Pfaller, MD • Iowa City, IA
Gina Pugliese, RN, MS • Chicago, IL
Isaam Raad, MD • Houston, TX
Jordi Rello, MD, PhD • Tarragona, Spain
Manfred L. Rotter, MD, DipBact • Vienna, Austria
Henning Rüden, MD • Berlin, Germany
William A. Rutala, PhD, MPH • Chapel Hill, NC
Lisa Saiman, MD, MPH • New York, NY
William E. Scheckler, MD • Madison, WI
Lynne M. Sehulster, PhD • Atlanta, GA
John A. Sellick, DO • Amherst, NY
Kent Sepkowitz, MD • New York, NY
Andrew E. Simor, MD • Toronto, ON
Philip W. Smith, MD • Omaha, NE
Denis W. Spelman, MD • Prahan, Victoria, Australia
Jeffrey R. Starke, MD • Houston, TX
Janet E. Stout, PhD • Pittsburgh, PA
Clyde Thornberry, PhD • Franklin, TN
William Trick, MD • Chicago, IL
Antoni Trilla, MD, PhD • Barcelona, Spain
Robert A. Weinstein, MD • Chicago, IL
Andreas Widmer, MD, MS • Basel, Switzerland
Marcus Zervos, MD • Royal Oak, MI

Infection Control and Hospital Epidemiology (ISSN 0899-823X) is published monthly by the University of Chicago Press, 1427 E. 60th St., Chicago, IL 60637-2954 (<http://www.journals.uchicago.edu/ICHE/>). The editorial office is in Chicago, Illinois.

Editorial Office

Communications should be addressed to the Editor, *Infection Control and Hospital Epidemiology*, 1427 E. 60th St., Chicago, IL 60637-2954; (e-mail: iche@press.uchicago.edu; telephone: 773-702-2448, fax: 773-753-4247). Contributors should consult the Information for Authors, which is available at the journal's Web site.

Advertising

Please direct advertising inquiries to Journals Advertising, University of Chicago Press, 1427 E. 60th St., Chicago, IL 60637 (e-mail: thill@press.uchicago.edu; telephone: 773-702-8187; fax: 773-702-0172). Publication of an advertisement in *Infection Control and Hospital Epidemiology* does not imply endorsement of its claims by the Society for Healthcare Epidemiology of America, by the Editor, or by the University of Chicago. Correspondence regarding advertising should be addressed to the advertising office in Chicago.

Permissions

Articles may be copied or otherwise reused without permission only to the extent permitted by Sections 107 and 108 of the US Copyright Law. Permission to copy articles for personal, internal, classroom, or library use may be obtained from the Copyright Clearance Center (<http://www.copyright.com>). For all other uses, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale,

please contact the Permissions Coordinator, Journals Division, University of Chicago Press, 1427 E. 60th St., Chicago, IL 60637 (e-mail: journalpermissions@press.uchicago.edu; fax: 773-834-3489). Articles in the public domain may be used without permission, but it is customary to contact the author.

Subscriptions

Subscription rates for 2008 are \$164 for individuals and \$386 for institutions. Additional rates for non-US subscribers and reduced rates for fellows, residents, and students are available at <http://www.journals.uchicago.edu/ICHE>. Subscription agent for Japan: Kinokuniya Company, Ltd. Individuals have the option to order directly from the University of Chicago Press. Single copy rates: individuals \$17; institutions \$38.

Please direct subscription inquiries, requests for back issues, and address changes to Journals Division, University of Chicago Press, P.O. Box 37005, Chicago, IL 60637 (e-mail: subscriptions@press.uchicago.edu; telephone: 773-753-3347 or toll-free in the United States and Canada 877-705-1878; fax: 773-753-0811 or toll-free 877-705-1879).

Postmaster: Send address changes to *Infection Control and Hospital Epidemiology*, University of Chicago Press, P.O. Box 37005, Chicago, IL 60637-2954.

Periodicals postage paid at Chicago, Illinois, and at an additional mailing office.

Published by the University of Chicago Press, Chicago, Illinois. © 2008 by the Society for Healthcare Epidemiology of America. All rights reserved. This publication is printed on acid-free paper.

PROVEN

to reduce incidence of CRBSI by 60%.

When it comes to preventing Catheter-Related Bloodstream Infections (CRBSI), prepping the patient's skin is not enough. That's because resident bacteria begin to recolonize the skin surface within hours of thorough antiseptic application. BioPATCH® Protective Disk with CHG is proven to reduce incidence of CRBSI by a significant 60%.¹ The proprietary technology in BioPATCH® Disk continually releases CHG for up to 7 days, for sustained antimicrobial action. So add BioPATCH® to your catheter insertion and dressing change protocols and get closer to the goal of zero CRBSI. For additional information or technical support, call 877-ETHICON. For Full Prescribing Information, and to order, visit www.BioPATCH.com, or call 800-255-2500.



References: 1. Maki DG, Mermel L, Genthner D, Hua S, Chiacchierini RP. An evaluation of BioPATCH® Antimicrobial Dressing compared to routine standard of care in the prevention of catheter-related bloodstream infection. Johnson & Johnson Wound Management, a division of ETHICON, INC. 2000. Data on file.

©ETHICON, INC. 2008

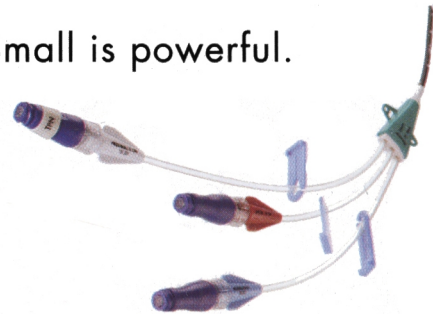
Despite its diminutive size the MicroCLAVE Neutral Displacement Connector can be one of your most powerful allies in the fight against catheter-related bloodstream infections. Neutral displacement and the ability to eliminate heparin flushing promotes better patient outcomes.

MicroCLAVE®

NEUTRAL DISPLACEMENT CONNECTOR



Small is powerful.



 **ICU Medical, Inc.**
951 Calle Amanecer, San Clemente, CA 92673, U.S.A.
Tel: +1 949 366 2183 • www.icumed.com



open up and
say anything

want better health care? start asking more questions. to your doctor. to your pharmacist. to your nurse. what are the test results? what about side effects? don't fully understand your prescriptions? don't leave confused. because the most important question is the one you should have asked. go to www.ahrq.gov/questionsaretheanswer or call 1-800-931-AHRQ (2477) for the 10 questions every patient should ask. **questions are the answer.**



In preventing CRBSI,

ZERO 

infection rate should be the goal.

When it comes to hospital-acquired infections, zero should be the only acceptable infection rate. BioPATCH[®] Protective Disk with CHG is the only one of its kind proven to reduce Catheter-Related Bloodstream Infections (CRBSI) by 60%¹. The proprietary technology in BioPATCH[®] continually releases CHG for up to 7 days, for sustained antimicrobial action. CRBSI can be attributed to high mortality rates, so add BioPATCH[®] to your catheter insertion and dressing change protocols and get closer to the goal of zero. For additional information or technical support, call 877-ETHICON. For Full Prescribing Information visit www.BioPATCH.com and, to order, please call 800-255-2500.



References: 1. Maki DG, Mermel L, Genthner D, Hua S, Chiacchierini RP. An evaluation of BioPATCH[®] Antimicrobial Dressing compared to routine standard of care in the prevention of catheter-related bloodstream infection. Johnson & Johnson Wound Management, a division of ETHICON, INC. 2000. Data on file.

©ETHICON, INC. 2008



CHG protection
comes

now
with a *view.*



Introducing 3M™ Tegaderm™ CHG Chlorhexidine Gluconate IV Securement Dressing.

If you're looking for a way to help staff comply with your protocols and deliver best patient care, the answer is finally clear. New Tegaderm™ CHG integrates antimicrobial protection with the transparent dressing that's easy to use. So you get the same protection every time.

- Clear, allowing continuous visualization of the insertion site
- Proven to be as effective as, or better at, reducing skin flora **on healthy volunteers** for up to 10 days than BIOPATCH® and more effective at preventing re-growth at 7 days
- Integrated design of dressing and CHG gel pad reduces application steps and minimizes potential for application error

*ETHICON, INC.

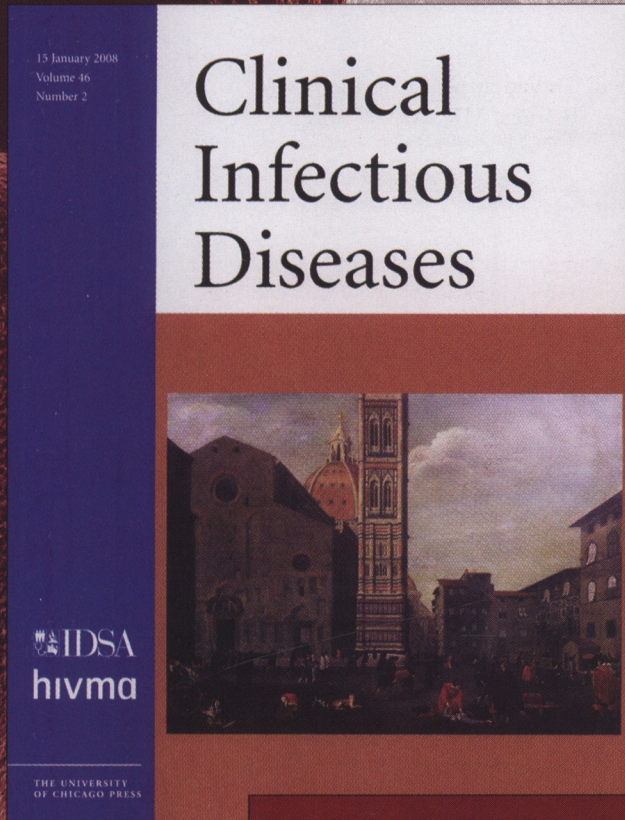
A new look at IV site protection.

Visit www.3M.com/tegadermchg for more information.

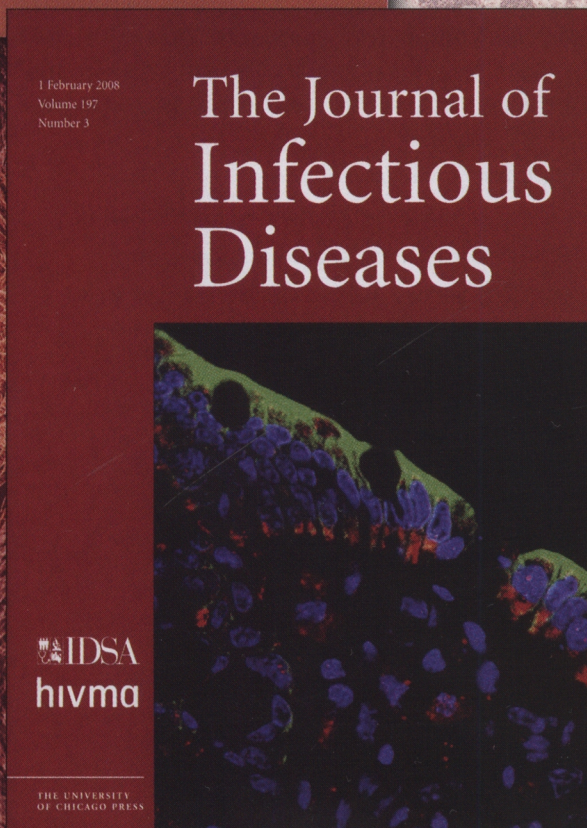
3M™ Tegaderm™ SIMPLE. DEPENDABLE. TRUSTED.
Dressings

3M

Top Ranked Infectious Diseases Research Journals



Providing Timely Information on Clinical Topics in Infectious Diseases Research



Celebrating More Than a Century of Leadership in Infectious Diseases Research



The Official Publications of the Infectious Diseases Society of America

Contact Timothy W. Hill at 773.702.8187 or thill@press.uchicago.edu



CHICAGO JOURNALS