# INFECTION CONTROL & HOSPITAL EPIDEMIOLOGY

VOLUME 28, NUMBER 3

**MARCH 2007** 

# SHEA/APIC POSITION STATEMENT

Legislative Mandates for Use of Active Surveillance Cultures to Screen for Methicillin-Resistant Staphylococcus aureus and Vancomycin-Resistant Enterococci: Position Statement From the Joint SHEA and APIC Task Force • Stephen G. Weber, MD, MS; Susan S. Huang, MD, MPH; Shannon Oriola, RN, CIC, COHN; W. Charles Huskins, MD, MSc; Gary A. Noskin, MD; Kathleen Harriman, PhD, MPH, RN; Russell N. Olmsted, MPH, CIC; Marc Bonten, MD, PhD; Tammy Lundstrom, MD, JD; Michael W. Climo, MD; Mary-Claire Roghmann, MD, MS; Cathryn L. Murphy, MPH, PhD, CIC; Tobi B. Karchmer, MD, MS

# EDITORIAL

- Healthcare-Associated Infection and Antimicrobial Resistance: Moving Beyond Description to Prevention Bonnie L. Zell, MD, MS; Donald A. Goldmann, MD
- Mortality Attributable to Nosocomial Infection: A Cohort of Patients With and Without Nosocomial Infection in a French University Hospital Pascale Fabbro-Peray, MD, PhD; A. Sotto, MD, PhD; C. Defez, MD; M. Cazaban, MD; L. Molinari, BSc; M. Pinède, BSc; A. Mahamat, MD; J.P. Daurès, MD, PhD

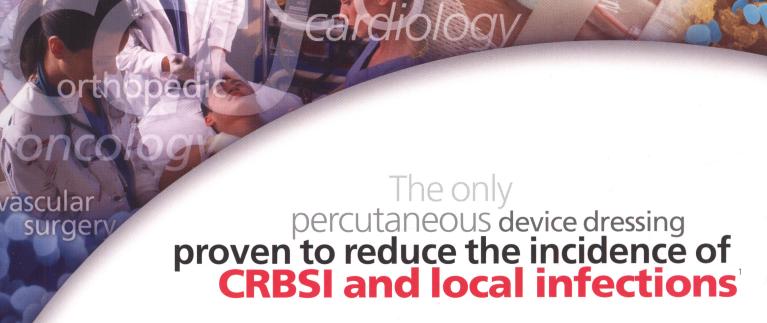
# ORIGINAL ARTICLES

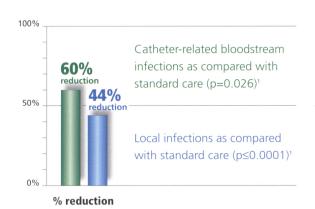
- 273 Comparison of Mortality Risk Associated With Bacteremia Due to Methicillin-Resistant and Methicillin-Susceptible Staphylococcus aureus Simone Shurland, MSc; Min Zhan, PhD; Douglas D. Bradham, PhD; Mary-Claire Roghmann, MD, MS
- **Effect of Healthcare-Acquired Infection on Length of Hospital Stay and Cost** Nicholas Graves, PhD; Diana Weinhold, PhD; Edward Tong, BSc (Hons); Frances Birrell, M App Epi; Shane Doidge, G Dip PH; Prabha Ramritu, MPH; Kate Halton, MSc; David Lairson, PhD; Michael Whitby, MPH
- **Attributable Mortality of Nosocomial** *Acinetobacter Bacteremia* Mordechai Grupper, MD; Hanna Sprecher, PhD; Tania Mashiach, MA; Renato Finkelstein, MD
- **Effect of Nosocomial Infections Due to Antibiotic-Resistant Organisms on Length of Stay and Mortality** in the Pediatric Intensive Care Unit Elizabeth E. Foglia, BS; Victoria J. Fraser, MD; Alexis M. Elward, MD
- Incidence and Outcomes of Ventilator-Associated Pneumonia in Japanese Intensive Care Units:
  The Japanese Nosocomial Infection Surveillance System Machi Suka, MD, PhD; Katsumi Yoshida, MD, PhD;
  Hideo Uno, MD; Jun Takezawa, MD, PhD
- Trends in Ventilator-Associated Pneumonia Rates Within the German Nosocomial Infection Surveillance System (KISS) I. Zuschneid, MD; F. Schwab; C. Geffers, MD; M. Behnke; H. Rüden, MD; P. Gastmeier, MD
- Prospective Surveillance for Surgical Site Infection in St. Petersburg, Russian Federation Samuel M. Brown, MD; Sergey R. Eremin, MD, PhD; Sergey A. Shlyapnikov, MD, PhD; Elena A. Petrova, MD; Ludmila V. Shirokova, MD; Donald Goldmann, MD; Edward J. O'Rourke, MD

CONTENTS CONTINUED INSIDE



THE OFFICIAL JOURNAL OF THE SOCIETY FOR HEALTHCARE EPIDEMIOLOGY OF AMERICA





BIOPATCH Dressing is specifically designed to inhibit bacterial growth around all percutaneous devices, including catheters and orthopedic pins.

# Powerful protection... Powerful proof.

- BIOPATCH Dressing provides protection against a broad spectrum of bacteria including resistant strains MRSA and VRE, as well as Candida albicans.
- In a controlled, randomized trial, use of BIOPATCH Dressing resulted in a reduction in the incidence of CRBSI and local infections as compared with standard care.¹



# B.E.S.T. Practice means **BIOPATCH** Every Single Time.

For additional information or technical support, call **1-877-384-4266** or visit our website at **www.biopatch.com**.

- † Not for use on premature infants, patients with known sensitivity to CHG. Safety and effectiveness in children under 16 years of age has not been established.
- 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. 2005. Data on file.



P.O. Box 151, Somerville, NJ 08876-0151

\*Trademark ©ETHICON, INC. 2006

# INFECTION CONTROL & HOSPITAL EPIDEMIOLOGY

VOLUME 28, NUMBER 3

**MARCH 2007** 

CONTENTS CONTINUED FROM COVER

- Jeannie P. Cimiotti, DNS, RN; Janet P. Haas, MS, RN; Phyllis Della-Latta, PhD, MS; Fann Wu, MD, PhD; Lisa Saiman, MD, MPH; Elaine L. Larson, PhD, RN
- Risk Factors Associated With Resistance to Ciprofloxacin in Clinical Bacterial Isolates From Intensive Care Unit Patients Phillip D. Levin, MB, BChir; Robert A. Fowler, MD; Cameron Guest, MD; William J. Sibbald, MD; Alex Kiss, PhD; Andrew E. Simor, MD
- Compliance With Routine Use of Gowns by Healthcare Workers (HCWs) and Non-HCW Visitors on Entry
  Into the Rooms of Patients Under Contact Precautions Farrin A. Manian, MD, MPH; John J. Ponzillo, PharmD
- Hand Hygiene Practices After Brief Encounters With Patients: An Important Opportunity for Prevention Rebecca E. Dedrick, AB, MPH; Ronda L. Sinkowitz-Cochran, MPH; Candace Cunningham, RN; Robert R. Muder, MD; Peter Perreiah, BS, BA; Denise M. Cardo, MD; John A. Jernigan, MD, MS
- Population Kinetics of the Skin Flora on Gloved Hands Following Surgical Hand Disinfection With 3 Propanol-Based Hand Rubs: A Prospective, Randomized, Double-Blind Trial • Manfred L. Rotter, MD; Günter Kampf, MD; Miranda Suchomel, DiplIng; Michael Kundi, PhD
- Influence of Rings on the Efficacy of Hand Sanitization and Residual Bacterial Contamination Montri D. Wongworawat, MD; Sidney G. Jones, MD

# CONCISE COMMUNICATIONS

- Challenges Faced by Hospital Healthcare Workers in Using a Syndrome-Based Surveillance System During the 2003 Outbreak of Severe Acute Respiratory Syndrome in Taiwan Fuh-Yuan Shih, MD; Muh-Yong Yen, MD; Jiunn-Shyan Wu, MS; Fang-Kuei Chang, BS; Lih-Wen Lin, BS; Mei-Shang Ho, MD; Chao A. Hsiung, PhD; Ih-Jen Su, MD; Melissa A. Marx, DrPH; Howard Sobel, MD; Chwan-Chuen King, DrPH
- **Compliance With Isolation Precautions at a University Hospital** David J. Weber, MD, MPH; Emily E. Sickbert-Bennett, MS; Vickie M. Brown, RN, MPH; Rebecca H. Brooks, RN; Irene P. Kittrell, RN; Brenda J. Featherstone, RN; Tina L. Adams, RN; William A. Rutala, PhD, MPH
- 362 Is Compliance with Hand Disinfection in the Intensive Care Unit Related to Work Experience? Danilo Teixeira Noritomi, MD; Marialuisa Chierego, MD; Bauduin Byl, MD; Nicola Menestrina, MD; Tiziana Carollo, MD; Marc Struelens, MD, PhD; Jean-Louis Vincent, MD, PhD
- Assessment of Healthcare Professionals' Adherence to Hand Hygiene After Alcohol-Based Hand Rub Introduction at an Intensive Care Unit in São Paulo, Brazil · Solange L. Santana, RN; Guilherme H. C. Furtado, MD, MSc; Ana Paula Coutinho, RN; Eduardo A. S. Medeiros, MD, PhD
- Postoperative Chryseobacterium indologenes Bloodstream Infection Caused by Contamination of Distillate Water Mehmet Refik Bayraktar, PhD; Elif Aktas, MD; Yasemin Ersoy, MD; Aysegul Cicek, MD; Riza Durmaz, PhD

# LETTERS TO THE EDITOR

- 370 Education-Based Intervention to Prevent Catheter-Associated Bloodstream Infection Caroline Marshall, FRACP, PhD; Jim Black, MBBS, PhD
- 370 Reply to Marshall and Black David K. Warren, MD, MPH; Victoria J. Fraser, MD; Prevention Epicenter Program

An Official Publication of the Society for Healthcare Epidemiology of America

### **EDITOR**

Suzanne F. Bradley, MD • Ann Arbor, MI

# **DEPUTY EDITORS**

Carol A. Kauffman, MD • Ann Arbor, MI David P. Calfee, MD, MS • New York, NY

# ASSISTANT EDITOR

Preeti N. Malani, MD, MSJ • 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

Donald A. Goldmann, MD • Boston, MA Didier Pittet, MD, MS • Geneva, Switzerland Andreas Widmer, MD, MS • Basel, Switzerland

### SECTION EDITORS

Beyond Infection Control: The New Hospital Epidemiology

Wing Hong Seto, MD • Hong Kong

Disinfection and Sterilization

William A. Rutala, PhD, MPH • Chapel Hill, NC

### From the Laboratory

Marcus Zervos, MD • Royal Oak, MI

Infections in Immunocompromised Patients Kent Sepkowitz, MD • New York, NY

# Information Management

John A. Sellick, DO • Amherst, NY

# Issues in Surgery

James T. Lee, MD, PhD • St. Paul, MN

# Medical News

Gina Pugliese, RN, MS • Chicago, IL Martin S. Favero, PhD • Irvine, CA

# Practical Healthcare Epidemiology

Loreen A. Herwaldt, MD • Iowa City, IA

# Statistics for Hospital Epidemiology David Birnbaum, PhD, MPH • Sidney,

British Columbia

# Topics in Long-Term Care

Philip W. Smith, MD • Omaha, NE

# Topics in Occupational Medicine

David Weber, MD, MPH • Chapel Hill, NC

# MANAGING EDITOR

Gordon Rudy, PhD, ELS • Chicago, IL

# 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 Marc J. M. Bonten, MD, PhD • Utrecht, The Netherlands

John M. Boyce, MD • New Haven, CT Christian Brun-Buisson, MD • Creteil

Christian Brun-Buisson, MD • Creteil, France John P. Burke, MD • Salt Lake City, UT Yehuda Carmeli, MD, MPH • Tel Aviv, Israel Carol Chenoweth, MD • Ann Arbor, MI 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 Jean Yves Fagon, MD, MPH • Paris, France Mark Farrington, MA, FRCPath • Cambridge, UK

Petra Gastmeier, MD • Hanover, Germany Dale N. Gerding, MD • Hines, IL Stephan Harbarth, MD, MS • Geneva, Switzerland Anthony D. Harris, MD, MPH • Baltimore, MD

Richard A. Garibaldi, MD • Farmington, CT

David K. Henderson, MD • Bethesda, MD
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
Ebbing Lautenbach, MD, MPH • Philadelphia, PA
L. Clifford McDonald, MD • Atlanta, Georgia
Allison McGeer, MD • Toronto, Ontario
John E. McGowan, Jr., MD • Atlanta, GA
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
Juhani Ojajärvi, MD • Helsinki, Finland

Michael T. Osterholm, PhD, MPH • Minneapolis, MN 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

Michael A. Pfaller, MD • Iowa City, IA Isaam Raad, MD • Houston, TX

Jordi Rello, MD, PhD • Tarragona, Spain Manfred L. Rotter, MD, DipBact • Vienna, Austria

Henning Rüden, MD • Berlin, Germany Lisa Saiman, MD, MPH • New York, NY Syed A. Sattar, PhD • Ottawa, Ontario

William E. Scheckler, MD • Madison, WI Lynne M. Sehulster, PhD • Atlanta, GA Andrew E. Simor, MD • Toronto, Ontario

Denis W. Spelman, MD • Prahan, Victoria, Australia Susan Springthorpe, MSc • Ottawa, Ontario

Jeffrey R. Starke, MD • Houston, TX Janet E. Stout, PhD • Pittsburgh, PA Michael L. Tapper, MD • New York, NY

Clyde Thornsberry, PhD • Franklin, TN
Jerome Tokars, MD, PhD • Atlanta, GA

William Trick, MD • Chicago, IL Antoni Trilla, MD, PhD • Barcelona, Spain Robert A. Weinstein, MD • Chicago, IL

Infection Control and Hospital Epidemiology (ISSN 0899-823X) is published monthly by the University of Chicago Press, 1427 East 60th St., Chicago, IL 60637-2954 (http://www.journals.uchicago.edu/ICHE/). The editorial offices are 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 *ICHE* Web site.

# Advertising

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 business office in Chicago (see above).

# Permissions

The copyright code on the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made only for personal or internal use or for the personal or internal use of specific clients and provided that the copier pays the stated per-copy fee through the Copyright Clearance Center (CCC), 222 Rosewood Dr., Danvers, MA 01923. To request permission for other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective

works, or for resale, please write to the Permissions Coordinator, Journals Division, University of Chicago Press, 1427 East 60th St., Chicago, IL 60637-2954; fax (773) 834-3489. For articles in the public domain, permission to reprint should be obtained from the author.

# Subscriptions

Subscription rates for 2007 are \$156 for individuals and \$368 for institutions. Additional rates for non-US subscribers and reduced rates for fellows, residents, and students are available at 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 \$16; institutions \$37.

Please direct subscription inquries, back-issue requests, and address changes to The University of Chicago Press, Journals Division, P.O. Box 37005, Chicago, IL 60637. 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. E-mail: subscriptions@press.uchicago.edu.

**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, IL. © 2007 by The Society for Healthcare Epidemiology of America. All rights reserved. This publication is printed on acid-free paper.

# Infection Control & Hospital Epidemiology



# IMPROVE THE QUALITY OF YOUR RESEARCH TIME

# Activate your online subscription

Take advantage of online-only features and improve the quality of your research time. Search articles, authors, and terms. Two more online services to increase your productivity:

# **Q-TOC** Alerts

e-TOC alerts deliver links to new content via e-mail as soon as each issue is available online. Abstracts and free-access articles are available to subscribers and nonsubscribers; regular full-text articles are available to subscribers and subscribing institutions.

# RSS RSS Feeds

RSS (Really Simple Syndication) is a free, easy, and automatic way to inform you when new journal articles are published. Instead of visiting a journal Web site for new articles, let RSS tell you the moment new articles are posted! Sign up today!

# University of Chicago Press

P.O. Box 37005 • Chicago, IL 60637 • Tel: 773/753-3347 • Fax: 773/753-0811 subscriptions@press.uchicago.edu

Despite its diminutive size the MicroCLAVE Neutral 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.



Hands and germs hang out in the same places. Especially in your hospital. Hibigeebie Proteus Mirabilis Staphylococcus Epidermidis

Hands are the first, and last, lines of defense against the spread of pathogens. It's not a job for just any antiseptic. The CDC advises that alcohol alone is not appropriate when hands are visibly dirty or contaminated with proteinaceous materials.<sup>1</sup>

# Compare washing with Hibiclens to using other antiseptic solutions like alcohol, iodine and PCMX:

- Broad-spectrum residual action lasts up to 6 hours after washing.<sup>2</sup>
- Efficacy is **not** compromised by contact with organic matter like blood.<sup>3</sup>
- Proprietary formulation is gentler on your skin.4
- For 34 years, the standard by which all others are compared.
- Removes dirt and debris leaving hands clean.
- With Hibiclens as your first, and last, wash of the day, you'll have one less thing to worry about.

# Kill the Hibigeebies with

# **HIBICLENS**

**Antimicrobial Antiseptic Skin Cleanser** 



'Guideline for Hand Hygiene in Health-Care Settings. Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HiCPAC/SHEA/APIC/IDSA Hand Hygiene Task Force. October 25, 2002 /Vol. 51 / No. RR-16. Accessed at: http://www.cdc.gov/mmw/PDF/rr/r/f5116 god on 18 September 2005. "Regent Medical Study #303917-150." "Independent Lab Test Time-Kill Study 5 Minutes S. epidermids ATCC #12228. Protocol #040907-150." "PRACS report #R05-025 and R05-0871. Hibiolens, Hibiolens, Hibiolens of Hibiolens of Hibiolens (Section 1998) and Milhinycke are registered trademarks of Milhinycke Group of companies. Distributed by Milhinycke Health Care US, LLC, Norcross, Georgia 30092. © 2006 Regent Medical Limited. All rights reserved. 1,800.843,8497 www. hibiogebies.com