

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY[®]

EDITORIAL

- Good Intentions, False Economy
JAMES T LEE, MD, PHD 6

ORIGINAL ARTICLES

- The Epidemiology of Hemorrhage Related to Cardiothoracic Operations**
LOREEN A. HERWALDT, MD; SHERI K. SWARTZENDRUBER, RN, BS; MICHAEL B. EDMOND, MD, MPH; RICHARD F. EMBRZY, MD; KIM R. WILKERSON, ART RICHARD P. WENZEL, MD, MSc; I&H M. I?su, MD, MSc 9

- Surgical-Site Infection Rates in Patients Who Undergo Elective Surgery on the Same Day as Their Hospital Admission**
FARRIN A. MANIAN, MD, MPH; LYNN MEYER, RN, MPH, CIC 17

- Increased Bloodstream Infection Rates in Surgical Patients Associated With Variation From Recommended Use and Care Following Implementation of a Needleless Device**
SUSAN TEMPORADO COOKSON, MD; MELANIE IHRIG, DVM; EDWARD M. O'MARA, MD; MARK DENNY, MBA, CIC; HELEN VOLK, RN, CIC; SHAILEN N. BANEWEE, PHD; ALAN I. HARTSTEIN, MD; WILLIAM R. JARVIS, MD 23

- Use of an Estimation Method to Derive an Appropriate Denominator to Calculate Central Venous Catheter-Associated Bloodstream Infection Rates**
SUSAN TEMPORA-O COOKSON, MD; MELANIE IHRIG, DVM; EDWARD M. O'MARA, MD; ALAN I. HARTSTEIN, MD; WILLIAM R. JARVIS, MD 28

- Risk Factors for Mortality in *Staphylococcus aureus* Bacteremia**
LUCIENI OLIVEIRA CONTERNO, MD; SERGIO BARSANTI WEY, MD; ADA-TO CASTEM, MD 32

CONCISE COMMUNICATION

- Stool Colonization of Healthcare Workers With Selected Resistant Bacteria**
YEHUDA CARMELI, MD; LATA VENKAT-, MS; PAO-A C. DEGIROLAMI, MD; DEBORAH A. LICHTENBERG, RN; ADOLF W. KARCHMER, MD; MATTHEW H. SAMORE, MD 38

PRACTICAL HEALTHCARE EPIDEMIOLOGY

- Infection Control in the Outpatient Setting**
LOREEN A. HERWALDT, MD; SHANON D. SMITH, MD; CHERYL D. CARTER, RN, BSN 41

Continued inside.

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY[®]

CONTENTS

Continued from cover

CALENDAR

8

MEDICAL NEWS

GINA PUGLIESE, RN, MS; MARTIN S. FAVERO, PHD

INH for HIV-Infected Persons With Anergy at Risk for TB	16
Pseudomonas Infections in Children With Cystic Fibrosis	22
Chlamydia and Risk of Coronary Artery Disease	27
MDR TB Trends in US	37
Costly Consequences of Multiple Misdiagnoses of TB	40
Risk Factors for Neurosurgical Site Infections	75
Hepatitis B and Liver Transplantation	75
Cryptosporidiosis and Child-Care Facilities	75

SHEA NEWS

MURRAY D. BATT, MD

80

*To view abstracts of these articles,
visit us on the Internet at <http://www.slackinc.com/general/iche>*

THE PUBLICATION OF ADVERTISING IN THE JOURNAL DOES NOT CONSTITUTE ANY GUARANTEE OR ENDORSEMENT BY THE SOCIETY FOR HEALTHCARE EPIDEMIOLOGY OF AMERICA OR SLACK INCORPORATED OF THE ADVERTISED PRODUCT OR SERVICE OR OF CLAIMS MADE BY THE ADVERTISER. THE PUBLICATION OF ARTICLES AND OTHER EDITORIAL MATERIAL IN THE JOURNAL DOES NOT NECESSARILY REPRESENT THE POLICY RECOMMENDATIONS OR ENDORSEMENT BY THE SOCIETY.

PUBLISHER: Infection Control and Hospital Epidemiology (ISSN-0899-823X, Canadian GST#129780466) is published exclusively by SLACK Incorporated 12 times a year. Address: 6900 Grove Rd., Thorofare, NJ 08086. Telephone: (609) 848-1000.

SHEA: 19 Mantua Rd., Mt. Royal, NJ 08061; telephone, 609-423-0087; fax, 609-423-3420; e-mail address, sheahq@tmg.smarthub.com.

COPYRIGHT 1998 The Society for Healthcare Epidemiology of America, Inc., and SLACK Incorporated. All rights reserved. No part of this publication may be reproduced without written permission from the publisher. Printed in the USA.

SUBSCRIPTIONS: Requests should be addressed to the publisher (except Japan). In Japan, contact Woodbell Incorporated, 4-22-11, Kitakasai, Edogawaku, Tokyo 134, Japan. Subscription rates in the United States and possessions: Individual: One year-\$98.00; Two years-\$136.00; Three years-\$169.00; Institutional: One year-\$120.00; Two years-\$170.00; Three years-\$220.00. Fellows: \$49 per year with proof of training status. Canada: \$19.00 additional each year plus 7% for Canadian Goods & Services tax; all other countries: \$38.00 additional each year. Overseas surface, \$84.00 each year overseas air mail. Single copies of current issues may be obtained for \$15.00, United States and possessions; \$20.00 all other countries.

INSTRUCTIONS TO AUTHORS: Authors may submit manuscripts prepared in accordance with the 1997 revision of the "Uniform Requirements for Manuscripts Submitted to Biomedical Journals." The Uniform Requirements has been published in several journals, including *Infect Control Hosp Epidemiol* 1997;18:457-464 and *Ann Intern Med* 1997;126:36-47. A digital version is available on our web site (<http://www.slackinc.com/general/iche/ichehome.htm>). Submit to ICHE Editorial Offices, Vanderbilt University School of Medicine, A-1131 Medical Center North, Nashville, TN 37232-2637, USA. All submissions must be accompanied by copyright form(s) signed by all authors (see January issue or our web site).

REPRINTS: All requests to reprint or use material published herein should be addressed to Jennifer McGovern, SLACK Incorporated, 6900 Grove Rd., Thorofare, NJ 08086. For reprint orders and prices, contact Jennifer McGovern at (609) 848-1000. Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by SLACK Incorporated, provided that the base fee of \$1.00 per copy, plus \$.15 per page is paid directly to Copyright Clearance Center, 27 Congress St., Salem, MA 01970. This consent does not extend to other kinds of copying, such as for general distribution, resale, advertising and promotional purposes, or for creating new collective works.

CHANGE OF ADDRESS: Notice should be sent to the publisher six weeks in advance of effective date. Include old and new addresses with zip codes. The publisher cannot accept responsibility for undelivered copies. Periodicals postage paid at Thorofare, New Jersey 08086-9447 and at additional mailing offices. POSTMASTER: Send address changes to SLACK Incorporated, 6900 Grove Rd., Thorofare, NJ 08086.

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY is listed in Index Medicus, Current Contents-Clinical Practice, Hospital Literature Index, Cumulative Index to Nursing & Allied Health Literature, Nursing Abstracts, Laboratory Performance Information Exchange System, and RNdex Top 100.

EDITORIAL OFFICES

Vanderbilt University School of Medicine
A-1131 Medical Center North
Nashville, TN 37232-2637
(615) 343-1095; (615) 343-1882 (FAX)
Email: iche@mcmail.vanderbilt.edu

EDITOR

Michael D. Decker, MD, MPH

MANAGING EDITOR

Susan Cantrell

STATISTICAL EDITOR

Beverly G. Mellen, PhD

SENIOR ASSOCIATE EDITORS

C. Glen Mayhall, MD

Gina Pugliese, RN, MS

William Schaffner, MD

ASSOCIATE EDITORS

Donald A. Goldmann, MD

Didier Pittet, MD, MS

Andreas Widmer, MD, MS

SECTION EDITORS

Beyond Infection Control:

The New Hospital Epidemiology

Bryan P. Simmons, MD

Stephen B. Kritchevsky, PhD

Memphis, Tennessee

Wing Hong Seto, MD

Hong Kong

Disinfection and Sterilization

William A. Rutala, PhD, MPH

Chapel Hill, North Carolina

Emerging Infectious Diseases

Larry J. Strausbaugh, MD

Portland, Oregon

Robert W. Pinner, MD

Atlanta, Georgia

From the Laboratory

Marcus Zervos, MD

Royal Oak, Michigan

Fred C. Tenover, PhD

Atlanta, Georgia

Information Management

John A. Sellick, DO

Buffalo, New York

The International Perspective

Mary D. Nettleman, MD, MS

Richmond, Virginia

Issues in Surgery

James T. Lee, MD, PhD

St. Paul, Minnesota

Medical News

Gina Pugliese, RN, MS

Chicago, Illinois

Martin S. Favero, PhD

Irvine, California

Practical Healthcare Epidemiology

Loreen A. Herwaldt, MD

Iowa City, Iowa

SHEA News

Murray D. Batt, MD

Clarksburg, West Virginia

Statistics for Hospital Epidemiology

David Birnbaum, PhD, MPH

Sidney, British Columbia, Canada

Topics in Long-Term Care

Philip W. Smith, MD

Omaha, Nebraska

Topics in Occupational Medicine

David Weber, MD, MPH

Chapel Hill, North Carolina

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY[®]

EDITORIAL ADVISORY BOARD

- Jacques F. Acar, MD
Paris, France
- J. Wesley Alexander, MD
Cincinnati, Ohio
- Paul Arnow, MD
Chicago, Illinois
- Graham A.J. Ayliffe, MD
Birmingham, United Kingdom
- Neil L. Barg, MD
Yakima, Washington
- Elizabeth Ann Bolyard, RN, MPH, CIC
Atlanta, Georgia
- John M. Boyce, MD
Providence, Rhode Island
- Professor Dr. Ilja Braveny
Munich, Federal Republic of Germany
- Charles Bryan, MD
Columbia, South Carolina
- Christian Brun-Buisson, MD
Creteil, France
- Donald E. Craven, MD
Boston, Massachusetts
- Sue Crow, MSN, RN, CIC
Shreveport, Louisiana
- Franz Daschner, MD
Freiburg, Federal Republic of Germany
- Leigh G. Donowitz, MD
Charlottesville, Virginia
- Charles E. Edmiston, Jr., PhD
Milwaukee, Wisconsin
- Theodore C. Eickhoff, MD
Denver, Colorado
- Bruce Farber, MD
Manhasset, New York
- Victoria J. Fraser, MD
St. Louis, Missouri
- Peter C. Fuchs, MD, PhD
Black Butte, Oregon
- Richard A. Garibaldi, MD
Farmington, Connecticut
- Velvl Greene, PhD, MPH
Beer Sheva, Israel
- Robert Gaynes, MD
Atlanta, Georgia
- David W. Gregory, MD
Nashville, Tennessee
- David K. Henderson, MD
Bethesda, Maryland
- Peter N.R. Heseltine, MD
Los Angeles, California
- Karen Hoffmann, RN, CIC, MS
Chapel Hill, North Carolina
- Marguerite McMillan Jackson, RN, PhD
San Diego, California
- Janine Jagger, MPH, PhD
Charlottesville, Virginia
- William R. Jarvis, MD
Atlanta, Georgia
- Douglas S. Kernodle, MD
Nashville, Tennessee
- Robert H. Latham, MD
Nashville, Tennessee
- Lewis B. Lefkowitz, MD
Nashville, Tennessee
- Hsieh-Shong Leu, MD, MSc
Taipei, Taiwan
- Jack Levy, MD
Brussels, Belgium
- Victor Lorian, MD
Bronx, New York
- Dennis G. Maki, MD
Madison, Wisconsin
- Professor Dr. Walter Marget
Munich, Federal Republic of Germany
- William J. Martone, MD
Bethesda, Maryland
- Allison McGeer, MD
Toronto, Ontario, Canada
- John E. McGowan, Jr., MD
Atlanta, Georgia
- Jonathan L. Meakins, MD, DSc
Montreal, Quebec, Canada
- Raf Mertens, MD
Brussels, Belgium
- Robert R. Muder, MD
Pittsburgh, Pennsylvania
- Joseph M. Mylotte, MD, CIC
Buffalo, New York
- Lindsay Nicolle, MD
Winnipeg, Manitoba, Canada
- Juhani Ojajarvi, MD
Helsinki, Finland
- Michael T. Osterholm, PhD, MPH
Minneapolis, Minnesota
- Jan Evans Patterson, MD
San Antonio, Texas
- Sindy M. Paul, MD
Trenton, New Jersey
- Michael A. Pfaller, MD
Iowa City, Iowa
- Samuel Ponce de Leon, MD, MSc
Mexico City, Mexico
- Isaam Raad, MD
Houston, Texas
- Manfred L. Rotter, MD, DipBact
Vienna, Austria
- Theodore Sacks, MD
Jerusalem, Israel
- William E. Scheckler, MD
Madison, Wisconsin
- Kent Sepkowitz, MD
New York City, New York
- Denis Spelman, MD
Pahran Victoria, Australia
- Michael L. Tapper, MD
New York, New York
- Clyde Thornsberry, PhD
Brentwood, Tennessee
- Professor Leonid P. Titov
Minsk, Republic of Belarus
- Timothy R. Townsend, MD
Millwood, Virginia
- Antoni Trilla, MD, PhD
Barcelona, Spain
- Professor Wang Shu-Qun
Beijing, People's Republic of China
- J. John Weems, Jr., MD
Greenville, South Carolina
- Robert A. Weinstein, MD
Chicago, Illinois
- Professor Dr. W. Weuffen
Greifswald, Federal Republic of Germany
- Sergio B. Wey, MD
São Paulo, Brazil
- Rebecca Wurtz, MD
Evanston, Illinois

SLACK Incorporated

6900 Grove Road
Thorofare, New Jersey 08086
(609) 848-1000

Vice President/Group Publisher

Richard N. Roash

Publisher

John C. Carter

Editorial Director

Jennifer Kilpatrick

Production Editor

Shirley P. Strunk, ELS

Assistant Editor

Eileen C. Anderer

Circulation Manager

Lester J. Robeson, CCCC

Production Director

Christine Malin

Production Coordinator

Joanne Patterson

Publishing Director/ Advertising

Wayne McCourt

Pharmaceutical Group Sales Director

Michael LoPresti

Advertising Sales Representative

Jennine Kane

Classified/Recruitment Sales Manager

Michele Burch