An Official Journal of The Society for Healthcare Epidemiology of America

PUBLISHED FOR THE SOCIETY BY SLACK INCORPORATED

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY®

EDITORIAL	
More Is More David P. Calfee, MD, MS	238
ORIGINAL ARTICLES	
Colonization and Infection With Multiple Nosocomial Pathogens Among Patients Colonized With Vancomycin-Resistant Enterococcus Curtis J. Donskey, MD; Amy J. Ray, MD; Claudia K. Hoyen, MD; Peter D. Fuldauer, BS; David C. Aron, MD, MS; Ann Salvator, MS; Robert A. Bonomo, MD	242
Natural History of Colonization With Vancomycin-Resistant Enterococci, Methicillin-Resistant Staphylococcus aureus, and Resistant Gram-Negative Bacilli Among Long-Term-Care Facility Residents Glenn A. Pacio, MD; Paul Visintainer, PhD; George Maguire, MD; Gary P. Wormser, MD; John Raffalli, MD; Marisa A. Montecalvo, MD	246
Effect of Nosocomial Vancomycin-Resistant Enterococcal Bacteremia on Mortality, Length of Stay, and Costs Xiaoyan Song, MD, MS; Arjun Srinivasan, MD; David Plaut, MS; Trish M. Perl, MD, MSc	251
The Epidemiology of Vancomycin-Resistant Enterococcus Colonization in a Medical Intensive Care Unit David K. Warren, MD; Marin H. Kollef, MD; Sondra M. Seiler, BA; Scott K. Fridkin, MD; Victoria J. Fraser, MD	257
The Changing Epidemiology of Vancomycin-Resistant Enterococci Kwan Kew Lai, DMD, MD; Sally A. Fontecchio, RN; Anita L. Kelley, RN, MA; Stephen Baker, MSc, PH; Zita S. Melvin, RN	264
Risk Factors for Stenotrophomonas maltophilia Bacteremia in Oncology Patients: A Case-Control Study Anucha Apisarnthanarak, MD; Jennie L. Mayfield, BSN, MPH; Teresa Garison, BSN, MSN; Patricia M. McLendon, MPH; John F. DiPersio, MD, PhD; Victoria J. Fraser, MD Louis B. Polish, MD	269
The Epidemiology of Multidrug-Resistant Acinetobacter baumannii: Does the Community Represent a Reservoir? Cosmina Zeana, MD; Elaine Larson, RN, PhD; Jyoti Sahni, MD; S. J. Bayuga, MPH; Fann Wu, MD, PhD; Phyllis Della-Latta, PhD, MS	275
Implementation of the Canadian Contingency Plan for a Case of Suspected Viral Hemorrhagic Fever Mark Loeb, MD, MSc; Douglas MacPherson, MD; Michele Barton, MD; Jan Olde, RN, CIC	280
REVIEW Acinetobacter Outbreaks, 1977–2000 Maria Virginia Villegas, MD, MSc; Alan I. Hartstein, MD	284
TOPICS IN LONG-TERM CARE Infection Control in British Nursing Homes RICHARD MAYON-WHITE, MD, FRCP; JOHN GRANT-CASEY, RN	296

Continued inside.



Get the latest headlines sent direct to your e-mail — FREE.

Introducing the Infection Control and Hospital Epidemiology News Wire, your source for instant access to the latest headlines.

As a FREE benefit to Infection Control and Hospital EPIDEMIOLOGY **journal subscribers and members** of the Society for Healthcare Epidemiology of America, the News Wire provides you with direct links to full-text, peer-reviewed scientific articles written by infection control practitioners and epidemiologists.

Not a member or subscriber?

Register for the News Wire today and see what you've been missing.

Visit ICHEJournal.com

An Official Journal of The Society for Healthcare Epidemiology of America

INFECTION CONTROL AND* HOSPITAL EPIDEMIOLOGY

A SLACK Incorporated® Publication

Vol. 24 No. 4 April 2003

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY®

CONTENTS

Continued from cover

CONCISE COMMUNICATIONS

Implication of a Healthcare Worker With Chronic Skin Disease in the Transmission of an Epidemic Strain of Methicillin-Resistant Staphylococcus aureus in a Pediatric Intensive Care Unit

PHILIPPE BERTHELOT, MD, MPH; FLORENCE GRATTARD, MD, PHD; PASCAL FASCIA, MD; CHRISTINE FICHTNER, MD; MARTINE MOULIN, MD; MARIE PIERRE LAVOCAT, MD; GEORGES TEYSSIER, MD; FRÉDÉRIC LUCHT, MD; BRUNO POZZETTO, MD, PHD

299

Mupirocin Resistance in Clinical Isolates of Staphylococcus aureus PAULA G. JONES, MD; TERRI SURA, MT, (ASCP); MICHAEL HARRIS, MT, (ASCP), SM; ANNE STROTHER

Bacterial Contamination of Computer Keyboards in a Teaching Hospital

300

MAUREEN SCHULTZ, MSN, CIC; JANET GILL, BSN, CIC; SABIHA ZUBAIRI, MT; RUTH HUBER, MS, CIC;

FRED GORDIN, MD

302

LETTERS TO THE EDITOR

Apparent Transmission of Two Species of Gram-Negative Rods in Catheterized Residents on a 50-Bed Nursing Home Unit

PAUL J. DRINKA, MD; MARY E. STEMPER, MT (ASCP), MS; CATHY GAUERKE, MT (ASCP); JANICE MILLER, MT; KURT D. REED, MD

233

Molecular Epidemiology of Methicillin-Resistant Staphylococcus aureus in a Veterans Administration Medical Center

PAUL J. DRINKA, MD; MARY E. STEMPER, MT (ASCP), MS; CATHY GAUERKE, MT (ASCP); PEGGY KRAUSE, RN, CCRC; LORI NEST, RNC; KURT D. REED, MD

233

A Gown Is a Gown Is a Gown: Or Is It?

NATHAN L. BELKIN, PHD

234

Nosocomial Infections in a Turkish University Hospital: A 2-Year Survey

ATA NEVZAT YALCIN, MD; HUSEYIN TURGUT, MD; BANU CETIN, MD; HAKAN ERBAY, MD; SIMAY SERIN, MD

235

Nasal Carriage of Methicillin-Resistant Staphylococcus aureus Among Healthcare Workers of an Iranian Hospital

MOHAMMED RAHBAR, PhD; MOHAMMED KARAMIYAR, MD; RASSOL GRA-AGAJI, MSC

236

MEDICAL NEWS

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

304

Full-text articles available online at ICHEJournal.com

THE PUBLICATION OF ADVERTISING IN THE JOURNAL DOES NOT CONSTITUTE ANY GUARANTEE OR ENDORSEMENT BY THE SOCIETY FOR HEALTHCARE EPIDEMIOLOGY OF AMERICAN ICA 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-0195-9417, Canadian GST#129780466) is published exclusively by SLACK Incorporated 12 times a year. Address: 6900 Grove Road,

SHEA: 19 Mantua Rd., Mt. Royal, NJ 08061; telephone, 856-423-0087; fax, 856-423-3420; e-mail address, sheahq@talley.com.

COPYRIGHT 2003 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 \$119.00, Two years \$179.00, Three years \$239.00; Institutional: One year \$259.00; Two years \$439.00; Three years \$609.00. Fellows: \$54.50 per year with proof of training status. Canada: add 7% Goods & Services tax; Overseas: add \$49.00 each year for delivery by air service. Single copies of current issues may be obtained for \$24.00.

Instructions to Authors: Authors may submit manuscripts prepared in accordance with the 2001 revision of the "Uniform Requirements for Manuscripts Submitted to Biomedical Jour A digital version it available at www.icmje.org. Submit to RapidReview.com. All submissions must be accompanied by copyright form(s) signed by all authors.

REPRINTS: All requests to reprint or use material published herein should be addressed to John Kain, SLACK Incorporated, 6900 Grove Road, Thorofare, NJ 08086. For reprint orders and prices contact Karen Lambertson at (856) 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 \$.20 per page is paid directly to Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923; phone (978) 750-8400. 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 6 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 080869447 and at additional mailing offices. POSTMASTER: Send address changes to SLACK Incorporated, 6900 Grove Road,

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 OFFICE

SLACK Incorporated 6900 Grove Road Thorofare, NJ 08086

(856) 848-1000; (856) 848-6091 (FAX)

E-mail: iche@slackinc.com

EDITOR

Barry M. Farr, MD, MSc

DEPUTY EDITORS

David P. Calfee, MD, MS

William R. Jarvis, MD

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

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
Infections in Immunocompromised

Patients

Kent Sepkowitz, MD

New York City, New York

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

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

Paris, France

Havana, Cuba

Atlanta, Georgia

Munich, Germany

Creteil, France

Cincinnati, Ohio

Chicago, Illinois Yakima, Washington

Providence, Rhode Island

Columbia, South Carolina Salt Lake City, Utah

Boston, Massachusetts

Charlottesville, Virginia

Milwaukee, Wisconsin

Manhasset, New York

Shreveport, Louisiana

Freiburg, Germany

Denver, Colorado

St. Louis, Missouri

Atlanta, Georgia

Beer Sheva, Israel

Nashville, Tennessee

Bethesda, Maryland

San Diego, California

Nashville, Tennessee

Nashville, Tennessee

Nashville, Tennessee

Brussels, Belgium

Madison, Wisconsin

Bethesda, Maryland

Toronto, Ontario, Canada

Montreal, Quebec, Canada

Pittsburgh, Pennsylvania

Pittsburgh, Pennsylvania

Minneapolis, Minnesota

Winnepeg, Manitoba, Canada Helsinki, Finland

Bronx, New York

Atlanta, Georgia

Buffalo, New York

San Antonio, Texas

Iowa City, Iowa

Houston, Texas Vienna, Austria

Jerusalem, Israel

Trenton, New Jersey

Mexico City, Mexico

New York, New York Madison, Wisconsin

New York, New York

Brentwood, Tennessee

Barcelona, Spain

Chicago, Illinois

São Paulo, Brazil

Evanston, Illinois

Greifswald, Germany

Toronto, Ontario, Canada

Prahran Victoria, Australia

Minsk, Republic of Belarus Millwood, Virginia

Greenville, South Carolina

Beijing, People's Republic of China

Taipei, Taiwan

Charlottesville, Virginia

Los Angeles, California

Chapel Hill, North Carolina

Black Butte, Oregon

Farmington, Connecticut

Jacques F. Acar, MD J. Wesley Alexander, MD

Paul Arnow, MD

Neil L. Barg, MD Manuel Bastanzuri, MD

Elizabeth Ann Bolyard, RN, MPH, CIC

John M. Boyce, MD

Professor Dr. Ilja Braveny

Christian Brun-Buisson, MD

Charles Bryan, MD John P. Burke, MD

Donald E. Craven, MD Sue Crow, MSN, RN, CIC

Franz Daschner, MD

Leigh G. Donowitz, MD

Charles E. Edmiston, Jr., PhD Theodore C. Eickhoff, MD

Bruce Farber, MD

Victoria J. Fraser, MD

Peter C. Fuchs, MD, PhD

Richard A. Garibaldi, MD

Robert Gaynes, MD

Velvl Greene, PhD, MPH

David W. Gregory, MD

David K. Henderson, MD

Peter N.R. Heseltine, MD

Karen Hoffmann, RN, CIC, MS

Marguerite McMillan Jackson, RN, PhD

Janine Jagger, MPH, PhD

Douglas S. Kernodle, MD

Robert H. Latham, MD

Lewis B. Lefkowitz, MD

Hsieh-Shong Leu, MD, MSc

Jack Levy, MD

Victor Lorian, MD Dennis G. Maki, MD

William J. Martone, MD

Allison McGeer, MD

John E. McGowan, Jr., MD

Jonathan L. Meakins, MD, DSc Robert R. Muder, MD

Carlene A. Muto, MD, MS Joseph M. Mylotte, MD, CIC

Lindsay Nicolle, MD

Juhani Ojajärvi, MD

Michael T. Osterholm, PhD, MPH

Jan Evans Patterson, MD

Sindy M. Paul, MD

Michael A. Pfaller, MD Samuel Ponce de Leon, MD, MSc

Isaam Raad, MD Manfred L. Rotter, MD, DipBact

Theodore Sacks, MD

Lisa Saiman, MD, MPH

William E. Scheckler, MD Andrew E. Simor, MD

Denis Spelman, MD

Michael L. Tapper, MD

Clyde Thornsberry, PhD

Professor Leonid P. Titov Timothy R. Townsend, MD

Antoni Trilla, MD, PhD

Professor Wang Shu-Qun

J. John Weems, Jr., MD

Robert A. Weinstein, MD

Professor Dr. W. Weuffen

Sergio B. Wey, MD

Rebecca Wurtz, MD

SLACK Incorporated

6900 Grove Road Thorofare, New Jersey (856) 848-1000

Circulation Manager Lester J. Robeson, CCCP **Production Director**

Christine Malin

Production Coordinator Joanne Patterson

Vice President, U.S. Advertising Wayne McCourt

Advertising Sales Representative Michael Raftery

Advertising Sales Administrator Theresa Ficarra

Classified/Recruitment Sales Manager

Classified/Recruitment Sales Representative Christopher Morello

Director of Reprint Sales John Kain

Assistant Editor
https://doi.org/19amic/Onderwoog/083120 Published online by Cambridge Press

Vice President, Publishing Operations

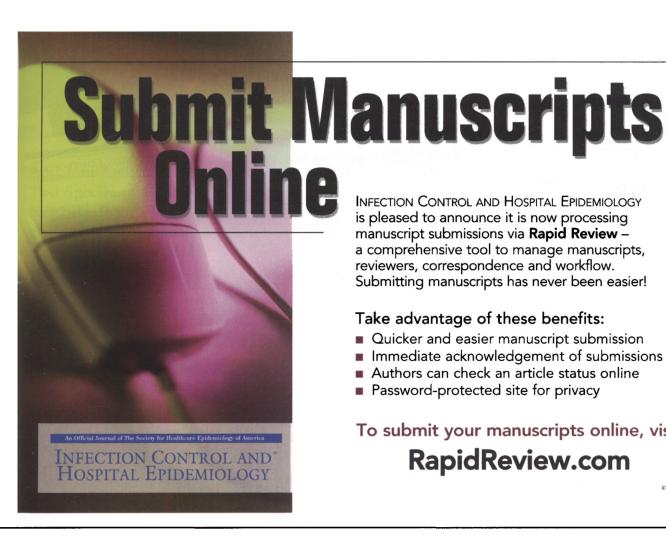
Editorial Director

Jennifer Kilpatrick **Executive Editor**

John C. Carter

Shirley P. Strunk, ELS

Executive Vice President Richard N. Roash



INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY is pleased to announce it is now processing manuscript submissions via Rapid Review a comprehensive tool to manage manuscripts, reviewers, correspondence and workflow. Submitting manuscripts has never been easier!

Take advantage of these benefits:

- Quicker and easier manuscript submission
- Immediate acknowledgement of submissions
- Authors can check an article status online
- Password-protected site for privacy

To submit your manuscripts online, visit

RapidReview.com

#3.IK5115



The Society for Healthcare Epidemiology of America

2003 SHEA/CDC Training Course in Hospital Epidemiology

Program

The program will be held May 3-6, 2003 at the Wyndham Atlanta, Atlanta, GA. Denise Cardo, MD, Loreen A. Herwaldt, MD, Timothy W. Lane, MD, and Gina Pugliese, RN, MS, will co-chair this program. The program, developed by the Society for Healthcare Epidemiology of America (SHEA) and the Centers for Disease Control and Prevention (CDC), is intended for infectious disease fellows and new hospital epidemiologists. It emphasizes hands-on exercises in which participants work in small groups to detect, investigate, and control epidemiological problems encountered in the hospital setting. These work sessions are supplemented with lectures and seminars covering fundamental aspects of hospital epidemiology and surveillance, epidemic investigation, transmission, and control of nosocomial infections, disinfection and sterilization, employee health, isolation systems, regulatory compliance, and quality improvement.

Who Should Attend

You should attend if you are a hospital epidemiologist or an infection control practitioner or if you are looking for a course that will provide you with the most current information concerning infection control practices and epidemiological methods in health care. This fundamental program will provide you with opportunities to find solutions in real situations that will occur in the hospital setting. Intensive problem solving sessions are supplemented with lectures and seminars presented by leading authorities.

Jonathan Freeman Scholarships

Five (5) Jonathan Freeman Scholarships in the amount of \$500 each will be awarded to infectious disease fellows to defray expenses incurred in attending the training program. In addition to the \$500 amount, each scholarship winner will receive complimentary registration in the training course.

Interested fellows must submit a letter of no more than one (1) page describing why they would like to have additional training in hospital epidemiology. A letter from the fellow's program director outlining the applicant's qualifications and suitability for the course also is required. The deadline for receipt of scholarship applications for the course is March 15, 2003. The SHEA Educational Activities Committee will select the scholarship recipients based on review of these letters. Winners will be notified before the end of March.

Nominations

Please send scholarship applications to:

SHEA/CDC

c/o The Society for Healthcare Epidemiology of America

19 Mantua Road

Mt. Royal, NJ 08061

Fees

Individual Registrants Fellows in Infectious Disease

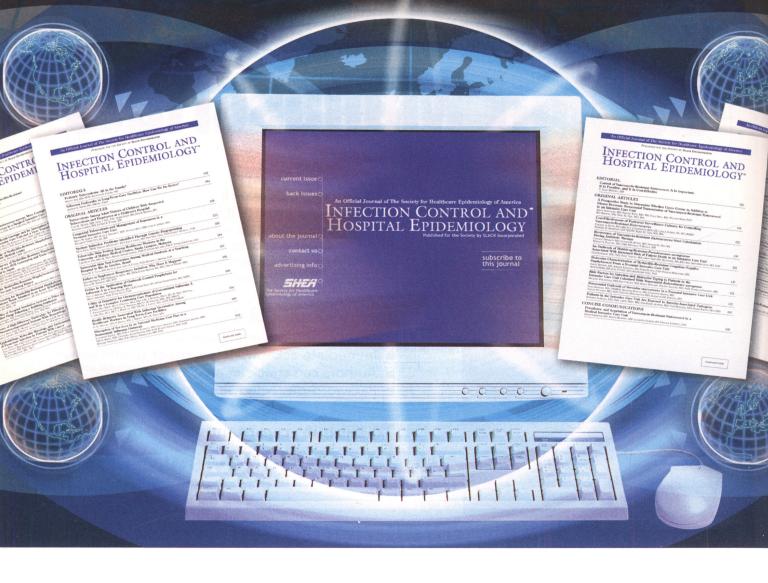
\$625 \$450

The Society for Healthcare Epidemiology of America (SHEA) is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

The Society for Healthcare Epidemiology of America designated this continuing education activity for up to 27 hours in Category 1 of the Physician's Recognition Award of the American Medical Association.

General Course Information

Information regarding the schedule, hotel and travel accommodations, discount airfare, and course fees are available from SHEA (856)-423-7222. NOTE THAT APPLICATION FOR A SCHOLARSHIP DOES NOT CONSTITUTE ENROLLMENT IN THE PROGRAM. This must be done separately.



Get Full-Text Online!



Full-text articles are now available online for INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY!

- Read the latest issue
- Find an archived article (PDF format)
- Search by topic, author or keyword

FREE, unlimited access to every article for subscribers
Non-subscribers may obtain full-text articles on a pay-per-view basis

ICHEJournal.com