An Official Journal of The Society for Healthcare Epidemiology of America

Published for the Society by Slack Incorporated

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY®

EDITORIAL	
The Calculus of Transmission R. Michael Massanari, MD, MS	81
ORIGINAL ARTICLES	
Modeling the Spread of Resistant Nosocomial Pathogens in an Intensive-C Véronique Sébille, PhD; Sylvie Chevret, MD, PhD; Alain-Jacques Valleron, DrSc	Care Unit 84
Nosocomial Infections in Neonates Receiving Extracorporeal Membrane C Susan E. Coffin, MD; Louis M. Bell, MD; MaryLou Manning, PhD; Richard Polin, MD	Dxygenation 93
Handwashing and Glove Use in a Long-Term-Care Facility BETSY L. THOMPSON, MD, MSPH; DIANE M. DWYER, MD; XILLA T. USSERY, MD; SUSAN DENMAN, MD; PA BENJAMIN SCHWARTZ, MD	m Vacek, MS;
Hospital Epidemiologic Surveillance for Invasive Aspergillosis: Patient Demographics and the Utility of Antigen Detection Jan Evans Patterson, MD; Ahmed Zidouh, MD, MPH; Peggy Miniter, PhD; Vincent T. Andriole, MD; Thomas F. Patterson, MD	104
Nosocomial Exposure to Parvovirus B19: Low Risk of Transmission to H Susan M. Ray, MD; Dean D. Erdman, PhD; Jeffrey D. Berschling, MPH; Joan E. Cooper, RN, MN, C Thomas J. Török, MD; Henry M. Blumberg, MD	
A Mixed Foodborne Outbreak With Salmonella heidelberg and Campylin a Nursing Home Marcelle C. Layton, MD; Susan G. Calliste, MD; Thomas M. Gomez, DVM, MS; Charlotte Patton,	
The Effect of High-Efficiency Particulate Air Respirator Design on Occupa A Pilot Study Balancing Risks in the Real World Enid K. Eck, RN, MPH; Ann Vanier, MD	ational Health:
Pseudo-Outbreak of Multiresistant <i>Pseudomonas aeruginosa</i> in a Hema Paul E. Verweij, MD, PhD; Diana Bijl, ICP; Willem J.G. Melchers, PhD; Ben E. De Pauw, MD, PhD; Jacques F.G.M. Meis, MD, PhD; Jacomina A.A. Hoogkamp-Korstanje, MD, PhD; Andreas Voss, MD, I	
CONCISE COMMUNICATIONS Evidence for the Genetic Unrelatedness of Nosocomial Alcaligenes xyloso in a Pediatric Hospital FARIDA BENAOUDIA, MD; EDOUARD BINGEN, PhD	oxidans Strains
Nosocomial Infections and Pseudoinfections From Contaminated Broncho Two-Year Follow Up Using Molecular Markers D.S. Blanc, PhD; T. Parret, MD; B. Janin, MD; P. Raselli; P. Francioli, MD	
A Pseudo-Outbreak of <i>Mycobacterium chelonae</i> Infections Related to Br Ronald Cox, MPH; Karen deBorja, MSc; Michael C. Bach, MD	conchoscopy 136

Continued inside.

Vol. 18 No. 2 February 1997

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY®

CONTENTS

Continued from cover

Outbreak Investigations Consuelo Beck-Sague, MD; William R. Jarvis, MD; William J. Martone, MD ISSUES IN SURGERY Decision Analysis: Balancing Quality and Cost Karen J. Brasel, MD, MPH; John A. Weigelt, MD MEDICAL NEWS GINA PUGLIESE, RN, MS; Martin S. Favero, PhD Risk Factors for VRE Infection Reuse of Medical Devices 149

PRACTICAL HEALTHCARE EPIDEMIOLOGY

Routine Cultures of Environment for Legionella?

Bacterial Contamination of Dental Unit Water Lines

Restrict Antibiotics, Control VRE

New York City Outbreak Accounts for 25% of US Cases of MDR-TB

New Finding on Biofilm and Coagulase-Negative Staphylococci

APHA Address Contaminated Dental Unit Water Lines

SHEA NEWS

MURRAY D. BATT, MD

152

149

150

150

150

151

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.

COPYRIGHT 1997 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 year-\$136.00; Three year-\$136.00; Three year-\$120.00; Two year-\$120.00; Two year-\$170.00; Three year-\$200.00. 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.

REPRINTS: All requests to reprint or use material published herein should be addressed to Les Robeson, SLACK Incorporated, 6900 Grove Rd., Thorofare, NJ 08086. For reprint orders and prices, contact Les Robeson 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 \$1.50 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

Publisher

John C. Carter

Editorial Director

Production Editor

Shirley P. Strunk, ELS

Jennifer Kilpatrick

Topics in Occupational Medicine

Vice President/Group Publisher Richard N. Roash

David Weber, MD, MPH Chapel Hill, North Carolina

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY®

EDITORIAL ADVISORY BOARD

Paris, France Jacques F. Acar, MD

J. Wesley Alexander, MD

Paul Arnow, MD Graham A.J. Ayliffe, MD

Yakima, Washington

Neil L. Barg, MD Elizabeth Ann Bolyard, RN, MPH, CIC

John M. Boyce, MD

Professor Dr. Ilja Braveny

Charles Bryan, MD

Christian Brun-Buisson, 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

Velvl Greene, PhD, MPH

Robert Gaynes, MD

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 William R. Jarvis, MD

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

Professor Dr. Walter Marget William J. Martone, MD

Allison McGeer, MD

John E. McGowan, Jr., MD Jonathan L. Meakins, MD, DSc

Raf Mertens, MD

Robert R. Muder, MD 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

William E. Scheckler, MD

Kent Sepkowitz, 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

Cincinnati, Ohio Chicago, Illinois

Birmingham, United Kingdom

Atlanta, Georgia

Providence, Rhode Island

Munich, Federal Republic of Germany

Columbia, South Carolina

Creteil, France Boston, Massachusetts

Shreveport, Louisiana Freiburg, Federal Republic of Germany

Charlottesville, Virginia

Milwaukee, Wisconsin

Denver, Colorado

Manhasset, New York St. Louis, Missouri

Black Butte, Oregon Farmington, Connecticut

Beer Sheva, Israel Atlanta, Georgia

Nashville, Tennessee

Bethesda, Maryland

Los Angeles, California Chapel Hill, North Carolina

San Diego, California

Charlottesville, Virginia

Atlanta, Georgia

Nashville, Tennessee Nashville, Tennessee

Nashville, Tennessee

Taipei, Taiwan

Brussels, Belgium Bronx, New York

Madison, Wisconsin Munich, Federal Republic of Germany

Bethesda, Maryland

Toronto, Ontario, Canada

Atlanta, Georgia

Montreal, Quebec, Canada Brussels, Belgium

Pittsburgh, Pennsylvania

Buffalo, New York

Winnepeg, Manitoba, Canada Helsinki, Finland

Minneapolis, Minnesota

San Antonio, Texas

Trenton, New Jersey

Iowa City, Iowa

Mexico City, Mexico

Houston, Texas

Vienna, Austria

Ierusalem, Israel

Madison, Wisconsin New York City, New York

Prahran Victoria, Australia

New York, New York Brentwood Tennessee

Minsk, Republic of Belarus

Millwood, Virginia

Barcelona, Spain

Beijing, People's Republic of China

Greenville, South Carolina Chicago, Illinois

Greifswald, Federal Republic of Germany São Paulo, Brazil Evanston, Illinois

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

Assistant Editor Eileen C. Anderer

Circulation Manager Lester J. Robeson, CCCP

Production Director Christine Malin

Production Coordinator

Publishing Director/ Advertising Wayne McCourt

Pharmaceutical Group Sales Director Michael LoPresti

Advertising Sales Representative

Classified/Recruitment Sales Manager

Michele Burch

https://doi.org/10.1017/S0195941700019159 Published online by Cambridge University Press