An Official Journal of The Society for Healthcare Epidemiology of America

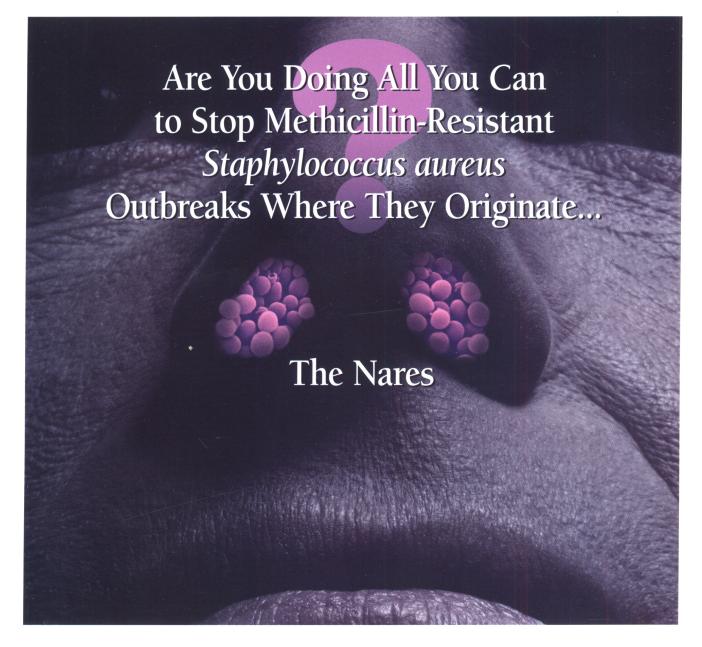
PUBLISHED FOR THE SOCIETY BY SLACK INCORPORATED

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY®

EDITORIAL	
Too Many or Too Few Hands? Peter Heseltine, MD	595
ORIGINAL ARTICLES	
Outbreak of Enterobacter cloacae Related to Understaffing,	
Overcrowding, and Poor Hygiene Practices Stephan Harbarth, MD, MS; Philippe Sudre, MD, PhD; Sasi Dharan, MT; Mercedes Cadenas, MD; Didier Pittet, MD, MS	598
Prospective Evaluation of a Hospital Epidemiologist's Activities at a European Tertiary-Care Medical Center	
Christian Ruef, MD	604
Tuberculosis in Hemodialysis Patients in New Jersey: A Statewide Study Teresa A. Simon, MPH; Sindy Paul, MD, MPH; Daniel Wartenberg, PhD; Jerome I. Tokars, MD, MPH	607
Surveillance of Antimicrobial Prophylaxis for Surgical Procedures Victor Vaisbrud, MD; David Raveh, MD; Yechiel Schlesinger, MD; Amos M. Yinnon, MD	610
Costs and Benefits of Measures to Prevent Needlestick Injuries	
in a University Hospital Françoise Roudot-Thoraval, MD; Olivier Montagne, MD; Annette Schaeffer, MD;	
Marie-Laure Dubreuil-Lemaire, MD; Danièle Hachard, RN; Isabelle Durand-Zaleski, MD, PhD	614
CONCISE COMMUNICATIONS	
Preventing Central Venous Catheter-Related Infection in a Surgical Intensive-Care Unit Rens Bijma, RN, ICP; Armand R. Girbes, MD, PhD; Dick J. Kleijer, RN; Jan H. Zwaveling, MD, PhD	618
Nosocomial Infections Caused by Multiresistant <i>Pseudomonas aeruginosa</i> Erico A.G. Arruda, MD; Ivan S. Marinho, MD; Marcos Boulos, MD; Sumiko I. Sinto, BSc; Helio H. Caiaffa F., BSc; Caio M. Mendes, MD; Carmen P. Oplustii, BSc; Helio Sader, MD; Carlos E. Levy, MD; Anna S. Levin, MD	620
Healthcare Worker Compliance With Nosocomial Tuberculosis Control Policies Philip LoBue, MD; Antonino Catanzaro, MD	623
Infection and Antimicrobial Use in Laparoscopic Cholecystectomy Maryanne McGuckin, DrScEd; Judy A. Shea, PhD; J. Sanford Schwartz, MD	624
Bacterial Contamination of Hospital Physicians' Stethoscopes Louis Bernard, MD; Anne Kereveur, MD; Dominique Durand, RN; Jeanne Gonot, RN; Fred Goldstein, MD; Jean Luc Mainardi, MD; Joseph Acar, MD, PhD; Jean Carlet, MD	626
SHEA POSITION PAPER	
Prevention of Influenza in Long-Term–Care Facilities	
SUZANNE F. BRADLEY, MD; THE LONG-TERM-CARE COMMITTEE OF THE SOCIETY FOR HEALTH-CARE EPIDEMIOLOGY OF AMERICA	629
	11/43

Continued inside.

PRITORIAL



Bactroban Nasal is indicated for eradication of nasal colonization with methicillin-resistant S. aureus (MRSA) in adult patients and healthcare workers as part of a comprehensive infection control program to reduce the risk of infection among high-risk patients during MRSA outbreaks.¹

Single-use tube (actual size)

In a hospital study, Bactroban Nasal contributed to a dramatic reduction in MRSA infections and vancomycin costs during an outbreak.²

Excellent safety profile

Please see brief summary of prescribing information on adjacent page.

References: 1. Bactroban® Nasal prescribing information, 1995. 2. Reagan DR, Dula RT, Palmer BH, et al. Control of MRSA in a VAMC with limited resources. Prog Abstr 31st Interscience Conference on Antimicrobial Agents and Chemotherapy, Chicago, U.S.A., Sept. 29-Oct. 2, 1991, p 104.





2% ointment for intranasal use

BACTROBAN® NASAL (mupirocin calcium ointment), 2% Brief summary. For complete prescribing information, see package insert.

INDICATIONS AND USAGE
Bactroban Nasal is indicated for eradication of nasal colonization with methicillin-resistant. Staphylococcus aureus in adult
patients and health care workers as part of a comprehensive
infection control program to reduce the risk of infection
among patients at high risk of methicillin-resistant S. aureus
infection during institutional outbreaks of infections with this

- There are insufficient data at this time to establish that this product is safe and effective as part of an intervention program to prevent autoinfection of high-risk patients from their own nasal colonization with *S. aureus*.
- There are insufficient data at this time to recommend use of *Bactroban* Nasal for general prophylaxis of any infection in any patient population.
- tion in any patient population.

 Greater than 90% of subjects/patients in clinical trials had eradication of nasal colonization 2 to 4 days after therapy was completed. Approximately 30% recolonization was reported in one domestic study within 4 weeks after completion of therapy. These eradication rates were clinically and statistically superior to those reported in subjects/patients in the vehicle-treated arms of the adequate and well-controlled studies. Those treated with vehicle had eradication rates of 5% to 30% at 2 to 4 days post-therapy with 85% to 100% recolonization within 4 weeks.

 NTRAINDICATIONS

CONTRAINDICATIONS

Bactroban Nasal is contraindicated in patients with known hypersensitivity to any of the constituents of the product.

WARNINGS

AVOID CONTACT WITH THE EYES. Application of Bactroban Nasal to the eye under testing conditions has caused severe symptoms such as burning and tearing. These symptoms resolved within days to weeks after discontinuation of the

In the event of a sensitization or severe local irritation from *Bactroban* Nasal, usage should be discontinued.

PRECAUTIONS

General: As with other antibacterial products, prolonged use may result in overgrowth of nonsusceptible microorganisms, including fungi. (See DOSAGE AND ADMINISTRATION in complete prescribing information.)

complete prescribing information.)
Information for Patients: Patients should: apply approximately one-half of the ointment from the single-use tube directly into one nostril and the other half into the other nose tril; avoid contact of the medication with the eyes; discard the tube after using, press the sides of the nose together and genty massage after application to spread the ointment throughout the inside of the nostrils; and discontinue using Bactroban Nasal and call a health care practitioner if sensitization or severe local irritation occurs.

Drug Interactions: The effect of the concurrent application of intranasal mupirocin calcium and other intranasal products has not been studied. Do not apply mupirocin calcium ointment, 2% concurrently with any other intranasal products.

2% concurrently with any other intranasal products.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals to evaluate carcinogenic potential of mupirocin calcium have not been conducted. Results of the following studies performed with mupirocin calcium or mupirocin sodium in vitro and in vivo did not indicate a potential for mutagenicity: rat primary hepatocyte unscheduled DNA synthesis, sediment analysis for DNA strand breaks, Salmonella reversion test (Ames), Escherichia coli mutation assay, metaphase analysis of human lymphocytes, mouse lymphoma assay, and bone marrow micronuclei assay in mice human intranasal dose (approximately 20 mg mupirocin administered subcutaneously at doses up to 40 times the human intranasal dose (approximately 20 mg mupirocin per day) on a mg/m² basis and revealed no evidence of impaired fertility from mupirocin sodium.

Pregnancy: Teratogenic Effects. Pregnancy Category B.

fertility from mupirocin sodium.

Pregnancy: Teratogenic Effects. Pregnancy Category B. Reproduction studies have been performed in rats and rabbits with mupirocin administered subcutaneously at doses up to 65 and 130 times, respectively, the human intranasal dose (approximately 20 mg mupirocin per day) on a mg/m² basis and revealed no evidence of harm to the fetus due to mupirocin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, exercise caution when Bactroban Nasal is administered to a nursing woman.

Pediatric Use: Safety in children under the age of 12 years has not been established. (See CLINICAL PHARMACOLOGY in complete prescribing information.)

in complete prescribing information.)

ADVERSE REACTIONS

Clinical Trials: In clinical trials, 210 domestic and 2,130 foreign adult subjects/patients received Bactroban Nasal ointenent. Less than 1% of domestic or foreign subjects and patients in clinical trials were withdrawn due to adverse events. In domestic clinical trials, 17% (36/210) of adults treated with Bactroban Nasal ointment reported adverse events thought to be at least possibly drug-related that were reported in at least 1% of adults enrolled in domestic clinical trials were as follows: headache, 9%; rhinitis, 6%; respiratory disorder, including upper respiratory tract congestion, 5%; pharyngitis, 4%; taste perversion, 3%; burning/stinging, 2%; cough, 2%; and printfus, 1%.

The following events thought possibly drug-related were

ing, 276, 600gh, 276, and printers, 176.

The following events thought possibly drug-related were reported in less than 1% of adults enrolled in domestic clinical trials: blepharitis, diarrhea, dry mouth, ear pain, epistaxis, nausea and rash. All adequate and well-controlled clinical trials have been performed using Bactroban Nasal ointment, 2% in one arm and the vehicle ointment in the other arm of the study.

OVERDOSAGE

Following single or repeated intranasal applications of *Bactroban* Nasal to adults, no evidence for systemic absorption of mupirocin was obtained.

Manufactured by DPT Laboratories, Inc., San Antonio, TX

Distributed by **SmithKline Beecham Pharmaceuticals**, Philadelphia, PA 19101

BN:L1



INFECTION CONTROL SURVEILLANCE PRACTITIONER

The University of Wisconsin Hospital & Clinics (UWHC), a leading academic medical center, has a rare opportunity for an experienced Infection Control Practitioner. As part of our Infection Control team, you will work closely with UWHC medical faculty and department heads to implement a cutting-edge infection control program and to develop new patient care protocols and guidelines. You will also have major responsibilities for institution-wide surveillance of nosocomial infections and producing surveillance reports.

To qualify, you must have a Bachelor's degree in an appropriate healthcare field, such as Nursing, Microbiology, Medical Technology, Epidemiology or Preventive Medicine, and at least 5 years of clinical healthcare experience relevant to infection control. Certification in infection control is preferred. If you are the candidate we seek, a competitive salary, an excellent benefits package and great opportunity await you in our top-rated facility

To apply, please send a resume and cover letter to:

University of Wisconsin Hospital and Clinics Human Resources Dept. - Box KS 600 Highland Ave. Madison, WI 53792 Or Fax at (608) 263-5778

MEDICAL EPIDEMIOLOGIST

evelop and direct all aspects of hospital epidemiology and infection control. As a faculty member of the UW School of Medicine, may have clinical, educational and research responsibilities involving epidemiology and infectious diseases. Requires an MD or equivalent degree from a recognized institution of higher education; WA State medical license (or eligibility); Board certification or equivalent in a primary medical discipline; advanced training in discipline relevant to infection control, (e.g. Infectious disease, epidemiology, microbiology).

Applicants should submit a letter and CV to:

UW Medical Centers Employment ICHE-U-532, Box 359715 Seattle, WA 98104 Fax: (206) 731-3060 E-mail: uwmcp@u.washington.edu **EO/AAE**



University of Washington MEDICAL CENTER

THE RESULTS ARE



¹ R. Darouiche, I. Raad, S. Heard, J. Thornby, O. Wenker, A. Gabrielli, J. Berg, N. Khardori, H. Hanna, R. Hachem, R. Harris, and G. Mayhall for the Catheter Study Group: "A Comparison of Two Antimicrobial-Impregnated Central Venous Catheters," New England Journal of Medicine, Volume 340, Issue 1, (1999), 1-8.

² I. Raad, R. Darouiche, J. Dupuis, D. Abi-Said, A. Gabrielli, R. Hachem, M. Wall, R. Harris, J. Jones, A. Buzaid, C. Robertson, S. Shenaq, P. Curling, T. Burke, C. Ericsson, Texas Medical Center Catheter Study Group: "Central Venous Catheters Coated with Minocycline and Rifampin for the Prevention of Catheter-Related Colonization and Bloodstream Infections: A Randomized, Double-Blind Trial," Annals of Internal Medicine, 127

³ D. Pittet, R. Wenzel: "Nosocomial Bloodstream Infections in the Critically III, Letter to the Editor," Journal of the American Medical Association, 272 (1994), 1819-1820.

(1997), 267-274.

To learn how Cook Spectrum® can reduce infection rates in vascular access patients and significantly lower treatment costs, contact your COOK CRITICAL CARE representative. Or call COOK at 1-800 457-4500.

An extensive new study just published in *The New England Journal of Medicine* concludes that catheters impregnated with minocycline and rifampin are **twelve times less likely** to cause bloodstream infections than catheters impregnate with chlorhexidine and silver sulfadiazine.¹



Central venous catheters are vital to patient care, but they are also the leading cause of primary nosocomial bloodstream infection.²

A single episode of catheter-related septicemia can cost up to \$28,000 to treat (and an extra 6.5 days in the ICU).³

Cook Spectrum® antimicrobial central venous catheters are impregnated throughout their inner and outer surfaces with an effective combination of minocycline and rifampin to fight bacterial colonization and infections.



LISTEN. UNDERSTAND. INNOVATE.

www.cookgroup.com

© COPYRIGHT COOK CRITICAL CARE 1999

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY®

CONTENTS

Continued from cover

D	TO A	T	TD.	C)	TO	D	TIM	
ĸ	P. A		r.K		Pt.	ıĸ	11111	

Hospital Gangrene: The Scourge of Surgeons in the Past

JACK COHEN, MD

638

LETTERS TO THE EDITOR

Factors Associated With Tuberculin Conversion Among Staff

at a University-Affiliated Hospital

MANUEL ZARZUELA-RAMÍREZ, MD, MPH; JUAN A. CÓRDOBA-DOÑA, MD, MPH; EMILIO PEREA-MILLA, MD, MPH;

Encarnación Benítez-Rodríguez, MD, MPH; Antonio Escolar-Pujolar, MD, MPH;

FERNANDO J. LÓPEZ-FERNÁNDEZ, MD, MPH

589

Risk of Hepatitis A Among Hospital Personnel in an Intermediate-Endemicity Area

José-Ramón de Juanes, MD, PhD; María-Pilar Arrazola, MD, PhD; Antonio González, MD, PhD

590

Hepatitis B Morbidity in Municipal and Hospital Waste

Collection Workers in the City of Rio de Janeiro

João Alberto Ferreira, DSc, PE; Anamaria Testa Tambellini, DSc, MD; Carmem Lúcia Pessoa da Silva, DSc, MD; Maria Angélica A.M. Guimarães, DSc

591

Healthcare Workers' Perceptions of Occupational Exposure

SUNITA MUTHA, MD; DONNA B. JEFFE, PHD; LYNN E. KIM, MPH; PAUL B. L'ECUYER, MD; BRADLEY A. EVANOFF, MD, MPH; VICTORIA J. FRASER, MD

592

Tea as a Source of Acinetobacter baumannii

Ventilator-Associated Pneumonia?

THOMAS HAUER, MD; DANIEL JONAS, MD; MARKUS DETTENKOFER, MD; FRANZ D. DASCHNER, MD

594

MEDICAL NEWS

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

641

SHEA NEWS

Andreas Voss, MD, PhD

644

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: (856) 848-1000.

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

COPYRIGHT 1999 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-\$105.00; Two year-\$143.00; Three years-\$176.00; Institutional: One year-\$128.00; Two year-\$178.00; Three year-\$228.00. Fellows: \$52.50 per year with proof of training status. Canada: \$20.00 additional each year plus % for Canadian Goods & Services tax; Overseas surface, \$145.00 each year; Overseas air mail, \$190.00. Single copies of current issues may be obtained for \$15.00, United States and possessions; \$20.00 all other countries.

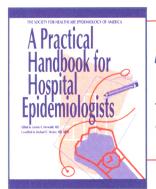
INSTRUCTIONS TO AUTHORS: Authors may submit manuscripts prepared in accordance with the 1997 revision of the "Uniform Requirements for Manuscripts Submitted to Biomedical Journals."
The Uniform Requirements has been published in several journals, including Infect Control Hosp Epidemiol 1997;18457-464 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 Karen Lambertson, SLACK Incorporated, 6900 Grove Rd., 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 \$.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 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 08086-9447 and at additional mailing offices. POSTMASTER: Send address changes to SLACK Incorporated, 6900 Grove Rd., Thorofare, New Jersey 08086-9447 and at additional mailing offices. POSTMASTER: Send address changes to SLACK Incorporated, 6900 Grove Rd., Thorofare, New Jersey 08086-9447 and at additional mailing offices.

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.

ALL THE ANSWERS UNDER ONE COVER



A Practical Handbook for Hospital Epidemiologists

Edited by Loreen A. Herwaldt, MD and co-edited by Michael D. Decker, MD, MPH

Soft Cover, 448 pp, ISBN 1-55642-302-0, Order# 13020, \$65.00

A Practical Handbook for Hospital Epidemiologists is the most complete source for practical advice on hospital epidemiology. It is intended to be a pragmatic guide that will assist both beginning and experienced epidemiologists in establishing and operating a successful hospital epidemiology program.

This handbook will supplement the various scientific references already available for hospital epidemiologists. It will provide practical information and advice regarding many aspects of operating a hospital epidemiology program and will help hospital epidemiologists improve their practices.

The Society for Healthcare Epidemiology of America (SHEA) has recruited the most recognized leaders in the field to share their expertise. They will share successful strategies for handling specific situations. The authors cover many topics that every newcomer should know but are usually learned through experience. These topics include:

- Overarching goals and ethical principles you should adopt to guide your practice
- What you can do to educate yourself
- How to negotiate with the administration and communicate with colleagues
- How to develop policies and procedures
- How to develop a surveillance system

Contents

Getting Started

Chapter I: An Introduction to Practical Hospital Epidemiology

Chapter 2: The Hospital Epidemiologist: Practical

Chapter 3: Educational Needs and Opportunities for the Hospital Epidemiologist

Chapter 4: Negotiating with the Administrationor How to Get Paid for Doing Hospital Epidemiology

Chapter 5: The Infection Control Committee

Chapter 6: Developing Policies and Guidelines

Chapter 7: Intramural and Extramural Communication

Chapter 8: Ethical Aspects of Infection Control

Surveillance and Analysis

Chapter 9: Basics of Surveillance—An Overview

Chapter 10: Hospital-Acquired Pneumonia: Perspectives for the Healthcare Epidemiologist

Chapter 11: Basics of Surgical Site Infection Surveillance

Chapter 12: Surveillance for Infections Associated with Vascular Catheters

Chapter 13: Designing Surveillance for Noninfectious Outcomes of Medical Care

Chapter 14: Outbreak Investigations

Chapter 15: Exposure Workups Chapter 16: Isolation

Chapter 17: Basics of Stratifying for Severity of

Chapter 18: Quantitative Epidemiology

Support Functions

Chapter 19: Microcomputers in Hospital Epidemiology

Chapter 20: The Computer-Based Patient Record: The Role of the Hospital Epidemiologist

Chapter 21: Basic Microbiologic Support for Hospital Epidemiology

Chapter 22: Epidemiologic Typing Systems Special Topics

Chapter 23: Epidemiologic Approaches to Quality Assessment

Chapter 24: Disinfection and Sterilization of

Patient Care Items Chapter 25: Controlling Use of Antimicrobial

Agents Chapter 26: Employee Health and Infection

Control Chapter 27: Tuberculosis Control in Healthcare

Chapter 28: Infection Control Issues in Construction and Renovation

Chapter 29: Hospital Epidemiology in Smaller Hospitals

Chapter 30: Infection Control in Public Hospitals Chapter 31: Infection Control in Long-Term Care Facilities

Chapter 32: Infection Control in the Outpatient Setting

Chapter 33: OSHA Inspections

Chapter 34: Preparing for and Surviving a JCAHO

Chapter 35: Product Evaluation https://doi.org/10.1017/S0195941700070934 Published online by Cambridge University Press

Order Coupon
Yes, Send mecopies of A Practical Handbook for Hospital Epidemiologists (Order# 13020) at \$65.00 each. (Shipping may appl Subtotal \$ Handling charge \$4.50 NJ residents add 6% sales tax \$ Total \$
Please print
Name
Address
City
State/Country
Zip
PhoneFax
_Check enclosed (payable to SLACK Inc., in US dollars drawn on a US bank) _Charge My
Account No Exp
signature
SLACK Incorporated, 6900 Grove Road, Thorofare, NJ 08086-9447, USA

To order call (in the US) 800-257-8290 or 609-848-1000 Fax orders to 609-853-5991 Order on-line: orders@slackinc.com

All Prices Are Subject To Change

CODE 4A391

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

Andreas Voss, MD, PhD

Nijmegen, The Netherlands

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 J. Wesley Alexander, MD

Paul Arnow, MD Chicago, Illinois Birmingham, United Kingdom Graham A.J. Ayliffe, MD

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

Professor Dr. Ilja Braveny Christian Brun-Buisson, MD

Charles Bryan, 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
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

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

SLACK Incorporated 6900 Grove Road Thorofare, New Jersey 08086 (856) 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

Editorial Assistant Aileen Schneider Circulation Manager Lester J. Robeson, CCCP

Production Director Christine Malin

Production Coordinator Joanne Patterson

Publishing Director/ Advertising Wayne McCourt

Yakima, Washington Atlanta, Georgia

Paris, France

Cincinnati, Ohio

Providence, Rhode Island

Munich, Federal Republic of Germany Creteil, France

Columbia, South Carolina

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

Atlanta, Georgia Beer Sheva, Israel

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

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

Jerusalem, 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

Pharmaceutical Group Sales Director

Michael LoPresti

Advertising Sales Representative Tina Panna

Advertising Coordinator/Product Sales Kathy Miranda

Classified/Recruitment Sales Manager Kathy Huntley

Classified/Recruitment Sales Representative Kelly Wark

Mothers. Spouses. (maybe) Medical Matrix.

What do they have in common? You place your trust in them. When searching the Internet for credible medical information, you need a resource you can trust. *The Lancet* quotes that "Medical Matrix is the most comprehensive compendium of reliable medical information on the Internet."

MEDICAL MATRIX...

http://www.medmatrix.org

The largest, peer-reviewed directory to the medical Internet.

Free registration.

SHEA

CDC Guidelines

for Surveillance
Prevention & Control
of Nosocomial
Infections

All In One Single Volume for only \$99.00*

Plus Shipping & Handling

Urinary Tract Infections • Surgical Wound Infections
Handwashing and Environmental Control
Hospital Personnel • HIV and HBV ExposureProne Procedures • Pneumonia Tuberculosis
Vancomycin Resistance • IV Device-Related
Infections • Isolation Precautions
HIV Post-Exposure Chemoprophylaxis
HCV Post-Exposure Prophylaxis
and Index of SHEA Position Papers

Foreword by Julia S. Garner, RN, MN

To Order Call 1-800-552-0076

International Orders 414-634-0806 E-mail ETNAComm@aol.com

* SHEA Journal Subscribers mention this ad for 10% discount. Orders outside the U.S.A., Canada, & Mexico are \$175.00 each.

SJ198



9 out of 10 mice prefer the Consumer Information Catalog online. Just point and click your way to **www.pueblo.gsa.gov** and you'll find more than 250 free publications ready to read or download.

U.S. General Services Administration

NOW AVAILABLE ON CD-ROM: NFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY

Simplifying your reference library is easy, with 11 years of Infection Control and Hospital EPIDEMIOLOGY now available on CD-ROM. As the official journal of the Society for Healthcare Epidemiology of America (SHEA), this ready reference will allow the user to quickly and easily access articles and studies from 1988-1998 that can help put current issues of epidemiology and infection control in perspective.

Easy and Convenient CD-ROM Technology

The Infection Control and Hospital Epidemiology CD-ROM will take full advantage of the latest CD-ROM technology, including:

- searchable text
- searchable text
 annual indexes organized by category,

 convenient updates
 PC and Mac compatibility page number, subject and author

The Infection Control and Hospital Epidemiology CD-ROM packs an enormous amount of information in a small space at a comparably small price! Adding 11 years of this informative journal to your library is a bargain, at special prices starting as low as \$147.

Money-Back Guarantee

The Society for Healthcare Epidemiology of America is always looking for innovative ways to keep you informed of important developments in infection control and hospital epidemiology. We are sure you will refer to the information in the Infection Control and Hospital Epidemiology CD-

ROM often. If you aren't satisfied, we offer a 30-day money-back guarantee.* To order, call us at 800-257-8290 or 609-848-1000 (in NJ); or write to INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY 6900 Grove Rd., Thorofare, NJ 08086

TYes! Please send me the INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY CD-ROM. Enclosed is a check or money order for the amount/quantity checked below.										
	SHEA Member:	\$147.00 ea.	Qty:							

Individual Non-Member: \$197.00 ea. \$247.00 ea. Institution:

Acct. No. _____ Exp. date: ____/___

Signature:

Send CD-ROM to:

Name

Address State _____ Zip ____

Send order and make check payable to:

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY • 6900 Grove Rd. • Thorofare, NJ 08086 Or FAX your order to: (609) 853-5991 For fastest service, call today: 1-800-257-8290 or 609-848-1000 (in NJ)

9 https://doi.org/10.1017/S0195941700070934 Published online by Cambridge University Press

*If not completely satisfied with the Infection Control and Hospita EPIDEMIOLOGY CD-ROM, just return it within 30 days and your money will be refunded.

Exp: 11/99



SHEA/SANG-HA TRAINING COURSE IN INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY

November 6-9, 1999 King Fahad National Guard Hospital Riyadh, Saudi Arabia

This training program is designed for those who have responsibility for hospital epidemiology and infection control programs. It is sponsored by the Society for Healthcare Epidemiology of America and the Saudia Arabian National Guard Health Affairs (SANG-HA). The course is taught by experts from the United States and the Middle East who support the pursuit of continuing education to broaden the scope of influence through new appli-

cation of epidemiological skills and continuous improvement of infection control. Topics to be addressed include patterns of transmission of nosocomial infections; risk factors for nosocomial infections; epidemic investigation; review of surveillance techniques; disinfection and sterilization; employee safety and health, and control of bloodborne pathogens; and introduction to quality-improvement challenges facing hospital epidemiologists.

For more information contact:

Ziad A. Memish, MD Symposium Chair E-mail: memish@ngha.med.sa Academic Affairs PO Box 22490 Riyadh 11426, Saudi Arabia

Fax: 966-1-252-0040 Telephone: 966-11-252-0088, ext 2329

