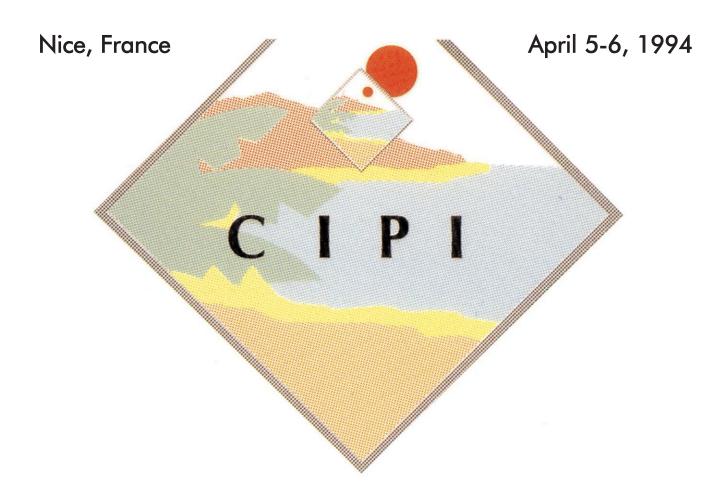
# INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY®



# 3<sup>rd</sup> International Conference on the Prevention of Infection



Laboratories 51. Louis. Mi

both disinfects and conditions in less time than any prior technology available to healthcare

Results of Time Kill tests demonstrate that Techni-Care eliminates gram negative and gram positive bacteria at 99.99% in 30 second contact.

Outstanding Bactericidal Activity without skin irritation Techni-Care's active ingredient, chloroxylenol (PCMX) at 3%, eliminates bacteria, while a host of skin conditioning agents work synergistically to condition and soften the skin. Exceptionally mild, Techni-Care's dermal conditioning ingredients, include cocamidopropyl PG-Dimonium Chloride Phosphate, Aloe Vera Gel, Collagen and Propylene Glycol.

Techni-Care has rated a "minimal irritation" in the Draize Dermal irritation test. Specially blended formulation for dermal conditioning, as well as for bacterial reduction. Techni-Care Surgical Scrub is soothing to dermal tissue while phospolipids promote natural turgor.



1-800-325-9681

Vol. 15 No. 7 July 1994

# INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY®

# CONTENTS

Why CIPI? (Editorial) Jean-Claude Pechere, MD	427
Mortality Attributable to Nosocomial Infections in the ICU Jean-Yves Fagon, MD, PHD; Ana Novara, MD; Francois Stephen, MD; Emmanuelle Girou, PharmD; Michel Safar, MD	428
Impact of Handwashing on Mortality in Intensive Care: Examination of the Evidence Bertil Nystrom, MD	435
Histamine-2-Receptor Antagonists and Antacids in the Critically Ill Population: Stress Ulceration V Nosocomial Pneumonia  Deborah J. Cook, MD; FRCPC, MSc(EPID); Brenda K. Reeve, BSc; L. Cory Scholes, BSc	
Viewpoint: Survival Benefit by Selective Decontamination of the Digestive Tract (SDD)  H.K.F. van Saene, MD, PhD, MRCPath; A.J. Nunn, BPharm, MRPharm; A.J. Petros, MRCP	437 443
Can Topical and Nonabsorbable Antimicrobials Prevent Cross-Transmission of Resistant Strains in Christian Brun-Buisson, MD; Patrick Legrand, MD	
Infectious Risk Factors Related to Operating Rooms Didier Pittet, MD, MS; Georges Ducel, MD	456
Antimicrobial Prophylaxis in Surgery: General Concepts and Clinical Guidelines  Claude Martin, MD; the French Study Group on ANticrobial Prophylaxis in Surgery; the French Society of Anesthesia and Intensive Care	463
Antibiotic Resistance Is Selected Primarily in Our Patients Jean-Claude Pechere, MD	472
Do Intensive Hospital Antibiotic Control Programs Prevent the Spread of Antibiotic Resistance?  John E. McGowan, JR., MD	478
Do Nonclinical Uses of Antibiotics Make a Difference?  Hilary-Kay Young	484
Applications of Molecular Methods to Epidemiologic Investigations of Nosocomial Infections in a F Hospital	ediatric
Edouard Bingen, PhD	488
Infectious Diseases and Death Among Nursing Home Residents: Results of Surveillance in 13 Nur Homes  Consuelo Beck-SAgue, MD; Elisa Villarino, MD; Diane Guiliano, RN; Sharon Welbel, MD; Lisa Latts, MD;	sing
Lilia M. Manangan, RN, MPH; Ronda L. Sinkowitz; William R. Jarvis, MD	494
Pros and Cons of BCG Vaccination in Countries with Low Incidence of Tuberculosis Eero O. Tala, MD, FCCP; Marianna M. Tala-Heikkila, MD	497
Usefulness of Molecular Epidemiology For Outbreak Investigations William R. Jarvis, MD	500
HEA NEWS C. GLEN MAYHALL, MD	504

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) 8481000.

COPYRIGHT 1994 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 LS.4.

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-\$85.00; Two years-\$120.00; Three years-\$150.00; Institutional: One year-\$95.00; Two years-\$135.00; Three years-\$175.00. Fellows: \$20 per year with proof of training status. Canada: \$18.00 additional each year plus 7% for Canadian Goods & Servicestax; all other countries: \$36.00 additional each year. 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 Lester Robeson, SLACK Incorporated, 6900 Grove Rd., Thorofare, NJ 08086. For reprint or use material published herein should be addressed to Lester Robeson, SLACK Incorporated, 6900 Grove Rd., Thorofare, NJ 08086. For reprint or users and prices, contact Lester Robeson at (609) 8481000. 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 Second-class postage is paid at Thorofare, New Jersey 08086, and additional entry points. Postmaster. Send address changes to SLACK Incorporated. 6900 Grove Rd.. Thorofare, NJU8086.

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

# **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

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

J. Wesley Alexander, MD

Paris, France Cincinnati, Ohio

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

Neil L. Barg, MD

Yakima, Washington Atlanta, Georgia

Elizabeth Ann Bolyard, RN, MPH, CIC

John M. Boyce, MD

Providence, Rhode Island

Professor Dr. Ilja Braveny

Munich, Federal Republic of Germany Columbia, South Carolina

Charles Bryan, MD Christian Brun-Buisson, MD

Creteil, France Boston, Massachusetts

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

Franz Daschner, MD

Shreveport, Louisiana Freiburg, Federal Republic of Germany

Leigh G. Donowitz, MD

Charlottesville, Virginia Milwaukee, Wisconsin

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

Denver, Colorado

Bruce Farber, MD

Manhasset, New York

Victoria J. Fraser, MD

St. Louis, Missouri

Peter C. Fuchs, MD, PhD Richard A. Garibaldi, MD Black Butte, Oregon Farmington, Connecticut

Velvl Greene, PhD, MPH

Beer Sheva, Israel Atlanta, Georgia

Robert Gaynes, MD David W. Gregory, MD

Nashville, Tennessee

David K. Henderson, MD Peter N.R. Heseltine, MD

Bethesda, Maryland Los Angeles, California Chapel Hill, North Carolina

Karen Hoffmann, RN, CIC, MS Marguerite McMillan Jackson, RN, PhD

San Diego, California Charlottesville, Virginia

Janine Jagger, MPH, PhD William R. Jarvis, MD

Atlanta, Georgia Nashville, Tennessee

Douglas S. Kernodle, MD Robert H. Latham, MD Lewis B. Lefkowitz, MD

Nashville, Tennessee Nashville. Tennessee

Hsieh-Shong Leu, MD, MSc Jack Levy, MD

Taipei, Taiwan Brussels, Belgium Bronx, New York

Victor Lorian, MD Dennis G. Maki, MD

Madison, Wisconsin Munich, Federal Republic of Germany

Professor Dr. Walter Marget William J. Martone, MD

Bethesda, Maryland Toronto, Ontario, Canada Atlanta, Georgia

Allison McGeer, MD

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

Montreal, Quebec, Canada

Raf Mertens, MD Robert R. Muder, MD

Brussels, Belgium Pittsburgh, Pennsylvania

Joseph M. Mylotte, MD, CIC

Buffalo, New York

Mexico City, Mexico

Madison, Wisconsin New York City, New York

Prahran Victoria, Australia

New York, New York

Brentwood Tennessee Minsk, Republic of Belarus

Millwood, Virginia

São Paulo, Brazil

Evanston Illinois

Houston, Texas

Vienna, Austria

Jerusalem, Israel

Lindsay Nicolle, MD

Winnepeg, Manitoba, Canada Helsinki, Finland

Juhani Ojajärvi, MD Michael T. Osterholm, PhD, MPH

Minneapolis, Minnesota Jan Evans Patterson, MD San Antonio, Texas

Sindy M. Paul, MD Trenton, New Jersey Iowa City, Iowa

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

Professor Dr. W. Weuffen

Barcelona, Spain Beijing, People's Republic of China

Robert A. Weinstein, MD

Greenville, South Carolina Chicago, Illinois

Sergio B. Wey, MD Rebecca Wurtz, MD

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

Circulation Manager

Christine Malin

**Publishing Director/ Advertising** Wayne McCourt

Greifswald, Federal Republic of Germany

Pharmaceutical Group Sales Director

Michael LoPresti Advertising Sales Representative

Classified/Recruitment Sales Manager Michele Burch

https://doi.org/10.1086/646944 Published online by Cambridge University Press

Shirley P. Strunk, ELS

Vice President/Group Publisher Richard N. Roash Publisher John C. Carter

**Editorial Director** Jennifer Kilpatrick **Production Editor**  Assistant Editor Eileen C. Anderer

Lester J. Robeson, ČCCP **Production Director** 

**Production Coordinator** Joanne Patterson