

#### **EDITORIAL**

Old Wine in New Bottles Richard P. Wenzel, MD

#### **ORIGINAL ARTICLES**

Outbreak of Staphylococcal Infection in Two Hospital Nurseries Traced to a Single Nasal Carrier

Anusha Belani, MD; Robert J. Sherertz, MD; Marsha L. Sullivan, RN; Beverly A. Russell, RN; Peter D. Reumen, MD

Commentary: Types of Disposable Medical Devices Reused in Hospitals

C. Glen Mayhall, MD

The Nosocomial Colonization of T. Bear

Walter T. Hughes, MD; Bonnie Williams, RN; Bobby Williams, BA; Ted Pearson, MS

Brief Report: Effects of Ultra High Speed Floor Burnishing on Air Quality in Health Care Facilities

Edward A. Schmidt, MPH, CIC; Bernard M. Cannan, BSChE; Richard C. Mulhall, BS; David L. Coleman, PhD

#### **SPECIAL SECTIONS**

Readers' Forum: Significance of Nosocomial Infection Rates in the Era of DRGs
Peter C. Fuchs, MD; Marie E. Gustafson, RN

Product Commentary: Reuse of Disposable Medical Devices—Historical and Current Aspects V.W. Greene, PhD, MPH

Clinical Pharmacology of Antibiotics: Metronidazole Mark Eggleston, PharmD



### **Because** infection control should be everybody's job

Choosing the right product can make all the difference in getting the staff to stop and take the time to wash their hands. Medi-Scrub\* is the right medicated health care personnel handwash for three reasons:

**L. Medi-Scrub's formula.** Our combination of P.C.M.X. and emollients is fast acting and persistent against bacteria, but gentle to your hands. Tests prove Medi-Scrub's effectiveness against a broad range of pathogenic organisms including antibiotic-resistant Staph and Candida albicans. Participants in these tests, even after repeated handwashing, reported no sign of skin irritation.

Disposable dispensing system. Medi-Scrub is packed in our exclusive DisposaCare cartridge, a factory-sealed container with a built-in measuring pump.When it's empty, throw it away. Pump and all. The matching wallmount dispenser puts Medi-Scrub exactly



where you need it. And the dispenser's unique window design lets you see the Medi-Scrub label so there's no question about what's inside.

**3.** Educational systems. Medi-Scrub is backed by a complete program. A video tape, bilingual filmstrips, posters, buttons and more to help you get Medi-Scrub out of the dispenser and into their hands. And your Huntington representative is always ready with technical and training assistance. For more information on Medi-Scrub and the Care System of products, call us now toll-free:

In Canada, call collect: (416) 791-2336

### Huntington.

970 East Tipton Street • Huntington, Indiana 46750

# Information for Authors

Manuscripts should consist of new material based on infection control activities within a health care facility or in the community, from the US or abroad. All clinical research must have been conducted in accordance with guidelines on the protection of human subjects as established by the US Department of Health and Human Services. Articles are accepted with the understanding that they are contributed solely to INFECTION CONTROL and have not been published previously except in abstract form. Authors will be requested to sign a standard release of copyright form. The journal will cover the general topics of environmental monitoring, surveillance, prevention, immunization, regulation, education, and research related to infection control.

All manuscripts should be submitted in quadruplicate (with duplicates of figures and tables), typewritten on one side on  $8\frac{1}{2} \times 11$ -inch paper, double-spaced with generous margins. The author should keep a

complete copy of the manuscript.

The organization of the paper should be as follows: title page; abstract; introduction; methods; results; discussion; acknowledgments; references; tables; figures and figure legends. The main sections and subdivisions should be indicated by side headings flush with the left margin and two lines above the text. The Arabic numbering system should be used.

Clinical Trials: The Editor requests that authors reporting the results of clinical trials describe clearly the following: 1) eligibility criteria; 2) whether or not subjects were admitted before allocation to one of the study groups; 3) the method of randomization; 4) whether the study was "masked," what specific information was masked and whether subjects, clinicians and evaluators were all masked; 5) the method used to identify treatment complications; 6) an explanation and analysis of subjects lost to follow-up; 7) statistical methods employed; and 8) information which led to the determination of the size of the study groups and the expected differences between groups.

Rapid Publication: A request for rapid publication must be stated in the cover letter and manuscripts should not exceed ten double-spaced, typewritten pages. Such papers will be published within three to four months of acceptance. No comments will accompany rejected papers, but manuscripts may be resubmitted under the normal publication procedures.

**Readers' Forum:** Brief communications are encouraged of approximately four to six typewritten pages containing information which does not represent a formal study. They may reflect opinions, hypotheses, or impressions related to infection control or summarize unusual experiences in the field.

Title Page: A separate title page should include the following: title of manuscript; author(s); laboratory or institution of origin with city and state; acknowledgment of grant support; address to be used for reprint requests. An abbreviated title, to be used as a running head, should be included. This should not exceed four words. A preliminary report or abstract should be credited by use of a footnote to the title.

**Abstract:** The abstract, not to exceed 150 words, should summarize the significant information in the paper and be understandable without reference to the text. The use of abbreviations should be avoided.

**Tables:** Tables should be double-spaced, each on a separate page, and self-contained. Do not use vertical lines or ditto marks. The table number should be typed flush left, with the table title beneath it. Symbols for footnotes are listed below. Abbreviations used in a table should be explained at the bottom of the table after the footnotes.

Figures: Two sets of unmounted glossy prints should be enclosed in separate envelopes. Indicate lightly on the back margin of each figure the number, name of author, and top. Illustration costs in excess of \$50 must be defrayed by the author.

**Photographs:** Two copies of each photograph should be submitted. Any identifiable human subject must sign a release form before the photograph can be used. Radiographs and other black-and-white material should be submitted as unmounted glossy print, 5" × 7" size preferred. A separate identification label should be pasted on each print; do not write directly on the print or use paper clips or staples. Photomicrographs or other color materials should be submitted as color transparencies. Actual magnification and staining method should be given where appropriate; electron photomicrographs should have internal scale markers.

Legends: Legends should be double-spaced, each on a separate page.

References: References should be double-spaced, and should be cited consecutively in the text with superscript numbers outside punctuation. A reference to a paper "in press" may be included. Citations such as "in preparation," "submitted for publication," "unpublished data," and "personal communication" should be given in parentheses in the text only. At the end of each article, references should be listed in the numerical order in which they appear in the text. No more than three authors should be listed for each citation; authors after the third should be designated "et al." Abbreviations of the names of the journals should conform to the Index Medicus. Journal titles should be cited as they existed at the time of publication. Unlisted journals should not be abbreviated. Authors are responsible for bibliographic accuracy.

Articles: Annuniziato D, Goldblum LM: Staphylococcal scalded skin syndrome: A complication of circumcision. Am J Dis Child 1978; 132:1187-1188.

Books: Hoeprich PD: Infectious Diseases, ed 2. New York, Harper & Row Pubs Inc, 1977, p 169.

Contributions to Books: Schaffner W: Psittacosis: Ornithosis, parrot fever, in Beeson PB, McDermott W, Wyngaarden JB (eds): Cecil Textbook of Medicine, ed 15. Philadelphia, WB Saunders Co, 1979, pp. 336-338.

Footnotes: Footnotes to the text and tables should be as few as possible. Each should be typed at the foot of the appropriate page, separated from the text or table by a horizontal line. Designate footnotes by the following symbols in this order: \*, †, ‡, \*\*, ††, ‡‡.

Abbreviations and Nomenclature: Abbreviations should conform to the American Medical Association Manual for Authors and Editors, published by Lange Medical Publications, Los Altos, California. Abbreviations should be kept to a minimum, preferably confined to the tables. Symbols for units of measurement (eg, mm, ml) should not be followed by periods. Chemical or generic names of drugs are preferred. A proprietary name may be given only after it is preceded by the chemical name the first time it appears. Unfamiliar terms and abbreviations must be defined when first used.

**Reviews:** Each manuscript will be reviewed by the Editor and at least one other Editorial Board member. Authors will be notified as soon as possible regarding the acceptability of their manuscripts.

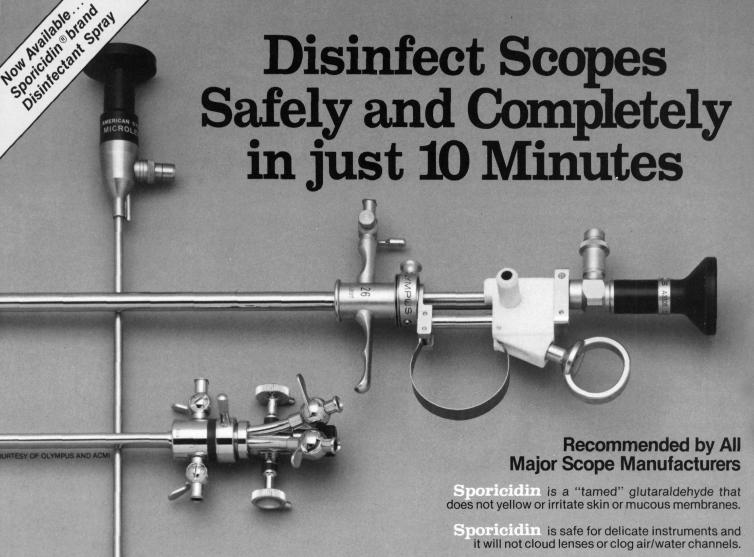
Galleys: Galley prints will be sent to the author for approval before the article is printed.

**Reprints:** The senior author will be sent five complimentary copies of the issue in which the article appears. An order form showing the price for reprints will be sent with the complimentary copies of the issue.

Mail Manuscripts to:

Richard P. Wenzel, MD, Editor INFECTION CONTROL SLACK Incorporated 6900 Grove Road Thorofare, New Jersey 08086 609/848-1000 800/257-8290

477





# Sporicidin COLD STERILIZING SOLUTION An exclusive glutaraldehyde formula

Sporicidin'

### Proof Comes from 15 Years of Research and Clinical Use

"In 5000 procedures the cystoscopes were used directly from the Sporicidin soak; there were no known incidents of iatrogenic infection or post-operative irritation. Sporicidin is safe and effective in 10 minutes."

Sporicidin (1:16) is tuberculocidal, bactericidal, fungicidal & virucidal (including Herpes I & II, Influenza

A2 and Polio I).

Urology, Vol. 23, No. 2, 1984

"After 3 years and 4001 procedures (laparoscopy, cystoscopy and colonoscopy), we observed (1) no post-operative tissue irritation or infection (2) no lens clouding or endoscope damage (3) preferred by our staff."

Journal Of The Operating Room Research Institute, Vol. 3, No. 8, 1983

"Sporicidin...was both more stable and more active against test spores than...Cidex and Cidex-7."

Infection Control, Vol. 1, No. 2, 1980

These and other studies available upon request.

### INFECTION CONTROL

### Table of Contents

Editorial			
<b>Old Wine in New Bottles</b> Richard P. Wenzel, MD			485
Original Articles			
Outbreak of Staphylococcal Infe Traced to a Single Nasal Carrier Anusha Belani, MD; Robert J. Sh Beverly A. Russell, RN; Peter D. I	erertz, MD; Mar		487
Commentary: Types of Disposab in Hospitals C. Glen Mayhall, MD	le Medical Devi	ces Reused	491
The Nosocomial Colonization of Walter T. Hughes, MD; Bonnie V Bobby Williams, BA; Ted Pearson	Villiams, RN;		495
Brief Report: Effects of Ultra High Speed Floor Burnishing on Air Quality in Health Care Facilities Edward A. Schmidt, MPH, CIC; Bernard M. Cannan, BSChE; Richard C. Mulhall, BS; David L. Coleman, PhD			501
Special Sections			
Readers' Forum: Significance of Infection Rates in the Era of DRO Peter C. Fuchs, MD; Marie E. Gus	Gs		506
Product Commentary: Reuse of I Devices—Historical and Current V.W. Greene, PhD, MPH		cal	508
Clinical Pharmacology of Antibiotics: Metronidazole Mark Eggleston, PharmD			514
Departments			
Information for Authors	477	Calendar of Events	521
Letters to the Editor	482	Classified Marketplace	524

### The ideas and opinions expressed by contributing authors do not necessarily reflect those of the editors or publisher.

Publisher: Infection Control (ISSN-0195-9417) is published monthly by SLACK Incorporated, 6900 Grove Road, Thorofare, New Jersey 08086. Telephone: (609) 848-1000.

Copyright 1986: All rights reserved. No part of this publication may be reproduced without written permission from the publisher.

**Subscriptions.** Requests should be addressed to the publisher (except Japan). In Japan, contact Woodbell Scope Incorporated, Mansui Bldg., 9-18. Kanda Surugadai 2-chome, Chiyoda-ku, Tokyo 101, Japan. Subscription rates in the US and possessions: Individual: One year—\$35.00; Two years—\$60.00; Three years—\$75.00. Institutional: One year—\$50.00; Two years—\$75.00; Three years—\$90.00; all other countries: \$15.00 additional each year. Single copies of current issues may be obtained for \$5.00, United States and possessions; \$8.00 all other countries.

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. Postmaster: Send address changes to SLACK Incorporated, 6900 Grove Road, Thorofare, NJ 08086.

As of Volume 1, Number 1, INFECTION CONTROL is listed in Index Medicus, Current Contents—Clinical Practice, Hospital Literature Index, and Cumulative Index to Nursing and Allied Health Literature.

# INFECTION CONTROL® / Editorial Board

#### **EDITOR**

Richard P. Wenzel, MD Iowa City, Iowa

### **SENIOR** ASSOCIATE EDITOR

William Schaffner, MD Nashville, Tennessee

#### ASSOCIATE EDITORS

Sue Crow, RN, MSN Shreveport, Louisiana

John E. McGowan, Jr., MD Atlanta, Georgia

Dennis G. Maki, MD Madison, Wisconsin

### IACK

SLACK Incorporated 6900 Grove Road Thorofare, New Jersey 08086

**Publisher** 

Richard N. Roash

**Associate Publisher** 

Eric M. Baloff

**Executive Editor** 

Donna Carpenter

**Associate Editor** 

Joseph J. Hoffman

**Assistant Editor** Dawn A. Zwick

Circulation Manager

Kevin J. Fenton

Advertising Manager

Randall Roash

Advertising

Sales Representative Wayne M. McCourt

Advertising Sales

Coordinator

Betty Martz

Classified

Advertising Representative

Donna M. Coles

#### **EDITORIAL** ADVISORY BOARD

Robert C. Aber, MD Hershey, Pennsylvania

Paul Arnow, MD Chicago, Illinois

Charles S. Bryan, MD Columbia, South Carolina

John P. Burke, MD Salt Lake City, Utah

Mary Castle, RN, MPH Berkeley, California

Marie B. Coyle, PhD Seattle, Washington

Burke A. Cunha, MD Mineola, New York

Richard E. Dixon, MD Trenton, New Jersey

Mark Eggleston, PharmD Washington, DC

Harvey A. Elder, MD Loma Linda, California

Bruce Farber, MD Pittsburgh, Pennsylvania

Martin S. Favero, PhD Atlanta, Georgia

Peter C. Fuchs, MD, PhD Portland, Oregon

Richard A. Garibaldi, MD Farmington, Connecticut

Donald A. Goldmann, MD Boston, Massachusetts

Dieter H.M. Gröschel, MD Charlottesville, Virginia

Peter A. Gross, MD Hackensack, New Jersey

Karen Hadley, RN, MPH New Orleans, Louisiana

David K. Henderson, MD Bethesda, Maryland

Peter N.R. Heseltine, MD Los Angeles, California

Cyrus C. Hopkins, MD Boston, Massachusetts

Allen B. Kaiser, MD Nashville, Tennessee

Donald L. Kaiser, DrPH Charlottesville, Virginia

Elaine Larson, PhD Cabin John, Maryland

Harold Laufman, MD, PhD New York, New York

William J. Ledger, MD New York, New York

Barbara McArthur, RN, PhD Detroit, Michigan

Rob Roy MacGregor, MD Philadelphia, Pennsylvania

C. Glen Mayhall, MD Richmond, Virginia

Ronald Lee Nichols, MD New Orleans, Louisiana

Harry C. Nottebart, Jr., JD, MD Richmond, Virginia

James E. Peacock, Jr., MD Winston-Salem, North Carolina

Frank S. Rhame, MD Minneapolis, Minnesota

William A. Rutala, PhD, MPH Chapel Hill, North Carolina

William E. Scheckler, MD Madison, Wisconsin

Robert J. Shannon, MSPH Boston, Massachusetts

Walter E. Stamm, MD Seattle, Washington

Charles W. Stratton, MD Nashville, Tennessee

George H. Talbot, MD Philadelphia, Pennsylvania

Timothy R. Townsend, MD Baltimore, Maryland

William M. Valenti, MD Rochester, New York

James Veazey, MD Albany, New York Kathy J. Wydra, RN Geneva, New York

#### **FOREIGN** ADVISORY BOARD

Graham Ayliffe, MD, FRCPath. Birmingham, England

Professor G. Berencsi Szeged, Hungary

David Birnbaum, MPH Sidney, British Columbia, Canada

Professor Jaap Dankert Groningen, Netherlands

Professor Dr. F. Daschner Freiburg, West Germany

Lars O. Kallings, MD Stockholm, Sweden

Professor W.B. Kędzia Sieroca, Poland

Professor A.P. Krasilnikow Minsk, USSR

Professor Dr. W. Marget Munich, West Germany

Bertil Nyström, MD Huddinge, Sweden

Ian Phillips, MA, MD, MRCPath. London, England

Samuel Ponce de Leon, MD Mexico City, Mexico

Hans Reber, MD Basel, Switzerland

Professor Gerald Reybrouck Leuven, Belgium

Manfred L. Rotter, MD, DipBact Vienna, Austria

Theodore Sacks, MD Jerusalem, Israel

Dr. Bernhard M. Thimm Federal Republic of Germany

Professor Dr. med. H.P. Werner Mainz, West Germany

Professor Dr. W. Weuffen Greifswald, German Democratic Republic

### **Software Evaluation**

In the June, 1986, issue of the American Journal of Infection Control (86;14:139-145), Rosemary Berg, B.S., M.Ed., CIC, of the APIC Education Committee reported the results of an in-depth evaluation of computer software packages for infection control. Lynne P. Strony, Ph.D., and Sue Troxler, R.N., M.P.H., assisted in developing the evaluation criteria and editing the manuscript; and Larry Mohr, a data management specialist, and Sandra Baus, R.N., a second-year ICP, assisted in testing.

Although the software systems were similar in many respects, they were found to differ significantly on a number of important criteria. On almost all of these criteria the AICE software system was judged superior to its competitors. The following table, prepared by ICPA, Inc., summarizes the major points of difference.

Evaluation Criteria	AICE*	Nearest competitor
Basic purchase price	\$3,250	\$3,500
Level of time and computer skill required for the ICP to use the software package	"A basic understanding of computers" "Small to fair amount of time and computer knowledge"	"Strong interest in computers" "Increased time and knowledge"
User's manual and operator instructions	"Excellent" "Easy to follow"	"Large, but thorough" "Directions to produce reports were confusing" "Excellent in some areas, confusing in others"
Efficiency for entering and editing patient records	"Quick and simple"	"A bit cumbersome"
Number of items (fields) the ICP can sort patients by	All 42 fields	Only 6 fields that must be predefined as sort fields
Denominators for rates can be user- defined or calculated automatically by the report procedure	Yes	No
Computing speed (time needed to select and sort 55 patients' records)	Fast (1 second)**	Slow (46 seconds)**
Performs common epidemiologic statistical tests like the chi square and Eisher's exact test	Yes	No
Ability to download data from the hospital's mainframe computer	Yes	No
Duration of software warranty	2 years	6 months
Summary of assessments of infection control practitioners and computer analyst	"Very flexible and adaptable" "I felt comfortable enough with the system to enter and analyze my own data." "Analysis of data is extremely fast, and the resulting reports, tables and graphs are flexible and self explanatory." "Versatile, can be modified for individualized use, and produces clear and concise reports." "Exceedingly competent"	"Most complicated and most difficult to learn"  "A good example of 'no free lunch' "  "Directions to obtain reports were confusing"  "The user who is not very comfortable with 'computerese' should be prepared to spend some time on the telephone"  "Greater learning time and slower execution"  "When I attempted to produce reports, I got lost."

\*Infection Control and Prevention Analysts, Inc., II22 N. Alma, Suite 220, Richardson, Texas 75081, telephone 214-680-9988.
\*\*AICE can select and sort 2,500 patients' records in less than 10 seconds on an IBM PC-AT with a hard disc. Assuming a 46:1 ratio, the nearest competitor's software would take over 7 minutes to select and sort the same 2,500 patients' records.