VOLUME 12, NUMBER 6 JUNE 1991

An Official Journal of The Society for Healthcare Epidemiology of America

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY™

EDITORIAL

Diarrhea: A Neglected Nosocomial Hazard? 343
BARRY FARR, MD, MSc

ORIGINAL ARTICLES

Risk Factors for the Development of *Clostridium difficile*-Associated Diarrhea During a Hospital Outbreak 345
ALAIN THIBAULT, MD; MARK A. MILLER, MD; CHRISTINA GAESE, BSc, RN

Hospital-Acquired Diarrhea in Adults: A Prospective Case-Controlled Study in Mexico 349
MUSSARET ZAIDI, MD; SAMUEL PONCE DE LEON, MD, MSc; ROSA MARIA ORTIZ, BSC; SERGIO PONCE DE LEON, MD; JUAN J. CALVA, MD, MSc; GUILLERMO RUIZ-PALACIOS, MD; MARGARITA CAMORLINGA, MSc; LUZ ELENA CERVANTES, BSc; FRANCISCO OJEDA, BSc

Nosocomial Pneumonia in a Canadian Tertiary Care Center: A Prospective Surveillance Study 356
M. LOUIE, MD; B. DYCK, RN; S. PARKER, MD; L. SEKLA, MD; L.E. NICOLLE, MD

Policy for Managing a Community Infectious Disease Outbreak 364
RUTH M. FRACE, RN, MSN; JEFFREY A. JAHRE, MD

EMPORIATRICS

Biological Warfare and Infection Control 368
MARY D. NETTLEMAN, MD

STATISTICS FOR HOSPITAL EPIDEMIOLOGY

Problems Resulting from Multiple Tests 373
LEON F. BURMEISTER, PHD

CLINICAL PHARMACOLOGY OF ANTIBIOTICS

Pentamidine: A Review 375
BRIAN WISPELWEY, MD; RICHARD D. PEARSON, MD

REFLECTIONS

The Secret Life of a Hospital Epidemiologist...With Apologies to Dr. Mitty 383
RICHARD N. OLANS, MD

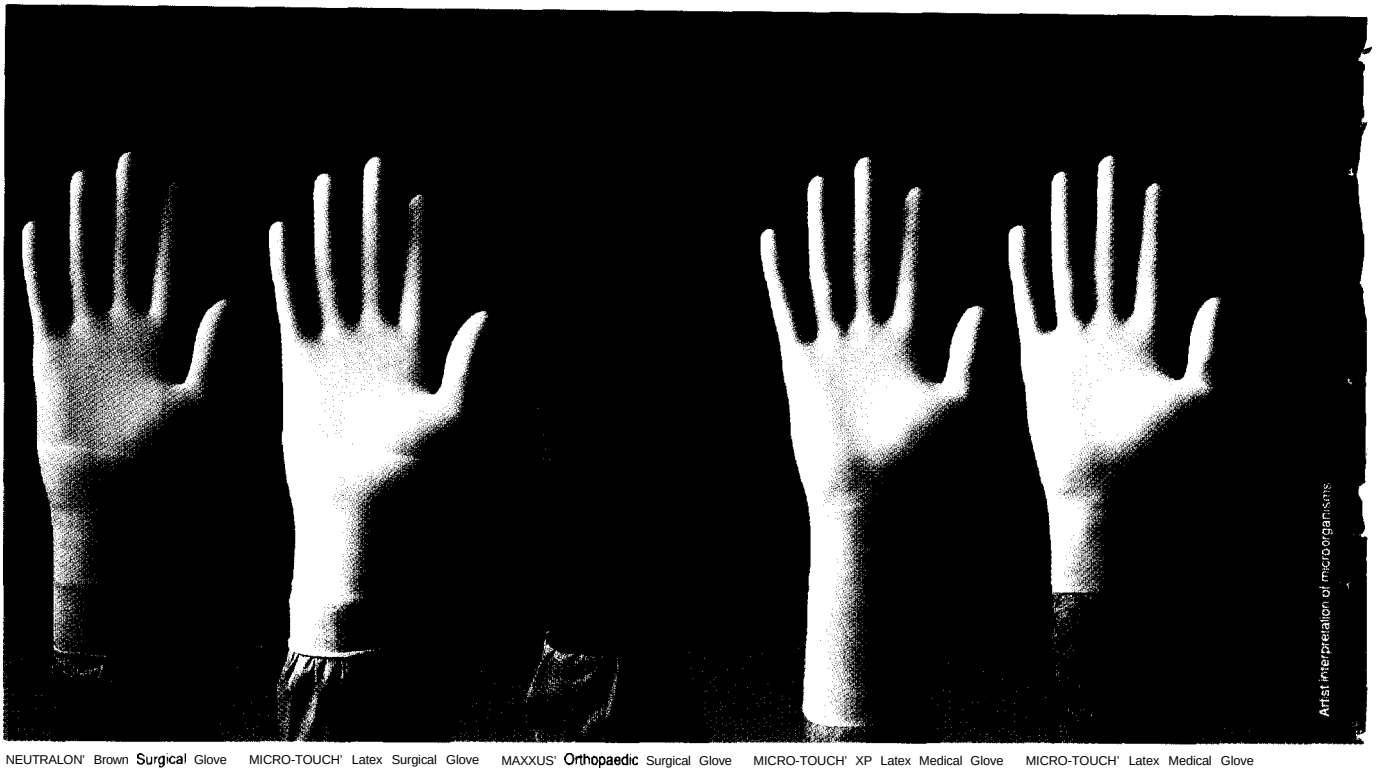
LETTERS TO THE EDITOR

Ciprofloxacin-Resistant Serratia marcescens 342
LEONARD MALVONE, MT (HEW)

SHEA NEWSLETTER 387

https://doi.org/10.1086/646351 Published online by Cambridge University Press

Protection is our line.



NEUTRALON' Brown Surgical Glove MICRO-TOUCH' Latex Surgical Glove MAXXUS' Orthopaedic Surgical Glove MICRO-TOUCH' XP Latex Medical Glove MICRO-TOUCH' Latex Medical Glove

Protection. The key to our superior glove line.

At Johnson & Johnson Medical, Inc., we have a reputation that spans more than 20 years — years dedicated to the research and development of quality gloves that provide maximum protection, optimum fit and excellent touch sensitivity.

We engineer quality into every aspect of our gloves beginning with 100 percent on-line visual inspection of all latex gloves, and quality standards that far exceed those required by the FDA.

https://doi.org/10.1086/646331 Published online by Cambridge University Press

SOME PEOPLE TAKE DRUG ABUSE TO HEART.



Most cocaine-users are so dedicated to the drug that what it does to their hearts never enters their minds. They don't realize that every time they use cocaine, they put themselves at risk for such potentially fatal cardiovascular complications as hypertensive crisis.. . myocarditis.. .myocardial infarction . . . ventricular tachycardia.. .ventricular fibrillation.. .even cardiac arrest.

Chances are, at least some of these people are your patients. And many of them may feel more comfortable telling a nurse what they can't-or won't-tell a doctor. That's why your role becomes critical in helping suspected drug abusers understand what illegal drug use does to their bodies.

As key members of the health care team, nurses *can* make a difference in helping to curb drug abuse, and in preventing some of its deadliest consequences. The next time you suspect a patient may be using cocaine-or *any* illegal substance—have a heart-to-heart talk about the damage these drugs can do.

A short talk can go a long way.

Partnership fur a Drug-Free America

https://doi.org/10.1086/646351 Published online by Cambridge University Press

Vol. 12 No. 6 June 1991

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY

CONTENTS

EDITORIAL

Diarrhea: A Neglected Nosocomial Hazard? 343

BARRY FARR, MD, MSc

ORIGINAL ARTICLES

Risk Factors for the Development of Clostridium difficile-Associated Diarrhea During a Hospital Outbreak 345

ALAIN THIBAULT, MD; MARK A. MILLER, MD; CHRISTINA GAESE, BSc, RN

Hospital-Acquired Diarrhea in Adults: A Prospective Case-Controlled Study in Mexico 349

MUSSARET, MD; SAMUEL PONCE DE LEON, MD, MSc; ROSA MARIA ORTIZ, BSc; SERGIO PONCE DE LEON, MD; JUAN J. CALVA, MD, MSc; GUILLERMO RUIZ-PALACIOS, MD; MARGARITA CAMORLINGA, MSc; Luz ELENA CERVANTES, BSc; FRANCISCO OJEDA, BSC

Nosocomial Pneumonia in a Canadian Tertiary Care Center: A Prospective Surveillance Study 356

M. LOUIE, MD; B. DYCK, RN; S. PARKER, MD; L. SEKLA, MD; L.E. NICOLLE, MD

Policy for Managing a Community Infectious Disease Outbreak 364

RUTH M. FRACE, RN, MSN; JEFFREY A. JAHRE, MD

EMPORIATRICS

Biological Warfare and Infection Control 368

MARY D. NETTLEMAN, MD

STATISTICS FOR HOSPITAL EPIDEMIOLOGY

Problems Resulting from Multiple Tests 373

LEON F. BURMEISTER, PHD

CLINICAL PHARMACOLOGY OF ANTIBIOTICS

Pentamidine: A Review 375

BRIAN WISPELWEY, MD; RICHARD D. PEARSON, MD

REFLECTIONS

The Secret Life of a Hospital Epidemiologist...With Apologies to Dr. Mitty 383

RICHARD N. OLANS, MD

DEPARTMENTS

Copyright and Republication Policy 338

Information for Authors 340

Letters to the Editor 342

SHEA Newsletter 387

Book Reviews 391

Calendar of Events 394

Classified Marketplace Cover3

THE PUBLICATION OF ADVERTISING IN THE JOURNAL DOES NOT CONSTITUTE ANY GUARANTEE OR ENDORSEMENT BY THE SOCIETY FOR HOSPITAL 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 RECOMMENDATOiNS OR ENDORSEMENT BY THE Society

PUBLISHER: Infection Control and Hospital Epidemiology (ISSN-0899-823X) is published exclusively by SLACK Incorporated 12 times a year. Address: 6900 Grove Rd.. Thorofare, NJ 08086. Telephone: (609) 848-1000.

COPYRIGHT 1991 by The Society for Hospital Epidemiology of America, Inc. and SLACK Incorporated. All rights resewed. 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 Incorporated, 4-22-11, Kitakasai, Edogawaku, Tokyo 134, Japan. Subscription rates in the United States and possessions: Individual: One year—$70.00; Two years—$105.00; Three years-$135.00; Institutional: One year—$80.00; Two years-$120.00; Three years—$160.00. Canada: $18.00 additional each year; all other countries: $36.00 additional each year. Single copies of current issues may be obtained for $8.00, United States and possessions; $16.00 all other countries.

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

As of Volume 1, Number 1, INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY is listed in Index Medicos, Current Contents-Clinical Practice, Hospital Literature Index. Cumulative Index to Nursing and Allied Health Literature, and Nursing Abstracts.

https://doi.org/10.1086/646351 Published online by Cambridge University Press

DO YOU REALLY KNOW WHAT YOU'RE GETTING INTO?



If you work in a high-risk medical area, you know the hazards. So does **Ansell.** That's why we've introduced our new E.P.'" Gloves. They rovide the extra protection you nee8 because E.P. Gloves are manufactured and tested to even tighter requirements than the current industry standards for surgical gloves. They also provide features for added protection not available with other gloves in the marketplace today.

Ansell E.P. Gloves Provide Extra Protection By:

- Testing to ten times tighter **AQL** than the industry standard for surgical gloves*
- **100%** electronic inspection for pinholes
- No powder added
- **Thicker** latex
- long, **12"** cuff
- Textured wet-grip surface
- Meeting industry guidelines for handling cytotoxic drugs**
- Availability in four sizes, **petite, small, medium, and large**

So get your hands into **Ansell's** new E.P. Gloves — before your get into anything else. For more information and a FREE pair of E.P. Gloves, call today.

*American Society for the Testing of Materials (ASTM) D3577-78a

**Occupational Safety & Health Administration (OSHA) Instruction PUB 8-1.1 "Work Practice Guidelines for Personnel Dealing with Cytotoxic (Antineoplastic) Drugs" January 29, 1986

Ansell Medical

Ansell Incorporated
P.O. Box 1252, Dothan, Alabama 36302
800-327-8659 205-794-4231 (in Alabama)

© 1990 Ansell Incorporated All Rights Reserved

https://doi.org/10.1086/646351 Published online by Cambridge University Press

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
Topics in Occupational Medicine
David Weber, MD, MPH
Chapel Hill, North Carolina

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY®

EDITORIAL ADVISORY BOARD

Jacques F. Acar, MD	Paris, France
J. Wesley Alexander, MD	Cincinnati, Ohio
Paul Arnow, MD	Chicago, Illinois
Graham A.J. Ayliffe, MD	Birmingham, United Kingdom
Neil L. Barg, MD	Yakima, Washington
Elizabeth Ann Bolyard, RN, MPH, CIC	Atlanta, Georgia
John M. Boyce, MD	Providence, Rhode Island
Professor Dr. Ilja Braveny	Munich, Federal Republic of Germany
Charles Bryan, MD	Columbia, South Carolina
Christian Brun-Buisson, MD	Creteil, France
Donald E. Craven, MD	Boston, Massachusetts
Sue Crow, MSN, RN, CIC	Shreveport, Louisiana
Franz Daschner, MD	Freiburg, Federal Republic of Germany
Leigh G. Donowitz, MD	Charlottesville, Virginia
Charles E. Edmiston, Jr., PhD	Milwaukee, Wisconsin
Theodore C. Eickhoff, MD	Denver, Colorado
Bruce Farber, MD	Manhasset, New York
Victoria J. Fraser, MD	St. Louis, Missouri
Peter C. Fuchs, MD, PhD	Black Butte, Oregon
Richard A. Garibaldi, MD	Farmington, Connecticut
Velvl Greene, PhD, MPH	Beer Sheva, Israel
Robert Gaynes, MD	Atlanta, Georgia
David W. Gregory, MD	Nashville, Tennessee
David K. Henderson, MD	Bethesda, Maryland
Peter N.R. Heseltine, MD	Los Angeles, California
Karen Hoffmann, RN, CIC, MS	Chapel Hill, North Carolina
Marguerite McMillan Jackson, RN, PhD	San Diego, California
Janine Jagger, MPH, PhD	Charlottesville, Virginia
William R. Jarvis, MD	Atlanta, Georgia
Douglas S. Kernodle, MD	Nashville, Tennessee
Robert H. Latham, MD	Nashville, Tennessee
Lewis B. Lefkowitz, MD	Nashville, Tennessee
Hsieh-Shong Leu, MD, MSc	Taipei, Taiwan
Jack Levy, MD	Brussels, Belgium
Victor Lorian, MD	Bronx, New York
Dennis G. Maki, MD	Madison, Wisconsin
Professor Dr. Walter Marget	Munich, Federal Republic of Germany
William J. Martone, MD	Bethesda, Maryland
Allison McGeer, MD	Toronto, Ontario, Canada
John E. McGowan, Jr., MD	Atlanta, Georgia
Jonathan L. Meakins, MD, DSc	Montreal, Quebec, Canada
Raf Mertens, MD	Brussels, Belgium
Robert R. Muder, MD	Pittsburgh, Pennsylvania
Joseph M. Mylotte, MD, CIC	Buffalo, New York
Lindsay Nicolle, MD	Winnepeg, Manitoba, Canada
Juhani Ojajärvi, MD	Helsinki, Finland
Michael T. Osterholm, PhD, MPH	Minneapolis, Minnesota
Jan Evans Patterson, MD	San Antonio, Texas
Sindy M. Paul, MD	Trenton, New Jersey
Michael A. Pfaller, MD	Iowa City, Iowa
Samuel Ponce de Leon, MD, MSc	Mexico City, Mexico
Isaam Raad, MD	Houston, Texas
Manfred L. Rotter, MD, DipBact	Vienna, Austria
Theodore Sacks, MD	Jerusalem, Israel
William E. Scheckler, MD	Madison, Wisconsin
Kent Sepkowitz, MD	New York City, New York
Denis Spelman, MD	Prahran Victoria, Australia
Michael L. Tapper, MD	New York, New York
Clyde Thornsberry, PhD	Brentwood, Tennessee
Professor Leonid P. Titov	Minsk, Republic of Belarus
Timothy R. Townsend, MD	Millwood, Virginia
Antoni Trilla, MD, PhD	Barcelona, Spain
Professor Wang Shu-Qun	Beijing, People's Republic of China
J. John Weems, Jr., MD	Greenville, South Carolina
Robert A. Weinstein, MD	Chicago, Illinois
Professor Dr. W. Weuffen	Greifswald, Federal Republic of Germany
Sergio B. Wey, MD	São Paulo, Brazil
Rebecca Wurtz, MD	Evanston, Illinois

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

Circulation Manager
Lester J. Robeson, CCCP

Production Director
Christine Malin

Production Coordinator
Joanne Patterson

Publishing Director/ Advertising
Wayne McCourt

Pharmaceutical Group Sales Director
Michael LoPresti

Advertising Sales Representative
Jennine Kane

Classified/Recruitment Sales Manager
Michele Burch

https://doi.org/10.1086/646351 Published online by Cambridge University Press

SPORICIDIN® MONITOR TEST KIT



PROOF FOR EFFECTIVE CONCENTRATIONS

The Sporicidin Monitor Test Kit is a color indicator which is used to determine effective concentrations of 1: 8 and 1: 16 dilutions of Sporicidin Cold Sterilizing Solution.

To order, or for additional information, call: (800) 424-3733

Sporicidin

Sporicidin International, 12000 Old Georgetown Road, Rockville, MD 20852 . (301) 231-7700 . FAX (301) 23143165

https://doi.org/10.1086/646351 Published online by Cambridge University Press

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY

The Society for Hospital Epidemiology of America (SHEA) and SLACK Inc. Copyright and Republication Policy

The Society for Hospital Epidemiology of America (SHEA) and SLACK Inc. hold copyright on Infection ***Control and Hospital Epidemiology.*** We request that all authors of works transfer to SHEA and SLACK Inc. all rights, title, and interest to such works, including copyright. In accord with the Copyright Act of 1976, we must acquire every author's signature to effect the transfer. A written work cannot be considered for publication until the 'Assignment of Copyright' form is signed by the author or authors and is on file at the editorial offices. Please submit this signed from with your manuscript. In the event that a manuscript is not accepted for publication, this agreement will be returned to the authors.

Signed 'Assignment of Copyright' forms confirm that a work submitted has not previously been published, is not subject to copyright or other rights except those of the author to be transferred to SHEA and SLACK Inc., and is not under consideration for publication elsewhere, except under circumstances communicated to us in writing at the time the work is submitted.

Permission to reproduce any part of the works published by SHEA and SLACK Inc. in ***Infection Control and Hospital Epidemiology*** in any form or by any means, electronic or mechanical, is not permitted without written permission from SLACK Inc.

Assignment of Copyright

In consideration of SLACK Incorporated and The Society for Epidemiology of America (collectively called the 'Publisher') in publishing my (our) submitted manuscript, the undersigned hereby transfer(s), assign(s), and otherwise convey(s) all copyright in the manuscript to the Publisher. The undersigned declares that the manuscript is original and, to the best of the undersigned's knowledge, contains no matter that is libelous or unlawful or that infringed upon anyone else's rights of copyright.

In addition, we affirm that the work is the work of every author listed, and is not under consideration for publication elsewhere, except under circumstances communicated to us in writing at the time the work is submitted.

MANUSCRIPT NUMBER (if known) _____ DATE _____

AUTHORS _____

_____

TITLE _____

_____

_____

ALL AUTHORS

Signature _____ Date _____

Signature _____ Date _____

Signature _____ Date _____

Signature _____ Date _____

Signature _____ Date _____

Signature _____ Date _____

Signature _____ Date _____

This form may be photocopied.

https://doi.org/10.1086/646351 Published online by Cambridge University Press

OSHA VAPOR LIMIT

OSHA has set 0.2 ppm as the permissible exposure limit for glutaraldehyde.[1]

Sporicidin offers important advantages. When diluted for 100% hospital level disinfection, it contains 0.13% glutaraldehyde. With good cross-ventilation, this can avoid the need for special ventilation equipment to stay within the never-to-be exceeded ceiling of 0.2 ppm.

Greater ventilation and space areas are required when using 2% glutaraldehyde solutions. It is reported that a room volume of air 550 times greater than that of the soaking container is needed for 2% glutaraldehyde, while only 33 times greater is needed for Sporicidin.[2]

It's reassuring to know that you can lessen the risk of over-exposure to glutaraldehyde, offer greater protection to your staff and reduce your space and ventilation requirements as well, by using Sporicidin.



ANOTHER REASON TO DISINFECT WITH SPORICIDIN

References: 1. Federal *Register, Vol. 54, No. 12, Jan. 19, 1999* *2. Hospital Hazardous Materials Management, Vol. 3, No. 2, November 1999*

Sporicidin International **5901 Montrose** Rd., **Rockville**, Md. 20852

https://doi.org/10.1086/646351 Published online by Cambridge University Press