The Official Journal of The Society for Healthcare Epidemiology of America

PUBLISHED FOR THE SOCIETY BY SLACK INCORPORATED

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY®

EDITORIALS	
How Good Is the Tuberculin Skin Test? JOHN B. BASS, JR., MD	797
First Do No Harm: Ensuring That Healthcare Workers Vaccinate and Are Vaccinated Kristin L. Nichol, MD, MPH, MBA	799
ORIGINAL ARTICLES	
A Survey of Latent Tuberculosis Infection Among Laboratory Healthcare Workers in New York City ELIZABETH GARBER, MSC; PABLO SAN GABRIEL, MD, MPH; LAUREN LAMBERT, MPH; LISA SAIMAN, MD, MPH	80:
Prevalence of Tuberculin Skin Test Positivity and Conversions Among Healthcare Workers in New York City During 1994 to 2001 SHARLETTE COOK, MPH; KHIN LAY MAW, MD, MPH; SONAL S. MUNSIFF, MD; PAULA I. FUJIWARA, MD, MPH; THOMAS R. FRIEDEN, MD, MPH	807
Costs of Implementing and Maintaining a Tuberculin Skin Test Program in Hospitals and Health Departments Lauren Lambert, MPH; Sameer Rajbhandary, PhD; Noreen Qualls, DrPH; Lawrence Budnick, MD; Antonino Catanzaro, MD; Sharlette Cook, MPH; Linda Daniels-Cuevas; Elizabeth Garber, MSc; Randall Reves, MD	814
Utility of Dual Skin Tests to Evaluate Tuberculin Skin Test Reactions of 10 to 14 mm in Healthcare Workers Bryan J. Marsh, MD; Joshua San Vicente, MD; C. Fordham von Reyn, MD	82:
Potential Nosocomial Exposure to Mycobacterium tuberculosis From a Bronchoscope Janet L. Larson, MD; Lauren Lambert, MPH; Rachel L. Stricof, MPH; Jeffrey Driscoll, PhD; Michael A. McGarry, BA; Renée Ridzon, MD	825
Relative Versus Absolute Noncontagiousness of Respiratory Tuberculosis on Treatment Richard Long, MD; Karen Bochar, BScN; Sylvia Chomyc, MLT, BSc; James Talbot, MD, PhD; James Barrie, MD; Dennis Kunimoto, MD; Peter Tilley, MD	833
Use of, Effectiveness of, and Attitudes Regarding Influenza Vaccine Among House Staff Richard T. Lester, MD; Allison McGeer, MD, MSc; George Tomlinson, PhD; Allan S. Detsky, MD, PhD	839
Correlation Between Healthcare Workers' Knowledge of Influenza Vaccine and Vaccine Receipt Richard A. Martinello, MD; Laura Jones, RN; Jeffrey E. Topal, MD	845
A Preventable Outbreak of Pneumococcal Pneumonia Among Unvaccinated Nursing Home Residents in New Jersey During 2001 CHRISTINA G. TAN, MD; STANLEY OSTRAWSKI, RN, MS, CIC; EDDY A. BRESNITZ, MD, MS	848
Ventilator-Associated Pneumonia in a Multi-Hospital System: Differences in Microbiology by Location Hilary M. Babcock, MD; Jeanne E. Zack, BSN; Teresa Garrison, MSN; Ellen Trovillion, BSN; Marin H. Kollef, MD; Victoria J. Fraser, MD	853

Continued inside.

Step 1: Log On.

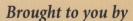


Step 3: Get Job.

It's that easy!

NursePath.com
The fastest route to your next career move

- Daily job postings on the home page
- Search hundreds of jobs by title, location or hospital/facility
- Choose from the best career opportunities in nursing















Vol. 24 No. 11 November 2003

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY

CONTENT

Continued from cover

ORIGINAL ARTICLES

Impact of a Program of Intensive Surveillance and Interventions Targeting Ventilated Patients in the Reduction of Ventilator-Associated Pneumonia and Its Cost-Effectiveness	
Kwan Kew Lai, DMD, MD; Stephen P. Baker, MSc, PH; Sally A. Fontecchio, RN	859
Ventilator-Associated Pneumonia at a Tertiary-Care Center in a Developing Country: Incidence, Microbiology, and Susceptibility Patterns of Isolated Microorganisms Zeina A. Kanafani, MD; Layla Kara, PharmD; Shady Hayek, MD; Souha S. Kanj, MD	864
CONCISE COMMUNICATIONS	
Is Cutaneous Tuberculosis Infectious? A Case Presentation and Practical	
Management Plan CHARLES HUI, MD, FRCPC; AMIT X. GARG, MD, MA, FRCPC; ROSS PENNIE, MD, FRCPC	870
Risk of Acquiring Influenza A in a Nursing Home From a Culture-Positive Roommate Paul J. Drinka, MD; Peggy Krause, RN, CCRC; Lori Nest, RN; Brian M. Goodman, PhD; Stefan Gravenstein, MD, MPH	872
LETTERS TO THE EDITOR Tuberculin Skin Test Conversion Among Healthcare Workers After Exposure to a Patient With Pleural Effusion and Parenchymal Disease Unapparent on Chest X-Ray Marcella McGuinn, MD; Barbara Schmitt, RN; Alan Harris, MD; John Segreti, MD	794
Varicella Seroprevalence Among Turkish Medical Students and the Validity of Disease History	
Güler Kanra, MD; S. Songül Yalçın, MD; Ates Kara, MD; Kadriye Yurdakök, MD; Tamer Pehlivanli, MD	795
MEDICAL NEWS GINA PUGLIESE, RN. MS: MARTIN S. FAVERO, PHD	875

Full-text articles available online at ICHEJournal.com

THE PUBLICATION OF ADVERTISING IN THE JOURNAL DOES NOT CONSTITUTE ANY GUARANTEE OR ENDORSEMENT BY THE SOCIETY FOR HEALTHCARE EPIDEMIOLOGY OF AMER-ICA 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-0195-9417, Canadian GST#129780466) is published exclusively by SLACK Incorporated 12 times a year. Address: 6900 Grove Road, 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.

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

COPYRIGHT 2003 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-\$119.00; Two years-\$179.00; Three years-\$239.00; Institutional: One year-\$259.00; Two years-\$439.00; Three years-\$609.00. Fellows: \$54.50 per year with proof of training status. Canada: add 7% Goods & Services tax; Overseas: add \$49.00 each year for delivery by air service. Single copies of current issues may be obtained for \$24.00.

Instructions to Authors: Authors may submit manuscripts prepared in accordance with the 2001 revision of the "Uniform Requirements for Manuscripts Submitted to Biomedical Journals." A digital version it available at www.icmje.org. Submit to RapidReview.com. All submissions must be accompanied by copyright form(s) signed by all authors.

REPRINTS: All requests to reprint or use material published herein should be addressed to John Kain, SLACK Incorporated, 6900 Grove Road, Thorofare, NJ 08086. For reprint orders and prices, contact John Kain 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 \$.20 per page is paid directly to Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923; phone (978) 750-8400. 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 Road,

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 OFFICE

SLACK Incorporated 6900 Grove Road Thorofare, NJ 08086

(856) 848-1000; (856) 848-6091 (FAX) E-mail: iche@slackinc.com

EDITOR

Barry M. Farr, MD, MSc

DEPUTY EDITORS

David P. Calfee, MD, MS

William R. Jarvis, MD

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

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

Infections in Immunocompromised

Patients

Kent Sepkowitz, MD

New York City, New York

Information Management

John A. Sellick, DO

Amherst, 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

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

Executive Vice President Richard N. Roash

John C. Carter

Editorial Director

Jennifer Kilpatrick

Executive Editor

Assistant Editor

Shirley P. Strunk, ELS

Vice President, Publishing Operations

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY®

EDITORIAL ADVISORY BOARD

Jacques F. Acar, MD J. Wesley Alexander, MD

Paul Arnow, MD

Neil L. Barg, MD Manuel Bastanzuri, MD

Elizabeth Ann Bolyard, RN, MPH, CIC

John M. Boyce, MD Professor Dr. Ilja Braveny

Christian Brun-Buisson, MD

Charles Bryan, MD

John P. Burke, MD

Donald E. Craven, MD

Sue Crow, MSN, RN, CIC

Franz Daschner, 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

Leigh G. Grossman, MD

David K. Henderson, MD

Peter N.R. Heseltine, MD

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

Janine Jagger, MPH, PhD

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

Robert R. Muder, MD

Carlene A. Muto, MD, MS 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 Lisa Saiman, MD, MPH

William E. Scheckler, MD

Andrew E. Simor, 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

Circulation Manager Lester J. Robeson, CCCP

Production Director Christine Malin

Production Coordinator Joanne Patterson

Vice President, U.S. Advertising Wayne McCourt

Pharmaceutical Group Sales Director Robin Geller subject to the Cambridge Core terms of use Paris, France Cincinnati, Ohio

Boston, Massachusetts Yakima, Washington

Havana, Cuba Atlanta, Georgia

New Haven, Connecticut

Munich, Germany

Creteil, France Columbia, South Carolina

Salt Lake City, Utah

Burlington, Massachusetts

Shreveport, Louisiana Freiburg, Germany

Milwaukee, Wisconsin

Denver, Colorado Manhasset, New York

St. Louis, Missouri

Black Butte, Oregon Farmington, Connecticut

Atlanta, Georgia

Beer Sheva, Israel

Nashville, Tennessee Charlottesville, Virginia

Bethesda, Maryland

San Juan, California Chapel Hill, North Carolina

Escondido, California

Charlottesville, Virginia Nashville, Tennessee

Nashville, Tennessee

Nashville, Tennessee

Taoyuan, Taiwan Brussels, Belgium

Bronx, New York

Madison, Wisconsin Bethesda, Maryland

Toronto, Ontario, Canada

Atlanta, Georgia Montreal, Quebec, Canada

Pittsburgh, Pennsylvania

Pittsburgh, Pennsylvania

Buffalo, New York

Winnepeg, Manitoba, Canada Helsinki, Finland

Minneapolis, Minnesota

San Antonio, Texas

Yardley, Pennsylvania

Iowa City, Iowa

Mexico City, Mexico Houston, Texas

Vienna, Austria

Jerusalem, Israel

New York, New York Madison, Wisconsin

Toronto, Ontario, Canada

Prahran, Victoria, Australia

New York, New York Franklin, Tennessee

Minsk, Republic of Belarus

Baltimore, Maryland

Barcelona, Spain Beijing, People's Republic of China

Greenville, South Carolina Chicago, Illinois

Greifswald, Germany São Paulo, Brazil Chicago, Illinois

AMP

Advertising Sales Representative Michael Raftery

Advertising Sales Administrator Theresa Ficarra Classified/Recruitment Sales Manager

Kristy Irwin Classified/Recruitment Sales Kelly Bove and Stacey Goldberg

Director of Reprint Sales

Jaime Underwood .org/core. 06 May 2025 at 05:42 Downloaded from

stection Control and Hospital Epidemiology 198-9417 199-199-199-199-199-199-199-199-199-19	corporation immediately followed by k. If not owned by a corporation, give we fin arme and ackess as well as
Compile Malling Address of Known Office of Prublication (Not Printer) (Street,city,county,state,and ZIP+4) Compile Malling Address of Known Office of Prublication (Not Printer) (Street,city,county,state,and ZIP+4) Compile Malling Address of Heacquarters or General sunners Office of Publisher (Not printer) Compile Malling Address of Heacquarters or General Business Office of Publisher (Not printer) Real Notes (Poor Note Note (Not printer) Full Names and Compiler Malling Address of Publisher, Editor, and Manaping Editor (Do not leave blank blaskers (Name and compiler malling address) And C. Carter, Slack (noroporated, 5000 Grove Road Thorofare, New Jersey 00066-9447 Black (Parne and compiler malling address) Interpretation (Parner) Interpretation (Parner	\$119.00 Contact Person Lesier Robason, CCCP Telephone (856) \$481-1000 extension 245
Complete Mailing Address of Known Office of Publication (Not Pilnter) (Street,city, county, state, and ZIP-14) 600 Grove Read forcolare, Glocucester County, New Jersey 08086-9447 Complete Mailing Address of Heacquarters or General Business Office of Publisher (Not printer) fact, incorporated 8900 Grove Road Thorolate, New Jersey 08086-9447 Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Do not leave blank behave (Name and complete mailing address) that C. Carter, Slack Incorporated, 8900 Grove Road Thorolates, New Jersey 08086-9447 filtor (Name and complete mailing address) larg M. Fart, MD, MSc. Same as above Ringing Editor (Name and complete mailing address) By P. Struk, ELS Same as above Il Dener (Do not leave black, if the publication is owned by a corporation, pive the name and address of the features and addresses of the Individual owners. If owner of the total amount of store for anexes and addresses of the Individual owners. If owner of the total amount of the features and addresses of the Individual owners. If the publication is published by a nongrowing cognitation, give the transe and features of the features and seal individual owners. If the publication is published by a nongrowing of owner unicooperated films, flower and addresses of the Individual owners. If the publication is published by a nongrowing owner in owner of the total unicon and Manager Mis Mane Mis Mane Same as Above Il Rowe Bondholders, Mortgagees, and Otter Security Holders Cerning or Mating I Persent of More of Total Amount of Bonds, Mortgages, or Managers, and Otter Security Holders Cerning or Mating I Persent of More of Total Amount of Bonds, Mortgages, or More devices of the Individual owners. If Note the Complete Mailing Address	Contact Person Leater Roberson, CCCP Telephone (856) 948-1000 extension 245) corporation immediately followed by k. If not owned by a corporation, give
KOG Grove Road Incordare, Gloucester County, New Jersey 08086-9447 Incordare, Gloucester County, New Jersey 08086-9447 Incordare, Gloucester County, New Jersey 08086-9447 Incorporated 6900 Grove Road Thorofare, New Jersey 08086-9447 Full Names and Compilere Mailing Addresses of Publisher, Editor, and Managing Editor (Do not leave blank blank blank blank from the County of the Coun	Leafur Robinson, CCCP Telephone (856) 848-1000 extension 245 Coopposition immediately followed by k. If not owned by a corporation, give we for some only a corporation, give we for some one of the corporation of the corpo
horofare, Gloucester County, New Jersey 08086-9447 Competer Multing Address of Haacquarters or General Business Office of Publisher (Not printer) lack, Incorporated 0800 Grove Fload Throrders, New Jersey 08086-9447 Full Names and Complete Multing Addresses of Publisher, Editor, and Menaging Editor (Do not leave blank hibitate), and Complete Multing Addresses of Publisher, Editor, and Menaging Editor (Do not leave blank hibitate), and Counter, Stack Incorporated, 8900 Grove Fload Throrders, New Jersey 08066-9447 ditor (Name and complete mailing address) Interpretation of Counter (Do not leave blank), and Counter (Name and complete mailing address) Interpretation (Plane and complete mailing address) Interpretation (Plane and complete mailing address) New P. Strunk, ELS Same as above It Come (Do not leave blank), if the publication is owned by a cooporation, pive the name and addresses of the Individual owner. If the publication is potential or name of the total amount of store to remove and defenses of the Individual owner. If the publication is potential or an organization printer than one of the Individual owner. If the publication is potential or an organization printer than of Strumber (Complete Mailing Address) It Karwal Stack Same as Above It Kone Bondholders, Mortgagees, and Other Sacurey Holders Coming or Material Securities. In None device According to the Complete Mailing Address It Rome Bondholders, Mortgagees, and Other Sacurey Holders Coming or Material Securities. In None, deck tox.	Telephone (856) 848-1000 extension 245
Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer) lack, incorporated 6900 Grove Road Thorofare, New Jersey, 08086-9447 Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Do not leave blank Mobiles (Name and complete mailing Address) Inthic Carter, Stack Incorporated, 8900 Grove Road Thorofare, New Jersey, 08066-9447 ditor (Name and complete mailing address) Inty M. Farr, MD, MSc. Same as above filtraging Editor (Name and complete mailing address) Namy M. Farr, MD, MSc. Same as above filtraging Editor (Name and complete mailing address) 18 Owar (Do not leave blank, If the publication is owned by a corporation, pive the name and address of the financial owners. If owned by a putnership or other unincorporated film, became and addresses of the standard owners. If owned by a putnership or other unincorporated film, beceded and continuous or of the total amount of since of each individual owner. If the publication is published by a nongerit organization, pive its mane and film Name No & WSS, Incorporated dos Stack, thoopporated 18 Owner (Short Stack) 18 Owne	(856) 848-1000 extension 245
seck, incorporated 6900 Grove Road Thorofare, New Jersey 08086-9447 Full Names and Compitele Mailling Addresses of Publisher, Editor, and Managing Editor (Do not leave blain behave (have an editor). Inc. Carter, Stack incorporated, 8900 Grove Road Thorofare, New Jersey 08066-9447 Star (Name and compitele mailing address) Inc. Market and compitele mailing address) Inc. Market and compitele mailing address) Inc. Market (Market Blaick If the publication is owned by a copposition, plus the name and address of the Anneas and addresses of all alrocations owners. It owners are not of the total amount of site for anneas and addresses of the addresses owners. It owners are not of the total amount of site for anneas and addresses of the Anneas owners. It is not to a name of the total amount of site for anneas and addresses of the Anneas owners. It is not to a name of the total amount of site for anneas and addresses of the Anneas owners. It is not to a name of the total amount of site for anneas and addresses of the Anneas owners. It is not a name of the total amount of site for anneas and addresses of the Anneas owners. It is not anneas and addresses of the Anneas owners. It is not a name of the total amount of site for anneas and addresses of the Anneas owners. It is not all amount of site for anneas and addresses of the Anneas owners. It is not a name of the total amount of site for anneas and addresses of the Anneas of the Anne	corporation immediately followed by k. If not owned by a corporation, give we fin arme and reference services as well as
eck, Incorporated 6900 Grove Road Thorofare, New Jersey 08086-9447 Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Do not leave blain better (hims and complete mailing address) and C. Carter, Slack Incorporated, 8900 Grove Road Thorofare, New Jersey 08066-9447 dirtic (Name and complete mailing address) hery M. Farr, MD, MSc. Same as above through Editor (Name and complete mailing address) Petry P. Strunk, ELS Same as above Changing Editor (Name and complete mailing address) Petry P. Strunk, ELS Same as above Same as above Changing Caltier (Name and complete mailing address) Petry P. Strunk, ELS Same as above Name (Do all state blank, if the publication is owned by a coposation, ples the name and address of the formation of the teach individual owner. If the publication is poblished by a more of the fold amount of size teachs and addresses of all abouthoddes owning in holding 1 percent or more of the fold amount of size teachs and addresses of the shocking owner. If the publication is poblished by a more of the fold amount of size teachs and addresses of the shocking owner. If the publication is poblished by a more of the fold amount of size teachs and addresses of the shocking owner. If the publication is poblished by a more of owner unincoporated of the same and addresses. No & WSS, Incorporated dba Slack, Incorporated Same as Above Name Sack Same as Above Name Sack Name as Above No Percent of More of Total Amount of Bonds, Mortgages, or the publication of the source of the same of the sam	corporation immediately followed by k. If not owned by a corporation, give we fin arme and ackess as well as
Full Names and Complete Malling Addresses of Publisher, Editor, and Managing Editor (Do not New blank blabe) (Name and complete mailing address) and the Carter, Slack Incorporated, 6900 Growe Road Thorofare, New Jersey 08066-9447 dto (Name and complete mailing address) and Market Slack Incorporated (Section 1997) and Same as above shringing Editor (Name and complete mailing address) and Same as above shringing Editor (Name and complete mailing address). Same as above 10. Ones; (Do not Nave Blank) if the publication is owned by a corporation, give the name and address of the tenance and addresses of all stockholders owning or hoding? I percent or more of the total amount of stoke rearness and addresses of all stockholders owning or hoding? I percent or more of the total amount of stoke rearness and addresses of all stockholders in publishers of the present or more of the total amount of stoke rearness and addresses of all stockholders in publishers. I found by a partnership or other university and amount of stoke areas and addresses of the stockholders in publishership or other university and amount of stoke areas and addresses of the stockholders owning or hoding? I percent or more of the total amount of stoke and the stoke of the st	corporation immediately followed by k. If not owned by a corporation, give we fin arme and ackess as well as
hebber (Name and complete mailing address) thin C. Carter, Slack Incorporated, 8000 Grove Road Thorofare, New Jersey 08086-9447 cition (Name and complete mailing address) lary M. Farr, ND, MSc. Same as above kenging Editor (Name and complete mailing address) New J. Same as above Renging Editor (Name and complete mailing address) 10 Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the fearance and addresses of the individual owners. If owned by a partnership or ofter unincorporated firm, became and addresses of the individual owners. If the publication is published by a nonyth organization, pive the same and addresses of the individual owners. If the publication is published by a nonyth organization, pive the same and addresses of the individual owners. If the publication is published by a nonyth organization, pive the same and addresses of the individual owners. If the publication is published by a nonyth organization, pive the same and addresses of the individual owners. If the publication is published by a nonyth organization, pive the same and addresses of the individual owners. If the publication is published by a nonyth organization, pive the same and addresses of the individual owners. If the publication is published by a nonyth organization, pive the same and addresses of the individual owners. If the publication is published by a nonyth organization, pive the same and addresses of the individual owners. If the publication is published by a nonyth organization, pive the same and addresses of the individual owners. If the publication is published by a nonyth organization, pive the same and addresses of the individual owners. If the published by a nonyth organization, pive the same and addresses of the individual owners. If the published by a nonyth organization is pive to the same and addresses of the individual owners. If the published by a nonyth organization is pive the same and addresses of the individual owners. If the published by a nonyth	corporation immediately followed by k. If not owned by a corporation, give we fin arme and ackess as well as
thin C. Carter, Stack Incorporated, 8000 Grove Hoad Thorofere, New Jersey 08086-8447 ditor (Name and complete mailing address) lary M. Farr, MD, MSc. Same as above Reaging Editor (Name and complete mailing address) Weep P. Strunk, ELS Same as above Reaging Editor (Name and complete mailing address) Same as above Reaging Editor (Name and complete mailing address) Same as above Romer (Do An bette blank. If the publication is owned by a corporation, give the name and address of the te names and addresses of all stockholders owning or holding if percent or more of the loted amount of stockers and addresses of all stockholders owning or holding if percent or more of the loted amount of stockers and addresses of all stockholders owning to holding if percent or more of the loted amount of stockers and addresses of all stockholders owning to holding if percent or more of the loted amount of stockers and addresses of the stockers of the loted amount of stockers and addresses of the stockers of the loted amount of stockers and the loted amount of stockers and the loted amount of stockers of the loted	k. If not owned by a corporation, give ive its name and address as well as
thor (Name and complete mailing address) lary M. Farr, MD, MSc. Same as above larging Editor (Name and complete mailing address) Philip P. Strunk, ELS Same as above Reaging Editor (Name and complete mailing address) Same as above It downer (Do not lister blank. If the publication is owned by a corporation, pive the name and address of the te reares and addresses of all all addresses of the standard owner. If the publication is politically perfectly among the properties of the standard owner. If the publication is politically by appartmentiple or other unincorporated from a dispersion of the standard owner. If the publication is politically by a composition give the name and addresses. Same as Above 18 Same as Above	k. If not owned by a corporation, give ive its name and address as well as
lary M. Farr, MD, MSc Same as above kinging Editor (Name and compilate mailting address) New Y. Strunk, ELS Same as above 10. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the teranese and addresses of all shockholders owning or holding? I parcent or more of the total amount of store teranese and addresses of all shockholders owning or holding? I parcent or more of the total amount of store teranese and addresses of all shockholders in published by a particularitie by published for of the running of the transport of the running of t	k. If not owned by a corporation, give ive its name and address as well as
Integring Editor (Name and complete mailting address) 2 New P. Strunk, ELS Same as above It Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the tenames and addresses of all shockholders owning to hodding to provide the name and addresses of the tenames and addresses of the individual owners. If owned by a particular for the unincorporated films, to took of each individual owner. If the publication is published by a corporate organization; pile its name and 24 tame. 24 tames All A tames Same as Above The N. Stack Same as Above It Know Bondholders, Mortgagees, and Ottor Security Holders Chering or 1885 or 19 Percent of More of Irola Amount of Bonds, Mortgages, or 19 None of Security Holders Chering or 1885 or 19 Percent of More of Irola Amount of Bonds, Mortgages, or 19 None of Security Holders Chering or 1885 or 19 Percent of More of Irola Amount of Bonds, Mortgages, or 19 None of Security Holders Chering or 1885 or 19 Percent of More of Irola Amount of Bonds, Mortgages, or 19 None 19	k. If not owned by a corporation, give ive its name and address as well as
Pier P. Strunk, ELS Same as above II Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the be arenes and addresses of all stockholders owning to holding 1 percent or more of the total amount of store the ranse and addresses of the individual owners. If owned by a partnership or other unincorporated film, of tope or each individual owner. If the publication is published by a nonprofit organization, give this manus and all same 85 & WSS, incorporated dba Slack, incorporated 9000 Grove Road, Thorofare, New Jersey 186 MSS, incorporated dba Slack, incorporated Same as Above 18 Annel Slack Same as Above 18 Foreign Struck (Slack) Same as Above	k. If not owned by a corporation, give ive its name and address as well as
Il Omere (Do not leave blank. If the publication is owned by a corporation, give the name and address of the flanemes and addresses of all stockholders owning or holding I persent or more of the total amount of six he names and addresses of the Individual owners. If owned by a partmentip or other unincorporated firm, of the order individual owner. If the publication is poblished by a nonyth organization, give its name and fill turne. Ris & WSS, incorporated dba Slack, incorporated 8000 Grove Road, Thorofare, New Jersey 8me N. Siack Same as Above 1. Konvel Bondholders, Mortgagees, and Otter Security Holders Owning or Witing I Persent of More of Creal Amount of Bonds, Mortgages, or Mortgages, and Otter Security Holders Owning or Witing I Persent of More of Creal Amount of Bonds, Mortgages, or December 1.	k. If not owned by a corporation, give ive its name and address as well as
The names and addresses of all shockholders owning or holding. I parent or more of the total amount of store the names and addresses of the individual owners. If owned by a partnership or other unincorporated films, tose of each individual owners. If the publication is published by a nongrid organization, pive the name and fill fallows. Ris E. WSS, incorporated disc Stack, incorporated 6000 Grove Road, Thorofare, New Jerse, Ren. N. Stack Same as Above Il Konvel Stack Same as Above Il Konvel Stack Same as Above North Parent of More of Total Amount of Bonds, Mortgages, or Mortgages, or Mortgages, and Otter Security Holders Coving or March 1 and Amount of Bonds, Mortgages, or Description, check box.	k. If not owned by a corporation, give ive its name and address as well as
New N. Seck Same as Above K Samuel Slack Same as Above It Krow Bondholders, Mortgagees, and Other Security Holders Owning or Mortgages, or Above Abo	
# Same as Above 1 Wow Bondholders, Mortgagess, and Other Security Holders Owning or 1850's Percent of More of Total Amount of Bonds, Mortgages, or 2 None 2 None 2 None	08086-9447
Samuel Sinck Same as Above 1. Kow Bondholders, Mortgagess, and Other Security Holders Owning or 1. Kow Bondholders, Mortgagess, and Other Security Holders Owning or 1. Kow Bondholders, Mortgages, and Other Securities, Inc., or Securities, Inc., or Securities, Inc., or Securities, Inc., or check box None	
Till Kow Bondholders, Mortgagess, and Other Security Holders Owning or 188gs Percent of More of Total Amount of Bonds, Mortgages, or 200 Securities, 1990, check box	
kiding 1 Percent or More of Total Amount of Bonds, Mortgages, or None Securities. If none, check box	
kiding 1 Percent or More of Total Amount of Bonds, Mortgages, or None Securities. If none, check box	
ther Securities. If none, check box	
12. Tax Status For completion by nonprofit organizations authorized to mail at special rates) (Check one)	
The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax Has Not Changed During Preceding 12 Months	
Has Changed During Preceding 12 Months (Publisher must submit explanation of change with this state facinitie PS Form 3526, September 1995 (See instructions on Reverse)	purposes:

IN Publication Title Intetion Control and Hospital Epidemiology	14. Issue Date for Circulation Data Below September 2003		
6. Extent and Nature of Circulation	Average No. Copies Each Issue During Preceding 12 Months	Actual No. Copies of Single Issue Published Nearest to Filing Date	
LTotal Number of Copies (Net Print Run)	5,704	6,169	
Paid and/or Requested Circulation (I) Sales Through Dealers and Carriers, Street Vendors, and Counter Sales (Not Mailed)	0	o	
(2) Paid or Requested Mail Subscriptions (include elvertiser's proof copies and exchange copies)	4,319	4,341	
Total Paid and/or Requested Circulation (Sum of 15b(1) and 15c(2))	4,319	4,341	
Free Distribution by Mail (Samples, complimentary, and other free)	378	374	
Fine Distribution Outside the Mail (Carriers or other means)	182	795	
Total Free Distribution (Sum of 15d and 15e)	560	1,169	
Total Distribution (Sum of 15c and 15f)	4,879	5,510	
Copies not Distributed (I) Office Use, Leftovers, Spoiled	825	659	
(2) Returns from Piews Agents	0	0	
Total (Sum of 15g, 15h(1), and 15h(2))	5,704	6,169	
Nort Paid and/or Requested Circulation (15c/15g x 100)	89%	79%	
M Publication Statement of Ownership L. Publication required. Will be printed in the Novembe Publication not required.	r 2003 issue of this publication.		
7. Signature and Title of Editor, Publisher, Business Manager, or Owner		Date	
Month N. Roash, Executive Vice President Aufta	October 1, 2003		
ledly that all information furnished on this form is true and com left omits material or information requested on the form may be including multiple damages and civil penalties).	plete. I understand that anyone who furnis		

For your next outbreak investigation ...

With more than 40 years of experience, Christiana Care's ID Lab offers fast, individualized service and competitive pricing for DNA analysis of bacteria and fungi, using:

- Pulsed field gel electrophoresis (PFGE)
- Ribotyping

... trust our world-class Infectious Disease Lab

Review our complete list of services and fees on our Web site: *www.christianacare.org* Click on our link under Patient Care.

- Antifungal susceptibility testing
- Anaerobe susceptibility testing
- Antimicrobial susceptibility testing (MIC and MBC)
- Serum bactericidal titers
- Synergy testing (fungal and bacterial)
- Time kill curves
- In-vitro studies, including evaluation of new antimicrobial and antifungal agents
- In-vitro support of clinical studies
- In-vitro microbiology support for pharmaceutical companies seeking a central laboratory for clinical trials

Directed by Joel D. Klein M.D., FAAP, the Christiana Care ID Lab is a CAP-accredited and CLIA-approved laboratory, and utilizes all NCCLS guidelines for susceptibility testing.

For more information, please contact: Elyse Foraker, BS, MT(ASCP), Manager

Phone: 302-428-2746 **Fax**: 302-428-6836

E-mail: *idlab@christianacare.org*





Get the latest article titles sent direct to your e-mail — FREE.

Introducing the INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY
News Wire, your source for instant access to the latest research
from The Official Journal of The Society for Healthcare
Epidemiology of America.

The free, monthly News Wire provides you with direct links to complete abstracts of full-text, peer-reviewed scientific articles written by infection control practitioners and epidemiologists.

Register for the News Wire today and see what you've been missing.

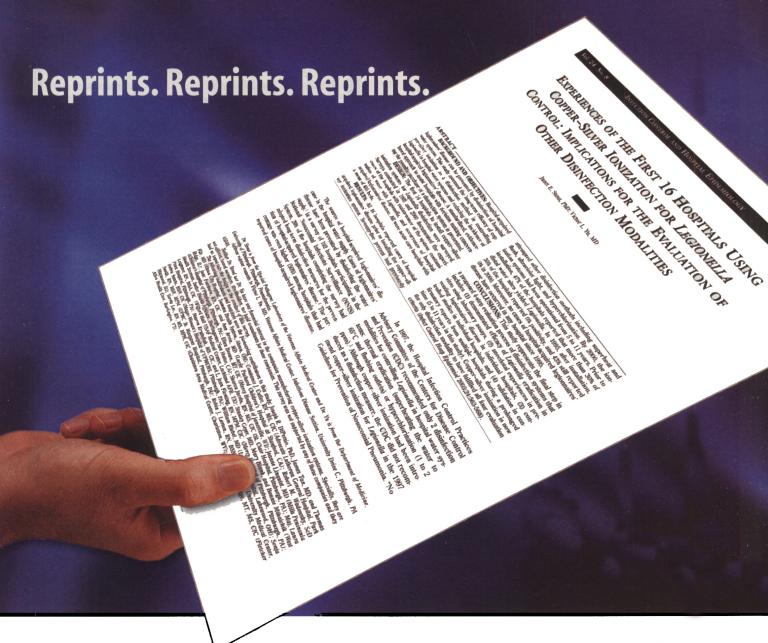
Visit ICHEJournal.com

SHEA Members will automatically receive the INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY News Wire as a benefit of membership. No need to register.

The Official Journal of The Society for Healthcare Epidemiology of America

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY*

A SLACK Incorporated® Publication



Your story is worth repeating.

When your article is featured in INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY, don't bury it in the archives – spread the word with an INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY reprint. Article reprints offer an easy solution to help you distribute information to your patients and colleagues.

Call today for a FREE quote and learn how INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY can help you.

Our professional customized article reprints offer*:

- Quick turn-around time
- Full color or black-and-white reproduction
- 8.5" x 11" booklet bound format
- High-quality glossy stock

For a FREE quote, call John Kain, Director of Reprint Sales, at **1-800-257-8290**, ext. 238 (856-848-1000 in N.J. or outside the U.S.), e-mail: jkain@slackinc.com or visit us online at **slackinc.com/reprints.**

Also available electronically — call for details.