

CONTENTS CONTINUED

Robert M. Rakita, MD;

Mandatory Influenza Vaccination

Work Analysis •

hD; Alberto Maria Segre, PhD

ion: Results of a Multisite

naszak-Holl, PhD;

rp Medical Devices

inlin, MPH;

Rubin, MD, PhD;

or Healthcare Workers:

s), MPH, PhD;

e An Italian Multicenter

izio Pezzotti, PhD;

agnoli, MD; Claudio De Felice, MD;

o Bacolla, MD; Giovanna Corso, MD;

llo; Lucilla Ravà, PhD;

omponent of the German

cker, PhD; Rotraut Schoop, PhD;

den, MD; Petra Gastmeier, MD

Increased Incidence of *Clostridium*

Bruno Hubert, MD, MSc;

Health Organization Network

;

881 Mandatory Influenza Vaccination of Healthcare Workers: A 5-Year Study • Beverly A. Hagar, BSN, COHNS; Patricia Crome, MN; Joyce K. Lammert, MD, PhD

889 Commentary: On Being the First: Virginia Mason Medical Center and Association of Healthcare Workers • Thomas R. Talbot, MD, MPH; William Schaffner, MD

893 Prioritizing Healthcare Worker Vaccinations on the Basis of Social Networks • Philip M. Polgreen, MD, MPH; Troy Leo Tassier, PhD; Sriram Venkata Pemmaraju

901 The Importance of Leadership in Preventing Healthcare-Associated Infections: A Qualitative Study • Sanjay Saint, MD, MPH; Christine P. Kowalski, MPH; Jane Forman, ScD, MHS; Laura Damschroder, MS, MPH; Sarah L. Krein, PhD, RN

908 Use of Gloves and Reduction of Risk of Injury Caused by Needles or Sharps in Healthcare Workers: Results from a Case-Crossover Study • Laura M. Murray A. Mittleman, MD, MPH, DrPH; Anthony D. Harris, MD, MPH; Michael David N. Fisman, MD, MPH, FRCPC

918 Evaluation of a Large-Scale Quantitative Respirator-Fit Testing Program: Survey Results • Irene J. Wilkinson, BSc (Hons), MPH; Dino Pisaniello, BSc (Hons); Junaid Ahmad, MBBS, GDFH, MOHS; Suzanne Edwards, DipMedStat

926 Determinants of Nosocomial Infection in 6 Neonatal Intensive Care Units: A Prospective Cohort Study • Cinzia Auriti, MD; Maria Paola Ronchetti, MD; Gabriella Marrocco, MD; Anna Quondamcarlo, MD; Giulio Seganti, MD; Francesco Giuseppe Buonocore, MD, PhD; Cesare Arioni, MD; Giovanni Serra, PhD; Gianfranco Savino Mastropasqua, MD; Annibale Mari, MD; Carlo Corchia, MD; Domenico Di Marcello Orzalesi, MD, PhD; Vincenzo Di Ciommo, MD, MSc

934 Representativeness of the Surveillance Data in the Intensive Care Unit Nosocomial Infections Surveillance System • Irina Zuschneid, MD; Gerta Jan Beyersmann, PhD; Martin Schumacher, PhD; Christine Geffers, MD; Henning

939 Epidemiological Patterns and Hospital Characteristics Associated with *C. difficile* Infection in Quebec, Canada, 1998–2006 • Rodica Gilca, MD, PhD; Elise Fortin, MSc; Colette Gaulin, MD; Marc Dionne, MD

948 Core Components for Infection Prevention and Control Programs: A World Health Organization Infection Prevention and Control Network • Wing Hong Seto, MD; Fernando Otaíza, MD; Carmen L. Pessoa-Silva, MD

CONTENTS CONTINUED INSIDE

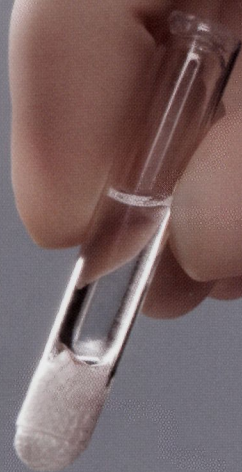


THE OFFICIAL JOURNAL OF THE SOCIETY FOR HEALTHCARE

EMIOLOGY OF AMERICA

PRESS

THE UNIVERSITY OF CHICAGO



The power to reduce
microorganisms by 59%¹
is at your fingertips.

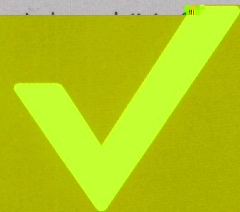
compared the ChloraPrep® Sepp® (2% chlorhexidine gluconate/70% isopropyl alcohol) to 70% isopropyl alcohol (IPA) wipes prior to peripheral venous cannulation (PVC):

shows that using ChloraPrep prior to peripheral IV insertion may help reduce the risk of PVC contamination or colonization, compared with using 70% IPA alone.

isms were present on 49.4% of PVC tips in the 70% IPA group compared with only 2% CHG in IPA (ChloraPrep) group.

is been proven in more than 35 outcome studies and 11 evidence-based guidelines.

® The proven way to prep.™



A recent study
to 70% isopro

- The study s
subsequent
- Microorgan
19.8% in th
- 2% CHG ha

ChloraPrep

t PA, Elliott T. Efficacy of adding 2% (w/v) chlorhexidine gluconate to 70% (v/v) isopropyl alcohol for skin disinfection prior to
08;29(10):963-965.

ChloraPrep. Visit chlora.com or call 800-523-0502.

REFERENCES 1. Small H, Adams D, Casey AL, Crosby CT, Lamb
peripheral venous cannulation. *Infect Control Hosp Epidemiol.* 20

Discover the proven performance of ChloraPrep. Visit chlora.com or call 800-523-0502.

Discover the proven performance of ChloraPrep. Visit chlora.com or call 800-523-0502.

Prep



Infection prevention and control in healthcare settings is a critical public health problem rapidly gaining interest.

Are you current with the latest trends and evidence?

Join SHEA Today!

Stay on top of emerging science and evidence-based strategies to prevent and control infections and to improve quality-of-care in your healthcare facility.

SHEA supports members' efforts to improve patient care and healthcare worker safety through:

- Research
- Education & Training
- Policy Development
- Evidence-based Practical Guidelines

- Research
- Education & Training
- Policy Development
- Evidence-based Practical Guidelines
- Mentorship and Professional Development

Application Details

www.shea-online.org

info@shea-online.org

(703) 684-1006

Annual membership offers:

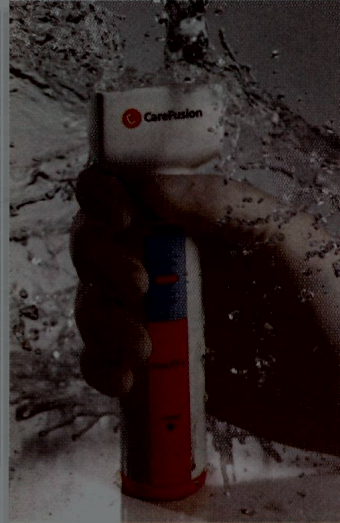
- Subscription and online access to *Infection Control and Hospital Epidemiology (ICHE)*, the official journal of SHEA
- Epidemiology News and e-newsletter
- Discounted registration on SHEA educational programming
- Online member network and job board

Easior to

Submersible solution for pre-op hair removal.

Electrical Clippers are 100% waterproof and submersible* for thorough cleaning and help reduce the risk of cross-contamination between OR cases. See for yourself how a submersible solution can simplify your day.

Visit www.carefusion.com/easior2 and register for a free, no-obligation OR Trial Kit, which includes a clipper handle with charging adapter, three types of easy-to-change blades, Chloraprep® Lite Orange skin preparation, training materials and more!



A submersible

CareFusion Surgical Site Disinfectant, t...
how a submersible

Visit www.carefusion.com which includes Chloraprep® H...

carefusion.com | 800.523.0500

OR



CareFusion

Put ORange in Your

*Submersion cannot exceed 15 minutes and cannot exceed one meter in depth.
© 2010 CareFusion Corporation or one of its subsidiaries. All rights reserved.
Chloraprep is a registered trademark of CareFusion Corporation or one of its subsidiaries.

Subsidiaries, ADV-Easior0910

INFECTION CONTROL & HOSPITAL EPIDEMIOLOGY

VOLUME 31, NUMBER 9

SEPTEMBER 2010

INFECTION CONTROL & HOSPITAL EPIDEMIOLOGY
VOLUME 31, NUMBER 9
SEPTEMBER 2010

Natural Disaster: Lessons Learned after the 2010 Earthquake

Infection Control in Field Hospitals after a Natural Disaster: Lessons Learned after the 2010 Earthquake in Haiti •

Infection Control in Hospitals Requires More than Clean Hands •

Control of Transmission of Infection in Hospitals Requires More than Clean Hands •

Pandemic Influenza A (H1N1) in China •

Community Transmission of Pandemic Influenza A (H1N1) in China •

INFECTION CONTROL & HOSPITAL EPIDEMIOLOGY
VOLUME 31, NUMBER 9
SEPTEMBER 2010

Natural Disaster: Lessons Learned after the 2010 Earthquake

Infection Control in Field Hospitals after a Natural Disaster: Lessons Learned after the 2010 Earthquake in Haiti •

Infection Control in Hospitals Requires More than Clean Hands •

Control of Transmission of Infection in Hospitals Requires More than Clean Hands •

Pandemic Influenza A (H1N1) in China •

Community Transmission of Pandemic Influenza A (H1N1) in China •

EDITORIAL
The 2010 Earthquake in Haiti: A Review of the Literature and the Role of Infection Control in the Management of the Disaster
The 2010 Earthquake in Haiti: A Review of the Literature and the Role of Infection Control in the Management of the Disaster
The 2010 Earthquake in Haiti: A Review of the Literature and the Role of Infection Control in the Management of the Disaster

CONTENTS

Original Papers
The Role of Infection Control in the Management of the Disaster: A Review of the Literature and the Role of Infection Control in the Management of the Disaster
The Role of Infection Control in the Management of the Disaster: A Review of the Literature and the Role of Infection Control in the Management of the Disaster

Review Articles
The Role of Infection Control in the Management of the Disaster: A Review of the Literature and the Role of Infection Control in the Management of the Disaster
The Role of Infection Control in the Management of the Disaster: A Review of the Literature and the Role of Infection Control in the Management of the Disaster

Downloaded from <https://www.cambridge.org/core>

INFECTION CONTROL & HOSPITAL EPIDEMIOLOGY

VOLUME 31, NUMBER 9

SEPTEMBER 2010

CONTENTS CONTINUED FROM COVER

- 981 **Reply to McGuckin and Govednik** • Vicki Erasmus, MSc; Ed van Beeck, MD, PhD; Margreet Vos, MD, PhD
- 981 **An Integrated Clinical Microbiology Service Ensures Optimal Early Empirical Antimicrobial Therapy for Methicillin-Resistant *Staphylococcus aureus* Bloodstream Infection** • Alida Fe Talento, MD; Fidelma Fitzpatrick, MD; Hilary Humphreys, MD; Edmond Smyth, MB, MSc
- 983 **Reply to Fe Talento et al** • Carrie Herzke, MD; Luke F. Chen, MBBS, FRACP; Deverick J. Anderson, MD, MPH; Yong Choi, RN; Daniel J. Sexton, MD; Keith S. Kaye, MD, MPH
- 983 **Inside-Out: The Changing Epidemiology of Methicillin-Resistant *Staphylococcus aureus*** • Leigh A. Kennedy, DO; Janet A. Gill, RN; Maureen E. Schultz, RN, MSN, CIC; Monica Irmeler, RN; Fred M. Gordin, MD
- 985 **Pitfalls of Public Reporting** • W. Kemper Alston, MD, MPH

An Official Publication of the Society for Healthcare Epidemiology of America

EDITOR

Suzanne F. Bradley, MD • Ann Arbor, MI

DEPUTY EDITOR

Carol A. Kauffman, MD • Ann Arbor, MI

SENIOR ASSOCIATE EDITORS

C. Glen Mayhall, MD • Galveston, TX
Gina Pugliese, RN, MS • Chicago, IL
William Schaffner, MD • Nashville, TN

ASSOCIATE EDITORS

Ebbing Lautenbach, MD, MPH • Philadelphia, PA
Preeti N. Malani, MD, MSJ • Ann Arbor, MI
David Weber, MD, MPH • Chapel Hill, NC

STATISTICS CONSULTANT

Rodney L. Dunn, MS • Ann Arbor, MI

SECTION EDITOR FOR GUIDELINES, POSITION PAPERS, AND INVITED REVIEWS

Carol Chenoweth, MD • Ann Arbor, MI

MANAGING EDITOR

Rob Blixt • Chicago, IL

PAST EDITORS

Infection Control

Richard P. Wenzel, MD, 1980–1990 (vols. 1–11)

Infection Control and Hospital Epidemiology

Richard P. Wenzel, MD, 1991–1992 (vols. 12 and 13)

Michael D. Decker, MD, 1993–2001 (vols. 14–22)

Barry M. Farr, MD, 2002–2004 (vols. 23–25)

William R. Jarvis, MD, 2005–2006 (vols. 26 and 27)

EDITORIAL ADVISORY BOARD

Miriam Alter, PhD, MD • Atlanta, GA
Anucha Apisarntharak, MD • Pratumthani, Thailand
Lennox Archibald, MD, FRCP • Alachua, FL
Hilary Babcock, MD • St. Louis, MO
Elise M. Beltrami, MD, MPH • Decatur, GA
David Birnbaum, PhD, MPH • Sidney, BC
Christian Brun-Buisson, MD • Creteil, France
John P. Burke, MD • Salt Lake City, UT
David P. Calfee, MD, MS • New York, NY
Yehuda Carmeli, MD, MPH • Tel Aviv, Israel
Sara E. Cosgrove, MD, MS • Baltimore, MD
Donald E. Craven, MD • Burlington, MA
Burke A. Cunha, MD • Mineola, NY
Erika D'Agata, MD, MPH • Boston, MA
Patch Dellinger, MD • Seattle, WA
Daniel Diekema, MD • Iowa City, IA
Charles E. Edmiston, Jr., PhD • Milwaukee, WI
Theodore C. Eickhoff, MD • Denver, CO
Martin S. Favero, PhD • Irvine, CA
Jon P. Furuno, PhD • Baltimore, MD
Petra Gastmeier, MD • Hanover, Germany
Dale N. Gerding, MD • Hines, IL
Donald A. Goldmann, MD • Boston, MA
Donna Haiduvn, RN, PhD, CIC • Tampa, FL
Anthony D. Harris, MD, MPH • Baltimore, MD
David K. Henderson, MD • Bethesda, MD
Loreen A. Herwaldt, MD • Iowa City, IA
Peter N. R. Heseltine, MD • San Juan, CA
Karen Hoffmann, RN, CIC, MS • Chapel Hill, NC
Janine Jagger, MPH, PhD • Charlottesville, VA
John A. Jernigan, MD, MS • Atlanta, GA
James T. Lee, MD, PhD • St. Paul, MN
L. Clifford McDonald, MD • Atlanta, GA

Allison McGeer, MD • Toronto, ON
Leonard A. Mermel, DO, ScM • Providence, RI
Robert R. Muder, MD • Pittsburgh, PA
Carlene A. Muto, MD, MS • Pittsburgh, PA
Joseph M. Mylotte, MD, CIC • Buffalo, NY
David L. Paterson, MBBS, FRACP • Pittsburgh, PA
Jan Evans Patterson, MD • San Antonio, TX
Sindy M. Paul, MD • Yardley, PA
David A. Pegues, MD • Los Angeles, CA
Eli Perencevich, MD, MS • Baltimore, MD
Michael A. Pfaffer, MD • Iowa City, IA
Didier Pittet, MD, MS • Geneva, Switzerland
Gina Pugliese, RN, MS • Chicago, IL
Isaam Raad, MD • Houston, TX
Jordi Rello, MD, PhD • Tarragona, Spain
Manfred L. Rotter, MD, DipBact • Vienna, Austria
Henning Rüden, MD • Berlin, Germany
William A. Rutala, PhD, MPH • Chapel Hill, NC
Lisa Saiman, MD, MPH • New York, NY
Sanjay Saint, MD, MPH • Ann Arbor, MI
William E. Scheckler, MD • Madison, WI
Lynne M. Schulster, PhD • Atlanta, GA
John A. Sellick, DO • Amherst, NY
Kent Sepkowitz, MD • New York, NY
Samir Shah, MD, MSCE • Philadelphia, PA
Andrew E. Simor, MD • Toronto, ON
Philip W. Smith, MD • Omaha, NE
Denis W. Spelman, MD • Prahan, Victoria, Australia
Jeffrey R. Starke, MD • Houston, TX
Janet E. Stout, PhD • Pittsburgh, PA
Clyde Thornsberry, PhD • Franklin, TN
William Trick, MD • Chicago, IL
Antoni Trilla, MD, PhD • Barcelona, Spain
Robert A. Weinstein, MD • Chicago, IL
Andreas Widmer, MD, MS • Basel, Switzerland
Marcus Zervos, MD • Royal Oak, MI

Infection Control and Hospital Epidemiology (ISSN 0899-823X) is published monthly by the University of Chicago Press, 1427 E. 60th St., Chicago, IL 60637-2954 (<http://www.journals.uchicago.edu/ICHE/>). The editorial office is in Chicago, Illinois.

Editorial Office

Communications should be addressed to the Editor, *Infection Control and Hospital Epidemiology*, 1427 E. 60th St., Chicago, IL 60637-2954; (e-mail: iche@press.uchicago.edu; telephone: 773-773-2298, fax: 773-753-4247). Contributors should consult the Information for Authors, which is available at the journal's Web site.

Advertising

Please direct advertising inquiries to Journals Advertising, University of Chicago Press, 1427 E. 60th St., Chicago, IL 60637 (e-mail: carhany@press.uchicago.edu; telephone: 773-702-8187; fax: 773-702-0172). Publication of an advertisement in *Infection Control and Hospital Epidemiology* does not imply endorsement of its claims by the Society for Healthcare Epidemiology of America, by the Editor, or by the University of Chicago. Correspondence regarding advertising should be addressed to the advertising office in Chicago.

Permissions

Articles may be copied or otherwise reused without permission only to the extent permitted by Sections 107 and 108 of the US Copyright Law. Permission to copy articles for personal, internal, classroom, or library use may be obtained from the Copyright Clearance Center (<http://www.copyright.com>). For all other uses, such as copying for general distribution,

for advertising or promotional purposes, for creating new collective works, or for resale, please contact the Permissions Coordinator, Journals Division, University of Chicago Press, 1427 E. 60th St., Chicago, IL 60637 (e-mail: journalpermissions@press.uchicago.edu; fax: 773-834-3489). Articles in the public domain may be used without permission, but it is customary to contact the author.

Subscriptions

Subscription rates for 2010 are \$180 for individuals and \$413 for institutions. Single-copy rates are \$18 for individuals and \$41 for institutions. Additional rates for non-US subscribers and reduced rates for fellows, residents, and students are available at <http://www.journals.uchicago.edu/ICHE>. Individuals have the option to order directly from the University of Chicago Press. Subscription agent for Japan: Kinokuniya Company, Ltd.

Please direct subscription inquiries, requests for back issues, and address changes to Journals Division, University of Chicago Press, P.O. Box 37005, Chicago, IL 60637 (e-mail: subscriptions@press.uchicago.edu; telephone: 773-753-3347 or toll-free in the United States and Canada 877-705-1878; fax: 773-753-0811 or toll-free 877-705-1879).

Postmaster: Send address changes to *Infection Control and Hospital Epidemiology*, University of Chicago Press, P.O. Box 37005, Chicago, IL 60637-2954.

Periodicals postage paid at Chicago, Illinois, and at an additional mailing office.

Published by the University of Chicago Press, Chicago, Illinois. © 2010 by the Society for Healthcare Epidemiology of America. All rights reserved. This publication is printed on acid-free paper.



Emerald Journals



Journal publishes:

- research articles which illustrate clear implications for practice
- results-focused case studies which discuss problems and successes in clinical governance techniques
- special issues on topical themes



Research you can use

Clinical Governance

An International Journal

Clinical Governance: An International Journal aims to address the doubts, queries, triumphs and practical applications of introducing quality assurance mechanisms into the delivery of care.

The journal takes an international stance and covers key developments worldwide which can inform best practice in health care. Efficiency, effectiveness and economics are the main factors in the assessment of best practice and all are addressed in the research- audit- and evidence-based papers published. All papers are peer reviewed to ensure their validity and value to current debates.

For more information please visit the homepage:
www.emeraldinsight.com/cgij.htm

To submit a paper visit:
<http://mc.manuscriptcentral.com/cgij>

Th
•
f
•
a
•
S

New from the Society for Healthcare Epidemiology of America

Practical Healthcare Epidemiology

3rd edition

Edited by Ebbing Lautenbach,
Keith F. Woeltje, and Preeti N. Malani

Newly Revised & Expanded

Cloth \$185.00

E-book \$60.00

Cloth + E-book \$200.00

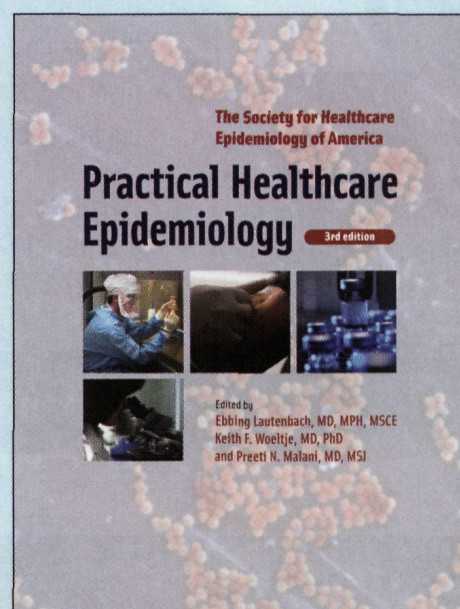
Order your copy online at www.press.uchicago.edu

Address infection prevention and quality of patient care with this hands-on guide to epidemiologic principles and prevention strategies.

In recent years, issues of infection prevention and control, patient safety, and quality-of-care have become increasingly prominent in healthcare facilities. *Practical Healthcare Epidemiology* takes a practical, hands-on approach to these issues, addressing all aspects of infection surveillance and prevention in clear, straightforward terms. This fully revised third edition brings together the expertise of more than fifty leaders in healthcare epidemiology who provide clear, sound guidance on infection prevention and control for the full range of patients in all types of healthcare facilities, including those in settings with limited resources. A powerful resource for practitioners in any branch of medicine or public health who are involved in infection prevention and control, whether they are experienced in healthcare epidemiology or new to the field.

"A handy desk reference and an up-to-date primer for trainees and experts alike." — JAMA, The Journal of the American Medical Association

"An essential for anyone in the field." — Thomas R. Talbot, Chief Hospital Epidemiologist, Vanderbilt University Medical Center



Find the latest in infection control research and practice information in **AJIC**



American Journal of Infection Control

EDITOR: **Elaine L. Larson, RN, PhD, FAAN, CIC**

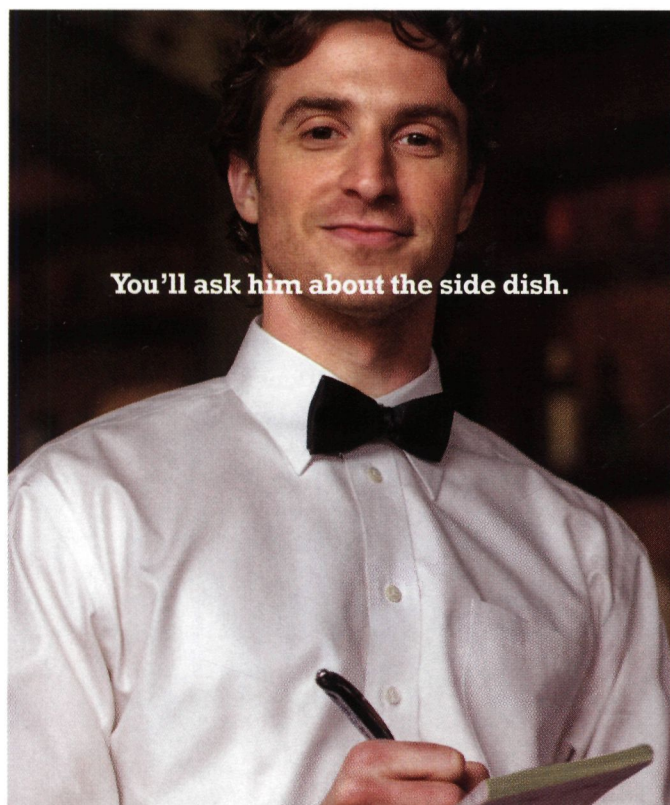
AJIC covers key topics and issues in infection control and epidemiology. Infection control professionals, including physicians, nurses, and epidemiologists, rely on **AJIC** for peer-reviewed articles covering clinical topics as well as original research. As the official publication of the *Association for Professionals in Infection Control and Epidemiology, Inc. (APIC)*, **AJIC** is the foremost resource on infection control, epidemiology, infectious diseases, quality management, occupational health, and disease prevention. **AJIC** also publishes relevant infection control guidelines. **AJIC** is included in Index Medicus and CINAHL.

**Official Publication
of the Association for
Professionals in
Infection Control and
Epidemiology, Inc.**

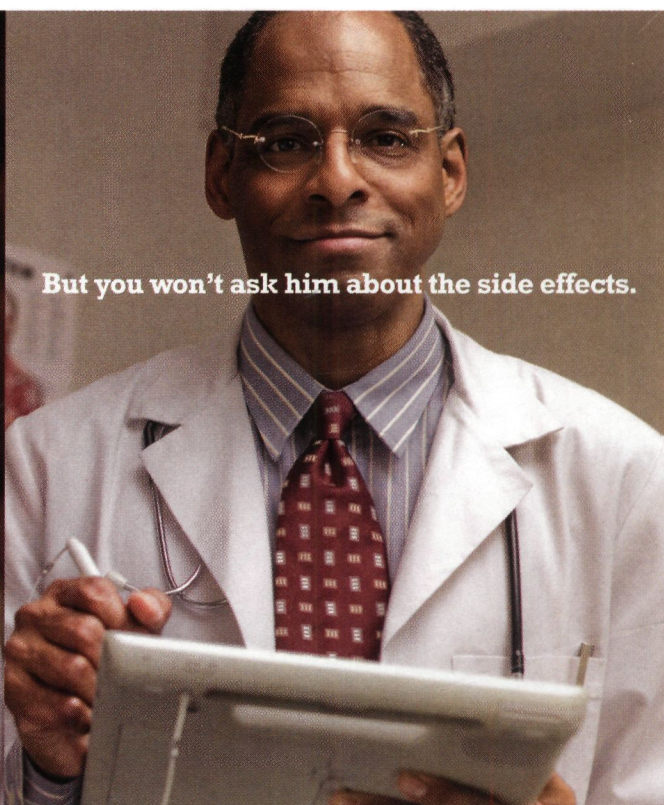
Register at ajicjournal.org to receive free access to
Tables of Contents and all article abstracts; free access to select
full text articles; free e-alerts and search personalization, and more!



Submit your manuscript at: <http://ees.elsevier.com/ajic/>



You'll ask him about the side dish.



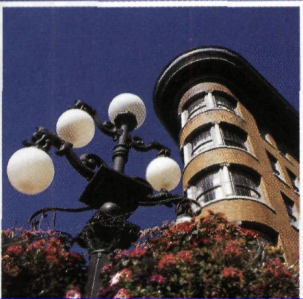
But you won't ask him about the side effects.



We ask questions everywhere we go, yet at the doctor's office, we clam up.
Ask questions. For a list of 10 everyone should know, go to **AHRQ.gov**.



Questions are the answer.



IDS[®]A 48TH ANNUAL MEETING

VANCOUVER

OCTOBER 21-24, 2010

www.idsociety.org/meetings.htm

For details on:

- Important Dates
- Preliminary Program
- Registration and Housing Online

Please visit

NEW CDC GUIDELINES FOR **TARGETED** TB TESTING

GUIDELINE HIGHLIGHTS

The **T-SPOT®.TB** test may now be used in place of the tuberculin skin test (TST) in all situations in which the CDC recommends tuberculin skin testing.¹

Targeted Testing Specific Recommendations:

- ▶ “An IGRA is **preferred** for testing persons who have received BCG.”¹
- ▶ “An IGRA is **preferred** for testing persons from groups that historically have low rates of returning to have TSTs read.”¹

Are you challenged by:

- BCG vaccinated individuals?
- Two-step new hire testing?
- TST non-returners?
- TST reliability?

Eliminate these headaches
with a new, **SIMPLE** solution.

oxford.

DIAGNOSTIC LABORATORIES™

National TB Testing Services

The **T-SPOT®.TB** Test



CALL TODAY

1-877-59 TBLAB

Visit: **TargetedTBtesting.com**

Note: IGRA (Interferon Gamma Release Assay) is a TB blood test. | ¹ MMWR 2010;59;(No. RR-5): pages 1-25.