

The Canadian Journal of **INFECTION CONTROL**

Revue canadienne de **PRÉVENTION DES INFECTIONS**

The official journal of the Community and Hospital Infection Control Association – Canada • Association pour la prévention des infections à l'hôpital et dans la communauté – Canada

INSIDE:

Rapid control of an
MRSA outbreak in an ICU

Influenza vaccination by
registered nurses: a personal decision



**CHICA's
National
Education
Conference
May 9-14
St. John's, NL**

Congratulations!

to the 2009 Award Winners



The Virox Technologies Partnership is committed to supporting continued education and providing educational opportunities for the Infection Control Professionals in Canada. Through the financial support of the Partnership, 14 CHICA-Canada members have been awarded scholarships to attend the 2009 National Education Conference in St. John's, Newfoundland.

Partners Furthering Education

Virox Technologies would like to thank the Patron Partnership for its continued support in the Scholarship Fund.



Engineering Revolutionary Disinfectants
for the War Against Microbes.



INTUITIVE AND EFFECTIVE **SAFETY IV** PASSIVE ACTIVATION CATHETER

Needlestick injuries are just one of many hazards health care professionals are exposed to in their everyday practices. Safe sharps reduce the risk of transmission of blood borne disease by significantly decreasing these preventable injuries.

Angus Medical is proud to introduce the complete range of Delta Self Safe® Safety IV Catheters. These highly bio-compatible, thin-walled, polyurethane catheters are introduced with a safety mechanism that passively activates as the needle is withdrawn. The introducer needle is back-beveled for ease of entry and decreased patient discomfort.

Designed to be intuitive to use and with patient comfort in mind, the Delta Self Safe® is the right choice for health care provider and patient.



Safety – Infection Control – Infusion
www.angusmedical.com



PREFILLED SALINE AND HEPARIN **FLUSH SYRINGES** WELL DESIGNED AND TRUSTED SAFE

Health Care Professionals depend on products of the highest quality that will perform safe and effectively in a wide variety of situations.

Angus Medical is proud to introduce the Medefil brand of Prefilled MedeFlush™ Syringes. Created in a fully-automated, human-free environment, the highest level of sterility is assured. MedeFlush™ Syringes feature 4-ringed, ISO compliant stoppers for a safer, more controlled delivery and larger diameter barrels for reduced PSI pressure on IV lines.

See for yourself why Medefil is a trusted name in Prefilled Flush Syringes.

All products are latex, preservative, and DEHP free.



Safety – Infection Control – Infusion
www.angusmedical.com

Hand Hygiene Saves Lives

Isagel 70% Ethyl Alcohol

Isagel Kills greater than 99% of most microorganisms in 15 seconds or less.



In vitro Time Kill Results Isagel No Rinse Antiseptic Hand Cleansing Gel

Organism	in 15 seconds	Log ₁₀ Reduction in 15 seconds	Percent Reduction in 30 seconds	Log ₁₀ Reduction in 30 seconds
Gram Positive Bacteria				
E. faecalis	>99.99	>6.18	>99.99	>4.83
E. faecium (VRE)	>99.99	>4.59	>99.99	>5.45
Listeria monocytogenes	>99.99	>4.11	>99.99	>6.04
Micrococcus luteus	>99.99	>4.40	>99.99	>4.38
Staph aureus	99.96	3.46	>99.99	>3.96
Staph aureus (MRSA)	99.96	3.36	>99.94	>3.19
Staph epidermidis	99.97	3.48	99.96	3.46
Staph haemolyticus	99.93	3.16	>99.96	>3.40
Strep pneumoniae	>99.99	4.36	>99.99	>6.11
Strep pyogenes	>99.95	>3.34	>99.99	>4.37
Gram Negative Bacteria				
Bacteroides fragilis	99.90	2.99	99.97	3.48
Escherichia coli	>99.99	>6.04	>99.99	>6.18
Haemophilus influenzae	>99.99	>5.79	>99.99	>5.78
Klebsiella pneumoniae	99.85	2.82	>99.97	>3.51
Proteus mirabilis	>99.99	>5.29	>99.99	>6.15
Pseudomonas aeruginosa	>99.99	>6.53	>99.99	>6.58
Salmonella choleraesuis serotype enteritidis	>99.99	>6.04	>99.99	>6.23
Salmonella typhimurium	>99.97	>3.58	>99.99	>6.30
Serratia marcescens	>99.99	>5.83	>99.99	>6.26
Shigella dysenteriae	>99.99	>6.71	>99.99	>6.62
Anaerobic Bacteria				
C. Difficile (non-spore form)	>99.68	>2.49	>99.98	>3.64
C. Difficile (spore form)	Not tested	Not tested	Not tested	Not tested
Fungi				
Candida albicans	99.97	3.52	>99.99	>4.34
Viruses				
Herpes Simplex Type I	>99.999	5.3	>99.999	5.3
Herpes Simplex Type II	>99.9	3.7	>99.9	3.7
Rotavirus	>99.9	3.9	>99.9	3.9

Independent Laboratory, Data on File, Coloplast Corp, Skin Care Division



Coloplast

www.coloplast.ca

1 888 880 8605

EDITOR-IN-CHIEF

Patricia Piaskowski, RN, HBSn, CIC

EDITORIAL BOARD

- Joanne Braithwaite, RN, BAA, CHPIC, CIC, Toronto, Ontario
- Sandra Callery, RN, HHSc, CIC, Toronto, Ontario
- David (Greg) Gamble, MD, FRCPC, Thunder Bay, Ontario
- Elizabeth Henderson, PhD, Calgary, Alberta
- Louise Holmes, RN, CIC, Vancouver, British Columbia
- Lori Jessome-Croteau, RN, BScN, CIC, Halifax, Nova Scotia
- Shirley McDonald, ART, CIC, Bath, Ontario
- Allison McGeer, MD, FRCPC, Toronto, Ontario
- Cathy Munford, RN, CIC, Victoria, British Columbia
- Nicole Tittley, HBSn, CIC, CRSP, Thunder Bay, Ontario
- Liz Van Horne, RN, CIC, Mississauga, Ontario
- Dick Zoutman, MD, FRCPC, Kingston, Ontario

EDITORIAL OFFICE

Patricia Piaskowski, RN, HBSn, CIC, Network Coordinator
 Northwestern Ontario Infection Control Network
 289 Munro Street, Thunder Bay, ON P7A 2N3
 (807) 683-1747 Fax: (807) 683-1745
 E-mail: piaskowp@tbh.net

WEB COMMUNICATION MANAGER

Shirley McDonald, ART, CIC chicawebmaster@mts.net

CHICA CONNECTIONS - WEB DISCUSSION BOARD

Jim Gauthier, MLT, CIC chicaoconnections@mts.net

POSTING EMPLOYMENT OPPORTUNITIES/OTHER INFORMATION

CHICA-Canada Membership Services Office
 chicacanada@mts.net

 www.chica.org

PUBLISHER



3rd Floor, 2020 Portage Avenue
 Winnipeg, MB R3J 0K4
 Tel: (204) 985-9780 Fax: (204) 985-9795
 www.kelman.ca E-mail: info@kelman.ca

- EDITOR - Cheryl Parisien
- DESIGN/PRODUCTION - Tracy Toutant
- SALES MANAGER - Aran Lindsay
- ADVERTISING COORDINATOR - Lauren Campbell

Send change of address to:
 CHICA Canada
 P.O. Box 46125, RPO Westdale,
 Winnipeg, MB R3R 3S3
 chicacanada@mts.net



Publications Mail Agreement #40065075
 Return undeliverable Canadian addresses to: Kelly@Kelman.ca

SUBSCRIPTIONS


Subscriptions are available from the publisher at the following rates: All Canadian prices include GST. Prices are listed as personal/institutional.
 Canada: \$30/\$38 (GST # 100761253); USA (in US funds): \$28/\$36; Other countries: \$45/\$60.

The Canadian Journal of INFECTION CONTROL

Revue canadienne de PRÉVENTION DES INFECTIONS

The official journal of the Community and Hospital Infection Control Association – Canada • Association pour la prévention des infections à l'hôpital et dans la communauté – Canada
 Vol. 24 No. 1 Spring 2009

FEATURES

- Rapid control of an methicillin-resistant Staphylococcus Aureus (MRSA) outbreak in a medical surgical intensive care unit (ICU) 12
- Influenza vaccination by registered nurses: a personal decision 18
- News from the Field: Buea Town: water, sanitation, Millennium Development Goals, and local realities in Cameroon..... 28
- 2009 NATIONAL EDUCATION CONFERENCE  Education Conference: Solid Foundations ... Shifting Horizons 31
- News from the Field: Hospital infection control at Dos de Mayo Hospital, Lima, Peru 83

DEPARTMENTS

- Editorial 6
- President's Message 8
- Message de la Présidente 9
- From the Executive Desk 10
- Member Profile..... 66
- Association News..... 77
- Reach Our Advertisers 91

VISION

CHICA-Canada will lead in the promotion of excellence in the practice of infection prevention and control.

MISSION

CHICA-Canada is a national, multidisciplinary, voluntary association of professionals. CHICA-Canada is committed to improving the health of Canadians by promoting excellence in the practice of infection prevention and control by employing evidence-based practice and application of epidemiological principles. This is accomplished through education, communication, standards, research and consumer awareness.

The Canadian Journal of Infection Control is the official publication of the Community and Hospital Infection Control Association (CHICA)-Canada. The Journal is published four times a year by Craig Kelman & Associates, Ltd. and is printed in Canada on recycled paper. Circulation 3000.

©2009 Craig Kelman & Associates Ltd. All rights reserved. The contents of this publication, which does not necessarily reflect the opinion of the publisher or the association, may not be reproduced by any means, in whole or in part, without the written consent of the publisher.

ISSN - 1183 - 5702

Indexed/abstracted by the Cumulative Index to Nursing and Allied Health Literature, SilverPlatter Information Inc. and the International Nursing Index (available on MEDLINE through NLM MEDLARS system).

The Canadian Journal of Infection Control is a "Canadian periodical" as defined by section 19 of the Canadian Income Tax Act. The deduction of advertising costs for advertising in this periodical is therefore not restricted.

PLATINUM:

• **3M Healthcare**
Ph: (519) 452-6069
Fax: (519) 452-6597

• BD

Ph: (905) 855-4640
Fax: (905) 855-5515

• Ecolab Healthcare

Ph: (651) 293-2914
(800) 352-5326
Fax: (651) 204-7372

GOLD:**• Baxter**

Ph: (800) 387-8399
Fax: (905) 281-6560

• Virox Technologies

Ph: (800) 387-7578
(905) 813-0110
Fax: (905) 813-0220

SILVER:**• Vernacare**

Ph: (416) 661-5552 ext. 232
Cell: (416) 580-9301

BRONZE:**• ArjoHuntleigh Canada**

Ph: (800) 665-4831
Fax: (800) 309-7116

• Covidien

Ph: (514) 695-1220 ext. 3471
Fax: (514) 695-4261

• Deb Canada

Ph: (519) 443-8697
Fax: (519) 443-5160

• Ethicon, a Division of Johnson & Johnson Inc.

Ph: (905) 946-2065
Fax: (905) 946-3735

• Laura Line

Ph: (519) 748-9628
Fax: (519) 895-2374

• Medline Canada

Ph: (800) 396-6996 ext.7021
Fax: (950) 465-9242

• Maxill

Ph: (519) 631-7370
Ph: (800) 268-8633 (toll-free)
Fax: (519) 631-3388

• Pharmax Limited

Ph: (416) 675-7333
Fax: (416) 675-9176

• Professional Disposables International

Ph: (845) 365-1700
Fax: (845) 398-5347

• Rubbermaid Canada

Ph: (905) 281-7324
Fax: (905) 279-1054

• Sci Can

Ph: (416) 446-2757
Fax: (416) 445-2727

• Smith & Nephew Inc.

Ph: (514) 956-1010
Fax: (514) 956-1414

• Steris Corporation

Ph: (905) 677-0863
Fax: (905) 677-0947

• The Stevens Company

Ph: (905) 791-8600
Fax: (905) 791-6143

• Webber Training

Ph: (613) 962-0437
Fax: (613) 969-7465

• Wood Wyant

Ph: (800) 361-7691
Fax: (450) 680-9735



CHICA-CANADA 2009 Board of Directors

Executive Officers

President

Cathy Munford, RN, CIC
Infection Control Practitioner
Victoria General Hospital
1 Hospital Way, Victoria, BC V8Z 6R5
Tel: 250-727-4021 Fax: 250-727-4003
cathy-munford@shaw.ca

President-elect

Anne Bialachowski, RN, BN, MSc, CIC
Network Coordinator
Central South Infection Control Network
St. Joseph's Villa
56 Governor's Road, Dundas, ON L9H 5G7
Tel: 905-627-3541 ext 2481 Fax: 905-627-6474
bialach@hhsc.ca

Past President

Marion Yetman, RN, BN, MN, CIC
Provincial IC Nurse Specialist
Government of Newfoundland Labrador
Dept. of Health & Community Services
1410 West Block, Confederation Bldg
PO Box 8700, St John's, NL A1B 4J6
Tel: 709-729-3427 Fax: 709-729-7743
MarionYetman@gov.nl.ca

Secretary/Membership Director

Bern Hankinson, RN, BN, CIC
Infection Prevention & Control Practitioner
Wetaskiwin Hospital
6910 47th Street, Wetaskiwin AB T9A 3N3
Tel: 780-361-4398 Fax: 403-361-4107
bhankinson@dthr.ab.ca

Director of Finance

Judi Linden, RN, BN, COHN(C), CIC
Infection Control Practitioner
Portage General Hospital
524 5th Street Southeast
Portage La Prairie, MB R1N 3A8
Tel: 204-239-2211 ext 264 Fax: 204-239-2298
jlinden@rha-central.mb.ca

Directors

Director of Education

Donna Moralejo, PhD
Memorial University School of Nursing
300 Prince Philip Drive, St. John's NL A1B 3V6
Tel: 709-777-6527 Fax: 709-777-7037
moralejo@mun.ca

Director, Programs & Projects

Karen Clinker, MEd, BScN, CCOHN, CIC
Infection Control Consultant
Northwestern Ontario IC Network
100 Casimir Ave, Suite 217, Box 116
Dryden ON P8N 3L4
Tel: 807-223-4408 Fax: 807-223-4139
clinker@tbh.net

Director, Standards & Guidelines

Bonnie Henry, MD, MPH, FRCPC
Physician Epidemiologist
BC Centre for Disease Control
655 West 12th Ave, Vancouver BC V5Z 4R4
Tel: 604-660-1823 Fax: 604-660-0197
bonnie.henry@bccdc.ca

Physician Director

Michael Gardam, MSc, MD, CM, MSc, FRCPC
Director Infection Prevention/Control Unit
University Health Network
200 Elizabeth Street, Toronto, ON M5G 2C4
Tel: 416-340-3758 Fax: 416-340-5047
Michael.gardam@oahpp.ca

Other Positions

Archivist

Mary LeBlanc, RN, BN, CIC
RR#2, Civic #11763
Tyne Valley, PE COB 2C0
nanaandpapa@route2.pe.ca

Clinical Editor – Canadian Journal of Infection Control

Pat Piaskowski, RN, HBScN, CIC
Network Coordinator
Northwestern Ontario IC Network
289 Munro Street
Thunder Bay ON P7A 2N3
Tel: 807-683-1747
Fax: 807-683-1745
piaskowp@tbh.net

Distance Education Coordinator

Karen Dobbins-Williams, RN, BN
28 Dalhousie Crescent
Mount Pearl NL A1N 2Y4
Tel: 709-745-7341
kdobbins@mun.ca

Web Master

Shirley McDonald, ART, CIC
RR 3, 4759 Taylor-Kidd Blvd
Bath ON K0H 1G0
Tel: 613-389-9810
Fax: 613-389-8468
chicawebmaster@mts.net

Professional Agents

Legal Counsel

Elliot Leven, LLB
Elliot Leven Law Corporation
204-100 Osborne Street
Winnipeg MB R3L 1Y5
Tel: (204) 944-8720
Fax: (204) 944-8721
leven@evenlegal.com

Auditor

Philip Romaniuk, CA
Stefanson Lee Romaniuk
1151 Portage Avenue
Winnipeg MB R3G 0S9
Tel: (204) 775-8975
promaniuk@slrca.ca

Membership Services Office

**Executive Administrator/
Conference Planner**

Gerry Hansen, BA
PO Box 46125 RPO Westdale, Winnipeg MB R3R 3S3
Tel: 204-897-5990/866-999-7111
Fax: 204-895-9595
chicacanada@mts.net

Deliveries only:
67 Bergman Crescent, Winnipeg MB R3R 1Y9

Administrative Assistant

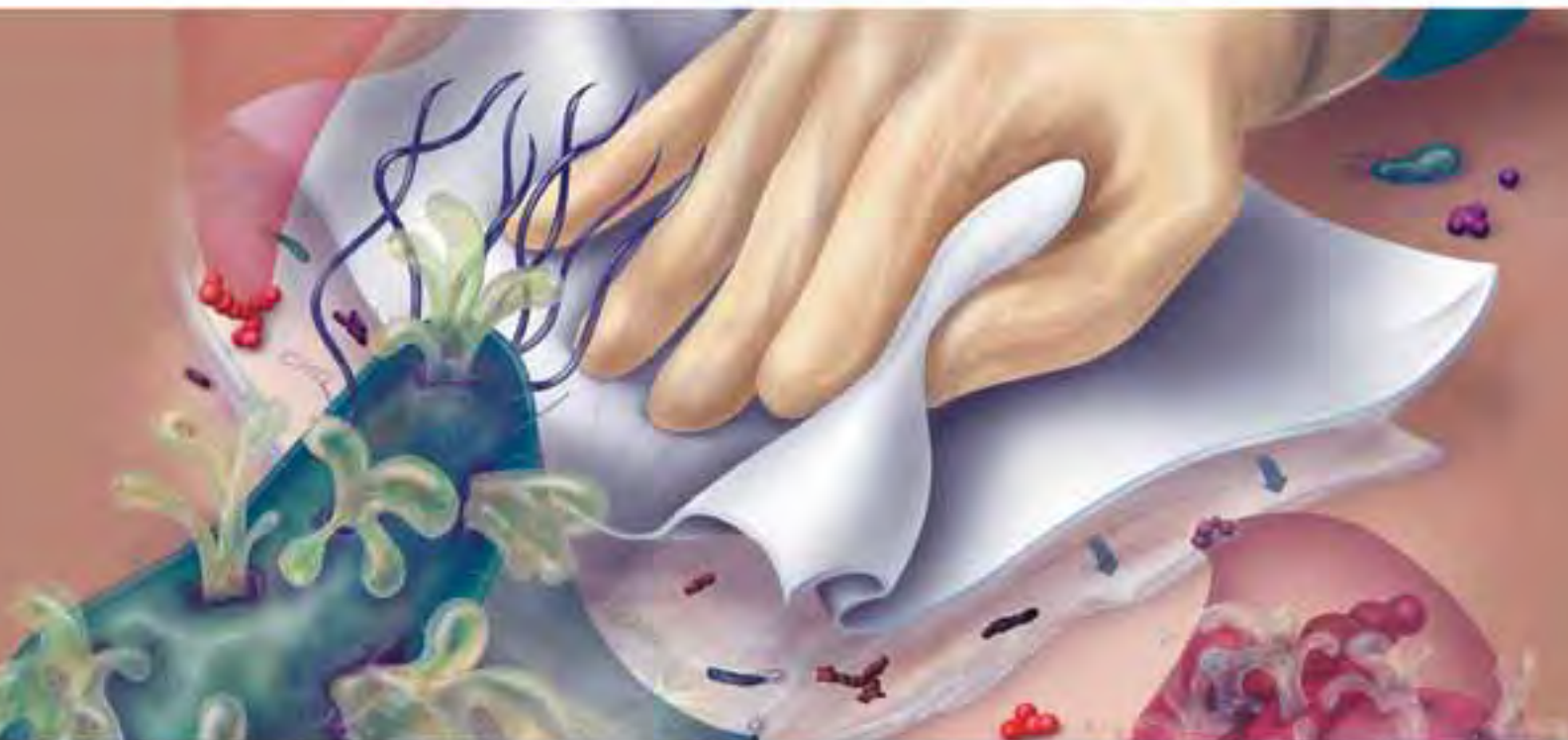
Kelli Wagner
kelli_wagner@mts.net



Source control for **prevention** of hospital-acquired infections



Call **1-800-323-2220**
for a free sample.



Suppress BSI-causing pathogens on the skin with **Sage Antiseptic Body Cleanser 2% Chlorhexidine Gluconate (CHG)** in a premoistened washcloth!

Bathing with Sage Antiseptic Body Cleanser resulted in a 53% reduction in the rate of blood stream infections.¹ The same study also reported a significant reduction of inguinal colonization with all gram-positives, MRSA, VRE, yeast and gram-negatives.

Each disposable washcloth rapidly reduces bacteria on the skin that can cause infection. Unlike other CHG solutions, it's designed to stay on the skin. So it provides maximum antimicrobial persistence against a wide variety of microorganisms. Sage Antiseptic Body Cleanser makes it easier to address skin decolonization.

Visit www.sageproducts.com/canada/chg for more information about Sage Antiseptic Body Cleanser



Call **1-800-323-2220**
for a free sample.

SAGE[®]
PRODUCTS INC

Simple Interventions.
Extraordinary Outcomes.

1. Bleasdale SC, et al., Skin Cleansing with 2% Chlorhexidine Gluconate (CHG): Infection Control and Clinical Benefits of Source Control. Presented at the 2006 Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Sep 2006, San Francisco, CA.



Pat Piaskowski, RN, HBScN, CIC

Clinical Editor, *Canadian Journal of Infection Control*

The value of certification in the eyes of the public

In the Winter 2008 issue of *CJIC*, Deanie Lancaster (President of CBIC Board) wrote a compelling argument for the value of CIC certification citing other professional organizations which actively promote certification of their members.

For example, the Canadian Nurses Association defines certification as the “periodic process by which an organized professional body confirms that a nurse has demonstrated competence in a nursing specialty by having met the predetermined standards of that specialty.”

Many facilities and agencies cite CIC certification as a required qualification for Infection Control Professionals (ICPs). In at least one province (Ontario), their Best Practices for Infection Prevention and Control Programs (www.pidac.ca) recommends that ICPs obtain their CIC when eligible.

In the US the Joint Commission on Accreditation of Healthcare Organizations endorses the CIC.

“ICPs in Canada demonstrate to the public that they fulfill the practice requirements and have the necessary professional competences for this vital role through certification in Infection Prevention and Control.”


The role of the Infection Control Professional (ICP) and the value of the practice of infection prevention

“News of infectious outbreaks and incidents are commonplace in local, national and international media drawing more attention to the importance of the IPAC program and the ICP.”

and control (IPAC) is coming under increasing public scrutiny in Canada. News of infectious outbreaks and incidents are commonplace in local, national and international media drawing more attention to the importance of the IPAC program and the ICP. As cited in a previous editorial some provinces in Canada are now requiring public reporting of infections which further highlights the visibility of the ICP as a professional in healthcare.

The CBIC website (www.cbic.org) states the purpose of the certification process is to protect the public by:

1. Providing standardized measurement of current basic knowledge needed for persons practicing infection control.
 2. Encouraging individual growth and study, thereby promoting professionalism among infection control professionals.
 3. Formally recognizing infection control professionals who fulfill the requirements for certification.
- ICPs are truly a key component to protect patients and in turn the public.

At the current time there are less than one quarter of CHICA-Canada members who list themselves as having a CIC. How do ICPs in Canada demonstrate to the public that they fulfill the practice requirements and have the necessary professional competences for this vital role? Certification in Infection Prevention and Control is an important way to demonstrate this to our patients and the public. 

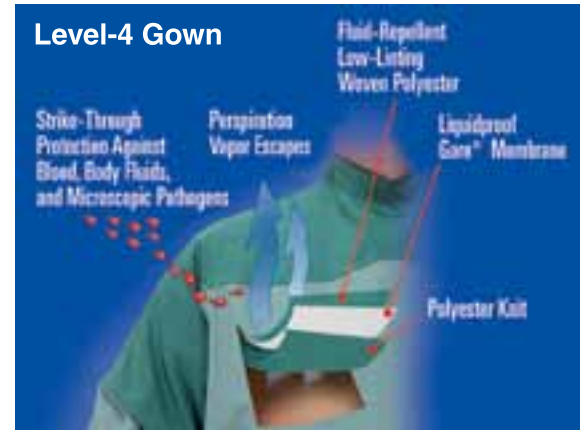


The protection you *need*, again and again.

When you choose Medline reusable surgical gowns made with Gore® barrier fabric, you don't just get level-3 and level-4 CSA Class D/AAMI PB70 protection. You also get a gown that "breathes" to keep you cool and comfortable.

Medline gowns incorporate the patented Gore® bicomponent membrane, which helps prevent strikethrough of blood and fluids while still allowing perspiration vapor to escape.

Level-4 Gown



The liquid-proof Gore® membrane in our level-4 gown helps ensure maximum protection while keeping you comfortable.

For more information on gowns that offer you outstanding protection without sacrificing comfort, please contact your Medline representative or call 1-800-396-6996.

©2009 Medline Industries, Inc.
Medline is a registered trademark of Medline Industries, Inc.



www.medline.ca



Cathy Munford, RN, CIC
President, CHICA-Canada

Shifting horizons, looking ahead

As I begin my term as president for 2009, I find myself in awe of all that has gone on before me, and trying to fill the shoes left by my predecessor Marion Yetman.

CHICA-Canada has grown from a few dedicated members to a membership of over 1500 since its founding in 1976. As we have grown so have the issues that our membership has faced. Among them are bioterrorism, multi-resistant organisms, epidemics, and resurgence of organisms once thought defeated. CHICA-Canada has kept pace with the evolution of infection prevention and control with interest groups and committees dedicated to the ever-changing issues and focus. Communication with members has evolved from a newsletter, written mail-outs and paper journal copies, to online communication,

webinars, online journals, e-mail, and video conferencing. Distance education for infection prevention and control courses and CBIC certification through computerized testing is now possible.

As I look at where CHICA-Canada has come from, I find that I am excited in thinking about where CHICA-Canada is going. This year will be exciting as we prepare for the future direction of infection prevention and control in Canada. In May, the board, along with the chapter presidents, will meet for a strategic planning retreat. This will focus the direction for CHICA-Canada for the next five years. St. John's promises to be an inspiring place to help our creative minds in imagining what the future could potentially hold for our organization.

St. John's, Newfoundland-Labrador will be the site for the 2009 National Education Conference. St. John's offers

wonderful scenic views, down home hospitality and delicious east coast seafood. The conference promises to be just as enjoyable. The theme this year is *Solid Foundations...Shifting Horizons*. This will look at infection prevention and control based on a solid foundation of knowledge with a focus of adaptation to the shifting changes that we constantly face. Sessions at the conference will include something for everyone. There will be novice and advanced practitioner day; preconference day will look at mental health issues long-term care and preparing for the CIC exam. The conference itself will feature sessions to cover items such as the generation gap, pandemic planning, community, occupational health, antibiotic stewardship and outbreaks. The Conference Committee has planned an exciting week, with special events, and exciting educational opportunity as well as plenty of time to network with both new and old colleagues and friends. Full conference information programs can be found on the CHICA-Canada website at www.chica.org.

For those going to the conference this year, I suggest to prepare in advance. There will be much to do and see. Check out the conference website, and print off the handouts before you come for those sessions you want to attend. Check the map of the exhibit hall to plan your time efficiently. Remember not to burn yourself out by trying to do too much. Have fun, and enjoy the east cost music, food, and hospitality. Above all else, remember to say hi to me and the other board members, because we all represent you at CHICA-Canada. ☺

Because you are in daily contact with your clients, you need to take extra care to avoid spreading germs and infection.



HUNT THEM DOWN!

Since 1968, the "Glo Germ™" system has been used to teach effective handwashing and cleaning techniques. "Glo Germ™" powder and lotion contain safe, inert "Germs You Can See" that glow when exposed to standard Ultraviolet light.



Glo Germ Company™
Box 188, Monticello, UT
USA 84500
1-800-342-6922
Fax: 435-299-0911
www.glogerm.com



Canadian Distributor + Michael Laro - Merit888 Phone: 613-342-8961 Toll Free Order Fax: 1-800-342-8988

Le congrès annuel, sous le thème **Shifting horizons, approche à grands pas**

Cathy Munford, RN, CIC
Président, CHICA-Canada

Alors que j'entame mon mandat à titre de présidente pour l'année 2009, je constate avec admiration tout ce qui a été accompli avant moi. Je m'efforce d'être à la hauteur de celle qui m'a précédée, Manon Yetman.

Depuis sa fondation, en 1976, CHICA-Canada est passée d'un petit groupe de membres déterminés à une association comptant plus de 1 500 membres. Pendant que notre association prenait de l'ampleur, il en allait de même des enjeux qui préoccupent nos membres. Parmi ces dossiers, mentionnons le bioterrorisme, les organismes multirésistants, les épidémies et la résurgence d'organismes que l'on avait crus vaincus. CHICA-Canada a suivi le rythme de l'évolution des pratiques en matière de prévention et de contrôle des infections grâce à des groupes d'intérêt et à des comités qui se penchent sur les préoccupations et priorités en perpétuel changement. La communication avec les membres a également évolué. Au début, nous envoyions un bulletin d'information et diverses lettres par la poste et notre revue spécialisée était distribuée en version papier; aujourd'hui, les communications se font en ligne, nous offrons des webinaires, les revues existent en version électronique, nous avons recours au courriel et aux visioconférences. Il est désormais possible de suivre des cours à distance en prévention et lutte contre les infections ainsi que de subir des tests informatisés en vue de la certification CBIC.

Tout comme que je mesure le chemin parcouru par CHICA-Canada, je m'enthousiasme à l'idée du chemin sur lequel CHICA-Canada poursuivra sa voie. L'année qui commence sera marquante pour ce qui est de l'orientation future de la prévention et du contrôle des infections au Canada. En mai, le conseil d'administration et les présidents des sections régionales se réuniront pour une retraite consacrée à la planification stratégique. Cet exercice déterminera l'orientation de CHICA-Canada au cours des cinq prochaines années. St. John's promet d'être un endroit inspirant, qui aidera nos esprits créateurs à imaginer ce que l'avenir peut réserver à notre association.

St. John's, à Terre-Neuve-et-Labrador, sera l'hôte de notre congrès national de formation en 2009. Cette ville recèle des paysages panoramiques, une hospitalité simple et chaleureuse, de délicieux poissons et fruits de mer caractéristiques de la côte Est. Le congrès s'annonce tout aussi agréable que cette ville. Le thème retenu cette année, *Solid Foundations...Shifting Horizons*, évoque l'idée que notre association, tout en s'appuyant sur des bases solides, sait ajuster le tir. Cela nous amènera à poursuivre la prévention et le contrôle des infections en nous appuyant sur de solides connaissances et en mettant l'accent sur l'adaptation aux changements auxquels nous devons constamment faire face. Étant donné la diversité des séances, chacun y trouvera son compte. Il y a une journée de séances distinctes pour les novices et pour les experts. La journée précongrès portera sur les questions de santé mentale, les problèmes liés aux soins de longue durée et la préparation à l'examen CIC. Dans le cadre du congrès proprement dit, les séances porteront sur divers sujets, notamment l'écart entre les générations, la planification

en cas de pandémie, la communauté, la santé au travail, la gérance des antibiotiques et les épidémies. Le comité d'organisation a planifié une semaine extraordinaire, des activités spéciales, des occasions de formation stimulantes et prévu amplement de temps pour réseauter avec des collègues et amis, nouveaux ou de longue date. Le programme détaillé du congrès se trouve sur le site Web de CHICA-Canada, à l'adresse www.chica.org.

Je suggère à ceux et celles qui assisteront au congrès cette année de bien s'y préparer. Il y aura beaucoup de choses à faire et à voir. Avant de partir, consultez le site Web du congrès et imprimez la documentation associée aux séances qui vous intéressent. Étudiez le plan du salon des exposants pour bien planifier votre visite. Faites attention de ne pas vous épuiser à essayer de trop en faire. Amusez-vous et profitez bien de la musique, de la cuisine et de l'hospitalité de la côte Est. Surtout, dites-nous bonjour, aux membres du conseil d'administration et à moi-même, car après tout, nous vous représentons auprès de CHICA-Canada. ☺

Parce que vous êtes en contact quotidien avec vos clients, il est recommandable de prendre toutes les précautions possibles pour ne pas transmettre les germes et les infections.



C'EST ÉVIDENT!

Depuis 1968, le système "Glo Germ"[™] est utilisé pour enseigner des techniques efficaces de nettoyage et lavage. La poudre et la lotion "Glo Germ"[™] contiennent des microbes inertes et inoffensifs, qui réagissent quand ils sont exposés au éclairage ultra-violet standard.



la Glo Germ[™]
One The Marty, UT
USA 64332
1-800-642-8622
Fax: (416) 258-8600
www.glogerm.com



Canadian Distributor • Michael Ladd - Markham Phone: 613-342-8961 Toll Free Order Fax: 1-800-342-8968



Gerry Hansen, BA

Executive Administrator, CHICA-Canada

A satisfied look back ... an enthusiastic look forward

In preparation for the upcoming Strategic Planning Retreat in St. John's, I looked back at the Strategic Plans developed for CHICA-Canada from 1988 to the current document. The latter will retire with the implementation of the 2010-2014 plan.

It is interesting that the running themes through these initiatives are education, promotion of the ICP and CHICA-Canada, and infrastructure. In 1988 the goals were to establish a national organization which included communication through a journal; education through a day program at Centennial College, conferences and chapter initiatives; promotion of CHICA-Canada as a national voice for infection control practitioners; and of course the marketing of the role of the ICP.

The needs of CHICA and its members appear to not have changed

through the years. The delivery has changed. Email was unheard of in the late eighties, and early nineties. Even the purchase of a fax machine

CHICA, and even past its 10th and 20th anniversaries, communication became mass communication. Education has become distance learning, webinars,

"It is time now to take stock of where we are, where we want to be in the next decade, and how we can get there without unduly straining human and financial resources."

for the association in 1990 was the cause of board discussion on whether it would be a worthwhile investment. The existence and impact of a communication highway called the Internet was only imagined by science fiction writers and did not even have a name. Since the inception of

and Internet resources. The promotion of CHICA-Canada as the national voice of infection prevention and control has created a situation of "beware of what you ask for" as the association and its representatives are in constant demand on provincial, national and international levels. The value of ICPs in reducing the financial and human burden of healthcare-acquired infections became a hard fact following the dramatic events of SARS. For all of this progress, we are grateful. However, it is time now to take stock of where we are, where we want to be in the next decade, and how we can get there without unduly straining human and financial resources.

In the past few weeks, CHICA-Canada members have been asked to complete an online survey that examines the role of CHICA-Canada in their education, their practices, and their professional representation. The results of the survey will be the basis of deliberations during the Board and Chapter Presidents Strategic Planning Retreat in St. John's. We thank members who have given the survey their most thoughtful response. ☺



Alberta Health
Services

Capital Health

Infection Prevention and Control Training Video

Health care workers are on the front line in the fight against infectious diseases. We need to learn and practice the infection prevention and control procedures that will protect our patients, ourselves and our families. This 28 minute video is designed to clearly teach those practices, and emphasizes the importance of following proper infection prevention and control procedures at all times.

This training video is a valuable tool for training new staff and providing regular reminders of the methods and importance of infection prevention and control practices to all staff working in health care settings. The video contains three distinct modules that can be viewed together, or taught in separate sessions:

1. **Routine Practices**
2. **Additional Precautions – Droplet, Contact, and Airborne Transmission**
3. **Combined Precautions – Routine Practices combined with Additional Precautions to prevent the spread of new infectious diseases such as SARS**

Copies of this video are available at the cost of \$100 for VHS, or \$150 for DVD or CD format.

To order copies of this video in VHS, DVD or CD format Contact Capital Health

Phone: 780-735-3435 • Fax: 780-413-4744 • Email: jennifer.osinchuk@capitalhealth.ca

NOW you hold ^{more} ~~the~~ power
to fight for your patients

Enhanced Efficacy



V-Link with **VitalShield**
Luer Activated Device Protective Coating

The first antimicrobial IV connector

Now 99.99% effective against 6 common pathogens known to cause catheter-related bloodstream infections (CR-BSIs)^{1*}

*These *in vitro* test results of typical devices have not been shown to correlate with a reduction in infections.

To learn more about the new V-Link device or any of our other products, contact your Baxter representative or the Baxter Product Information Center at 1-800-933-0303, or visit www.baxter.com.

The antimicrobial agent is not intended to be used as a treatment for existing infections.
Rx only.
For safe and proper use of this device, please refer to the complete instructions for use.



MEDICATION DELIVERY

Baxter

Reference: 1. Data on file. Baxter Healthcare Corporation.

Baxter, Committed to a Safer Healthcare Environment, V-Link, and VitalShield are trademarks of Baxter International Inc. Baxter Corporation, 4 Robert Speck Parkway, Suite 700, Mississauga, ON L4Z 3Y4 www.baxter.com 213399 09/08

Rapid control of a **methicillin resistant *Staphylococcus Aureus* (MRSA)** outbreak in a medical surgical intensive care unit (ICU)

Anjum Khan, MBBS, MSc, CIC
 Marianita Lampitoc, BSc CIC
 Maryam Salaripour, MSc, CIC
 Patricia McKernan, RN, BA, CPHQ, MBA
 Roslyn Devlin, MD, MHSc, FRCPC
 Matthew P. Muller, MD, PhD, FRCPC
 St. Michael's Hospital, Toronto, ON

Address for correspondence:

Anjum Khan
 30 Bond Street, Rm 3059 Shutter
 Toronto, Ontario M5B 1W8
 416-864-6060 ext. 6967
 Fax: 416-864-3059
 khana@smh.toronto.on.ca

ABSTRACT

Background

Outbreaks of methicillin resistant *Staphylococcus aureus* in the intensive care unit setting can be prolonged and difficult to control. This report describes the rapid control of an outbreak of methicillin resistant *Staphylococcus aureus* in a 24-bed open-concept medical surgical intensive care unit with a baseline methicillin resistant *Staphylococcus aureus* acquisition rate of 1.5 cases per 1000 patient days.

Interventions/results

This institution's infection control policy mandates an outbreak investigation if two cases of hospital-acquired methicillin resistant *Staphylococcus aureus* colonization or infection are identified in an intensive care unit within a four-week period. In July 2007, methicillin resistant *Staphylococcus aureus* was identified in the sputum of two patients within a one-week period. Screening of all patients in the intensive care unit identified one additional case and a fourth case was identified from a clinical specimen before control measures were implemented. Initial control measures included healthcare worker education, enhanced surveillance, patient cohorting, and enhanced environmental cleaning. Despite these measures, three more cases occurred. All patients were then placed in contact isolation, healthcare workers were screened, and the nursing staff was cohorted. After two weeks without a case, two additional cases were identified. Decolonization of all positive patients was initiated. No further cases occurred over a five-week period and the outbreak was declared over.

The outbreak resulted in nine cases of methicillin resistant *Staphylococcus aureus* colonization (n=8) or infection

(n=1) over an 11-week period. Only one of 175 healthcare workers was colonized and it was not the outbreak strain.

Conclusions

Early detection and the stepwise addition of infection control measures resulted in the rapid control of an outbreak of methicillin resistant *Staphylococcus aureus* in a medical surgical intensive care unit without unit closure. A low threshold of suspicion and the rapid initiation of unit wide surveillance were the key steps in limiting the size of the outbreak. Complete cessation of transmission occurred after the initiation of decolonization for all positive patients.

Key words: MRSA, outbreak, ICU, decolonization, screening

BACKGROUND

Outbreaks of methicillin resistant *Staphylococcus aureus* (MRSA) in intensive care units (ICU) are often prolonged and can result in substantial morbidity and mortality (1, 2). While outbreak control strategies for ICU can be extrapolated from guidelines for MRSA control in hospitals, ICUs have unique challenges in controlling MRSA relating to the severity of illness of patients, the need for invasive procedures and indwelling devices in most patients, and the spatial organization of ICU, particularly in open concept units. We describe the rapid control of an MRSA outbreak in an open concept medical surgical ICU (MSICU) through early recognition of the outbreak and the stepwise addition of infection control measures.

Setting and routine infection control practices

St. Michael's Hospital is a 550-bed, academic teaching hospital in Toronto, Ontario, Canada. Our MSICU is a

24-bed open concept unit with five private rooms that are prioritized for patients requiring airborne or respiratory droplet precautions but are also used for MRSA isolation when available. Risk-based surveillance is performed on all patients admitted with a history of MRSA, patients transferred from other facilities, or patients with a history of admission to hospital in the preceding year. These patients are screened at admission and are placed in a private room in contact precautions if positive. Patients identified as MRSA colonized that do not have wounds, tracheostomies or indwelling devices are considered for decolonization therapy.

The baseline rate of hospital-acquired (i.e. nosocomial) MRSA infection or colonization in our MSICU was 1.5 cases per 1000 patient days (approximately 10 cases per year). When a non-isolated patient was identified as MRSA colonized or infected in the MSICU, the patients immediately adjacent to this patient were screened for MRSA; if two cases were

identified within a one-month period, all patients in the MSICU would be screened for MRSA (prevalence study) and an outbreak investigation would be conducted.

Outbreak description

On 2nd and 10th of July 2007, two patients in MSICU were identified as MRSA positive. Both were positive on clinical cultures obtained from the respiratory tract (endotracheal aspirates). As these two cases were identified within a one-month period, an outbreak investigation was initiated and a prevalence study was conducted on July 12th. Two additional cases were identified, one as a result of the prevalence study and the other from a clinical specimen (Figure 1). Strain typing by pulsed field gel electrophoresis (PFGE) confirmed that all four cases were identical. Following the identification of these four cases of hospital-acquired MRSA, an outbreak management team was assembled that included members

from the MSICU, infection prevention and control, corporate health and safety services, environmental services, microbiology and public relations. An outbreak was declared and an action plan was initiated on July 16th (Table 1 – Initial Interventions). The key interventions included education of healthcare workers (HCW) on MRSA control, enhanced surveillance through weekly prevalence studies and admission/discharge screening of all ICU patients, enhanced environmental cleaning and cohorting of patients.

Despite these interventions, three additional cases were identified over several weeks, two from clinical specimens and one from a prevalence study (Figure 1). As a result of these new cases, additional strategies were implemented (Table I, Additional Interventions I). Notable additional interventions included placing all patients (MRSA positive and negative) on contact precautions (gown, gloves and surgical masks in addition to routine practices),

Table 1: Summary of Initial and Additional Interventions 1 and II

List of Interventions	Initial Interventions	Additional Interventions-I	Additional Interventions-II
Positive patients cohorted at one end of the unit/ or in isolation rooms when possible	✓	✓	✓
Terminal cleaning of the Unit	✓	✓	✓
Weekly point prevalence screens	✓	✓	✓
Admission discharge screening	✓	✓	✓
Traffic flow re-directed to minimize unnecessary traffic	✓	✓	✓
Education sessions for all staff	✓	✓	✓
Contact precautions initiated for ALL patients regardless of MRSA status		✓	✓
ALL staff screened for MRSA carriage		✓	✓
1:1 nursing was initiated with no cross coverage		✓	✓
Respiratory therapy was cohorted. RT for a given day/shift were located exclusively on the MRSA side of the unit, or on the non-MRSA side			✓
All rounds were to begin on the non-MRSA positive side of the unit and end on the MRSA side			✓
All patients were bathed daily with 1% Triclosan and all MRSA positive patients were topically decolonized with 2% Mupirocin			✓
Visitors were limited to one at a time			✓

Figure 1: Epidemic Curve and PFGE Results for MRSA Outbreak in the MSICU

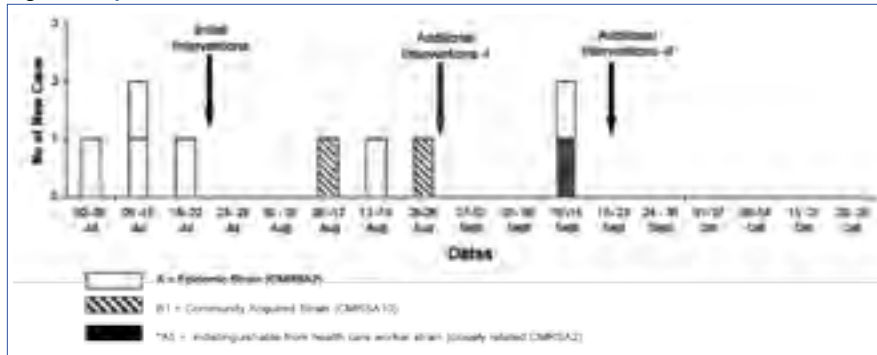


Table 2: Summary of Outbreak-related Cases

Case #	Nose	Peri-anal	ETT	Wound	Urine	C=Colonized I=Infected	Mupirocin Sensitivity	PFGE Type
1	-	-	+	-	+	C	S	A
2	-	-	+	-	-	I	S	A
3	-	+	-	-	-	C	S	A
4	-	-	+	-	-	C	S	A
5	-	-	+	-	-	C	S	B1
6	+	+	+	+	-	C	S	A
7	+	-	+	-	-	C	S	B1
8	-	-	-	+	-	C	S	A
9	-	-	+	-	-	C	S	A5

Legend: + = positive, - = negative, S = sensitive
 A = Epidemic Strain (CMRSA2)
 B1 = Community Acquired Strain (CMRSA10)
 A5 = Closely related to CMRSA2=indistinguishable from HCW strain

screening of healthcare workers for carriage of MRSA, and nurse cohorting.

Following the implementation of these additional strategies on August 23rd, three weekly prevalence studies failed to identify further cases, the outbreak was declared over on September 14th, and universal contact precautions (UCP) for all patients were discontinued while all other interventions continued. Within three days of removing precautions, two additional cases of hospital-acquired MRSA were identified on clinical isolates (Figure 1). All precautions were immediately re-initiated and precautions were further enhanced (Table 1, Additional Interventions II). We opted to decolonize all MRSA positive patients whether or not they had indwelling devices, tracheostomies or wounds. No further cases of hospital acquired MRSA occurred over a five-week period. All precautions were then removed, with the exception of MRSA screening for all admissions to the MSICU. From October 2007 to September 2008 there have only been two hospital-acquired cases of MRSA in our MSICU.

RESULTS OF INVESTIGATIONS

In summary, nine cases of MRSA (colonization = 8, infection =1) were identified in our MSICU over an 11-week period (Table 2). Six patients were identified from clinical specimens and three patients were identified on prevalence studies. Only one clinical infection occurred. The most common site of colonization was the endotracheal tube (7/9) with > one site positive in three patients (Table 2).

An epidemiological investigation into the outbreak included an examination of all cases for commonalities, spatial clustering or associations with specific healthcare workers, an assessment of environmental contamination with environmental swabs, an audit of infection control practices and a review of the reprocessing of ventilators and other respiratory equipment. No epidemiological links between cases were identified and all environmental swabs were negative; however, the infection control audit did identify ongoing failure to perform hand hygiene and incorrect

use of personal protective equipment even following education and enhanced awareness of infection control resulting from the outbreak. Despite the striking finding that seven out of nine patients were colonized from endotracheal specimens, no breakdown in routine infection control practices around suctioning, intubation, or the use of ventilators or respiratory equipment was identified. Additionally, screening of all 175 healthcare workers in the MSICU identified only a single colonized healthcare worker.

Molecular typing of the outbreak strains performed at the Toronto Public Health Laboratory confirmed that the initial four cases were all of the identical strain (C-MRSA-2 strain “A”). Interestingly, of the five cases that occurred following the initiation of our initial intervention strategy, only two of the five were strain “A”. Additionally, there were two patients with the identical community-acquired strain (C-MRSA-10 strain “B1”) and one patient with a C-MRSA-2 strain “A5” that was closely related to the outbreak strain and was genetically indistinguishable from the only healthcare worker that tested positive; it remains unclear whether this healthcare worker acquired MRSA from this patient, or vice versa.

DISCUSSION

Outbreaks of hospital-acquired MRSA are commonly centered in critical care areas indicating that these patients are at higher risk of acquiring MRSA than other hospitalized patients. The epidemiology of MRSA in ICU is complex. Mobile reservoirs, such as personnel or medical devices, play an important role in the transmission dynamics. Despite the recognition of MRSA as a significant hospital acquired problem, there is no consensus regarding the most effective measures to control it.

We have described a small outbreak of MRSA in our MSICU that was controlled over an 11-week period. Although a number of different infection control interventions were used, making it difficult to be sure which interventions were critical in controlling the transmission of MRSA, we believe

that some conclusions can be drawn from our experience.

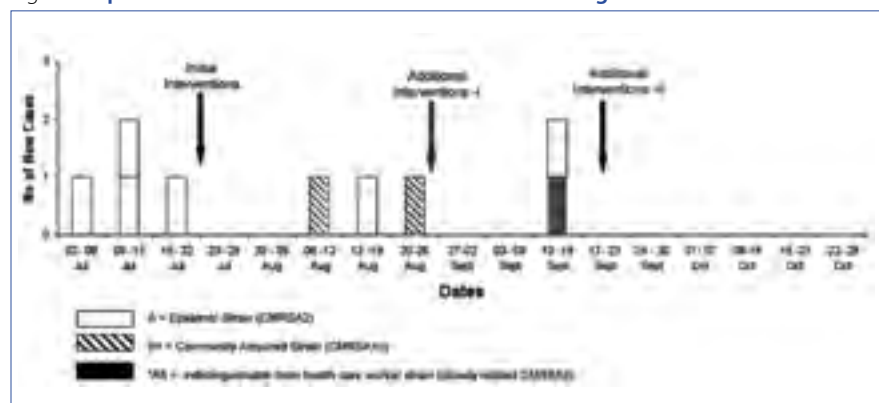
Our policy of conducting an investigation and a prevalence study whenever two cases of MRSA are detected in the MSICU ensured that this outbreak was recognized before it was widespread and more difficult to control. As a result, the outbreak management team was able to meet, develop and implement the first phase of an MRSA control strategy when the outbreak remained small, with only four hospital-acquired cases detected.

Our initial interventions (Table 1 – Initial Interventions) which consisted primarily of education, enhanced surveillance, and cohorting of positive cases were largely effective in curtailing the continued expansion of the outbreak although complete cessation of MRSA transmission was not obtained.

As our investigation failed to identify a cause for the initially clonal nature of the outbreak, and our audit demonstrated breakdowns in routine infection control practices (e.g. lack of performance of hand hygiene, failure to wear appropriate personal protective equipment) we believe that transmission likely resulted from transient carriage on the hands of healthcare workers. This conclusion was supported by our molecular data which identified three different MRSA strains among hospital-acquired cases considered part of the outbreak, and the fact that only one of 175 HCWs were colonized with MRSA. This is in accordance with the published evidence, that HCW are likely to be important in the transmission of MRSA, most frequently acting as vectors rather than reservoirs (3-6). According to the literature, most carriage of MRSA in healthy HCW appears to be transient. So HCW may sometimes contaminate a patient but be MRSA negative by the time of the screening procedure (5, 6).

As occasional cases continued to occur, we added additional infection control measures in an attempt to end transmission (Table 1). Our first concern was that, given the evidence of continued transmission despite our initial measures, and the three- to four-day turnaround time for results following each prevalence

Figure 2: Epidemic Curve of MRSA Outbreak in MSICU along with Colonization Pressure



study, patients with newly acquired MRSA would potentially spend several days on the unit without appropriate isolation. This was the rationale for the use of universal contact precautions (UCP) as part of our second line of interventions (Table 1).

The initiation of these secondary measures, including UCP, resulted in the cessation of transmission for several weeks. Two cases occurred immediately after these precautions were removed, however, although both cases most likely acquired MRSA during the period of precautions, as they were identified on clinical specimens (wound swab, endotracheal aspirate) not tested as part of previous prevalence studies and were both identified within two days of removing universal contact precautions.


Our other concern, over the course of the outbreak, was the rising proportion of ICU patients that were MRSA colonized (Figure 2). We felt that this increased “colonization pressure” was contributing to the outbreak by increasing the number of opportunities for cross transmission, particularly as there were some staff (i.e. physicians) that were not cohorted and there was ongoing evidence of intermittent breakdowns in routine infection control practices, including hand hygiene, throughout the outbreak. Acquisition of MRSA in ICU patients is strongly and independently influenced by colonization pressure (7). In the study by Coello et al (1994), treatment of MRSA carriers coincided with the reduction in the number of new cases and the control of a large hospital

outbreak that affected more than 900 people (8). Because many of the MRSA patients had tracheostomies, indwelling devices or wounds, few were eligible for decolonization as per our protocol. However, as a response to ongoing transmission, we decided to decolonize all MRSA positive patients in the MSICU using 2% mupirocin ointment (three times a day) and 1% triclosan baths and shampoo (once a day) for seven days. (Table 2 – Additional Interventions II). No further cases occurred for five weeks with re-instatement of UCP and MRSA decolonization for all patients.

Since the outbreak ended, we have had only two hospital-acquired cases in our MSICU over one-year period. This rate is well below our pre-outbreak baseline, which may be due to a combination of factors including improved infection control practices, enhanced awareness of MRSA, and universal admission and transfer screening to the unit.

CONCLUSION

With early detection and the stepwise addition of infection control measures MRSA outbreaks in ICU can be controlled rapidly without unit closure. A low threshold for suspicion of an outbreak (one to two cases of hospital acquired MRSA in an open concept unit), the rapid recognition of secondary cases, and the rapid initiation of infection control measures can prevent outbreaks from expanding rapidly. UCP and/or decolonization of MRSA positive patients may be

additional useful strategies to consider if complete cessation of transmission is not obtained using standard approaches. 

Acknowledgement

We would like to acknowledge all the staff and healthcare workers in the MSICU for their hard work to end this outbreak promptly. We would also like to thank Toronto Public Health Laboratory for providing the PFGE results for strain typing.

Reference List

1. Boyce JM. Should we vigorously try to contain and control methicillin-resistant *Staphylococcus aureus*? *Infect Control Hosp Epidemiol* 1991; 12(1):46-54.
2. Vincent JL, Bihari DJ, Suter PM, et al. The prevalence of nosocomial infection in intensive care units in Europe. Results of the European Prevalence of Infection in Intensive Care (EPIC) Study. *EPIC International Advisory Committee. JAMA* 1995; 274(8):639-644.
3. Hancox R, Cummins A, Kelsey MC. An outbreak of EMRSA 2 associated with long-term colonization of medical staff. *J Hosp Infect* 1992; 22(2):170-172.
4. Cookson B, Peters B, Webster M, et al. Staff carriage of epidemic methicillin-resistant *Staphylococcus aureus*. *J Clin Microbiol* 1989; 27(7):1471-1476.
5. Cox RA, Conquest C. Strategies for the management of healthcare staff colonized with epidemic methicillin-resistant *Staphylococcus aureus*. *J Hosp Infect* 1997; 35(2):117-127.
6. Cookson BD. Methicillin-resistant *Staphylococcus aureus* in the community: new battlefronts, or are the battles lost? *Infect Control Hosp Epidemiol* 2000; 21(6):398-403.
7. Merrer J, Santoli F, Appere d, et al. "Colonization pressure" and risk of acquisition of methicillin-resistant *Staphylococcus aureus* in a medical intensive care unit. *Infect Control Hosp Epidemiol* 2000; 21(11):718-723.
8. Coello R, Jimenez J, Garcia M, et al. Prospective study of infection, colonization and carriage of methicillin-resistant *Staphylococcus aureus* in an outbreak affecting 990 patients. *Eur J Clin Microbiol Infect Dis* 1994; 13(1):74-81.



The poster is for the 2nd Annual Medical Device Sterilization Forum, presented jointly by the Canadian Standards Association (CSA) and Accreditation Canada. It features logos for both organizations at the top. The main title is "Medical Device Sterilization Forum" with "2nd ANNUAL" above it. Below the title is a photograph of a person in a sterile environment, possibly a hospital, with their hands on a surface. To the right of the photo, it says "Mark your calendars September, 2009 Calgary AB". A green starburst graphic says "PRE-REGISTER by June 15th and SAVE \$100!".

WHO SHOULD ATTEND
Healthcare Managers/ administrators responsible for all aspects of sterile processing: Directors/Managers, Operating Room, Material Management, Medical Device Reprocessing, Infection Control, Risk Management

SPONSORSHIP OPPORTUNITY AVAILABLE
For information please contact 416.747.4299

FOR FORUM UPDATES or TO PRE-REGISTER
CALL: 1-800-463-6777
EMAIL: seminars@csa.ca

For more information visit learningcentre.csa.ca

Presented jointly by CSA and Accreditation Canada, the Forum will provide health care facilities decision-makers and administrators and their reprocessing staff with the knowledge, tools and operational recommendations to help meet accreditation standards for sterile processing departments within their facilities.

Make plans now to have key members of your hospital administration team attend this Forum where key issues, best practices and lessons learned will be discussed and shared by our panel of experts.

HERE'S WHAT ATTENDEES HAD TO SAY ABOUT THE 2008 FORUM

- "As a new SPD Manager I acquired a lot of beneficial knowledge and information"
- "Very well designed, excellent speakers, no wasted time"
- "Great variety of speakers that were experts in their fields"
- "Tough standards and alignment with accreditation... excellent"





Deploying rapid test results

bd.com/hais

■ 8,369 lives were saved by airbag deployment over a 5 year span.* ■

MRSA[†] is a growing concern in hospitals across Canada. In 2005 alone, 11.2% of all *S. aureus* isolates were reported as MRSA.[^] BD GeneOhm™ MRSA Assays help to identify, prevent and control MRSA by deploying rapid nucleic acid-based diagnostic solutions in just 2 hours. Patients carrying MRSA can now be identified on admission. Earlier intervention means preventing MRSA transmission and infection while reducing hospitalization costs. BD is committed to helping control Healthcare Associated Infections (HAIs) through breakthrough technology and innovation. To learn more call: 1-800-268-5430

BD GeneOhm™ MRSA Assay



Diagnosis in just 2 hours



PCR Rapid Molecular Testing



Designed with safety in mind.

*National Centre for Statistics and Analysis †Methicillin-Resistant Staphylococcus Aureus (MRSA) ^Ministry of Health and Long-Term Care BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. © 2009 BD

Influenza vaccination by registered nurses: a personal decision

Pierrynowski Gallant, Donna M,
PhD, RN,

Saint Francis Xavier University
Robinson Vollman, Ardene, PhD, RN,
University of Calgary
Sethi, Sarla, PhD, RN,
University of Calgary

Corresponding author:

Donna M. Pierrynowski Gallant
Saint Francis Xavier University,
School of Nursing
Box 5000, Antigonish, NS B2G 2W5
dgallant@stfx.ca
902-867-3392

ABSTRACT

Influenza is a contagious respiratory virus that causes high rates of morbidity and mortality and is associated with life-threatening complications. Despite the wide availability of a highly effective influenza vaccine, nurses are reluctant to receive influenza vaccination and vaccination rates among them are low. The purpose of this study was to generate a substantive theory/theoretical model regarding the phenomenon of influenza vaccination uptake by registered nurses (RNs). The study used grounded theory to develop a deeper understanding of RNs' decision-making regarding the acceptance or refusal to be vaccinated against influenza in Nova Scotia, Canada. Data were collected from 11 RNs using an unstructured and conversational interview format and analysed using the constant comparative method. The primary finding of this study is that nurses consider getting vaccinated to be a personal decision (the core variable). Their decisions are based on sources of information (including formal education, continuing education and the media); personal knowing (personal philosophy, perceived risks and benefits and personal experience); and personal modifiers (the availability and accessibility of the vaccine). The process of making a personal decision defined in this study provides a framework for creating more effective influenza immunization education and delivery programs.

Key words: influenza; vaccination; decision-making; grounded theory; nursing

INTRODUCTION

Recently, improving influenza vaccine uptake for healthcare providers has been a topic of focus and debate. There is a plethora of literature about why providers accept vaccine and reasons

why they do not. Most involves quantitative studies that have used questionnaires for obtaining data (1-6). We propose that these methods, or possibly the framing of the question, are not providing the insight needed into this issue, as programs for improving uptake rates are minimally effective. Also, no published studies have attempted to develop a substantive middle-range theory that can serve as a guide to understand the decision-making process nurses use when considering whether or not to accept influenza vaccine for themselves.

Significance

Influenza, one of the deadliest viruses of all time (7), is an acute viral disease of the respiratory tract involving fever, headache, myalgia, exhaustion, rhinitis, sore throat, and cough (8). Thirty-two pandemics have occurred since the identification of the disease with three appearing in the last century, in 1918, 1957, and, 1968 (9). Many experts agree that another influenza pandemic is unavoidable and imminent (9).

Providers of healthcare can acquire then transmit influenza to the populations they serve. Skowronski, Parker, and Strang (2000) found that 25% of all healthcare providers in British Columbia were infected with influenza during the winter months, potentially serving as vectors for the spread of disease (10). In response to such data (11-12), the National Advisory Committee on Immunization (NACI) in Canada and the Centers for Disease Control and Prevention (CDC) and the Advisory Committee on Immunization Practices (ACIP) in the United States recommends influenza vaccination of healthcare providers as one means of protecting vulnerable populations.

The statistics available regarding

influenza vaccine uptake by healthcare providers are disconcerting. NACI (2006) states that healthcare providers in hospitals and long-term care facilities show immunization rates of 26% to 61%, respectively (13). A 90% coverage rate is the target of most vaccine programs (13). These low rates are often the result of the failure of the healthcare system to provide the vaccine, as well as healthcare providers' decision not to accept the vaccine (13).

This study focuses on RNs because they are the largest segment of the healthcare workforce, are likely to transmit influenza virus due to their intimate contact with patients, and can be influential in affecting the decisions of others to be vaccinated. Various studies conducted throughout Europe and the United States indicate that RNs are the most reluctant of all health professionals to receive influenza vaccination (3-5, 14-15). Some reasons cited for this reluctance include the nurses' beliefs about the vaccine. Research has indicated that positive patient-physician relationships in which the provider promoted vaccination improved uptake by patients (16). Duclos and Hatcher (1993) found that recommendations by providers to take the influenza vaccine increased vaccination 30-fold in individuals over 65 and increased vaccination in people under 65 by 77 times, underscoring the importance of healthcare providers' attitudes in the education of the public (17). Individuals who considered themselves at risk for disease also had higher rates of vaccination (16).

Because little is known about the processes of deciding whether or not to be vaccinated against influenza, this study addressed the following question: Nurses are eligible to receive the influenza vaccine. How do they make their choice whether or not to be vaccinated?

METHOD

This study was done using a grounded theory method. Grounded theory is an inductive method, influenced by symbolic interactionism and pragmatism, and offers an approach to exploring social processes present in human interactions (18). The participants shared the process by which they made decisions about influenza vaccination and the theoretical model developed in this study is grounded in that data. Ethics approval for this study was received from the University of Calgary Conjoint Health Research Ethics Board. Pseudonyms have been used to protect the identity of the participants.

Setting

The setting for this study was the province of Nova Scotia. The influenza vaccine is offered free of charge to all healthcare providers in this province.

Sampling

Theoretical sampling was used for recruiting the sample for this study. "Theoretical sampling is the process of data collection for generating theory whereby the analyst jointly collects, codes, and analyzes his data and decides what data to collect next and where to find them, in order to develop his theory as it emerges," (19).

For the selection of the first participant, Glaser (1978) suggests that the researcher talks to someone knowledgeable in the field in order to "get a line on relevancies and leads" (19). The first participant for this study was a community health nurse who had over two decades' of experience in nursing, and an outstanding ability to articulate her decisions about vaccination. Participants for subsequent interviews were chosen based on their characteristics and ability to aid in the development of the substantive theory. The intent was to seek maximum variation in order to fully describe the

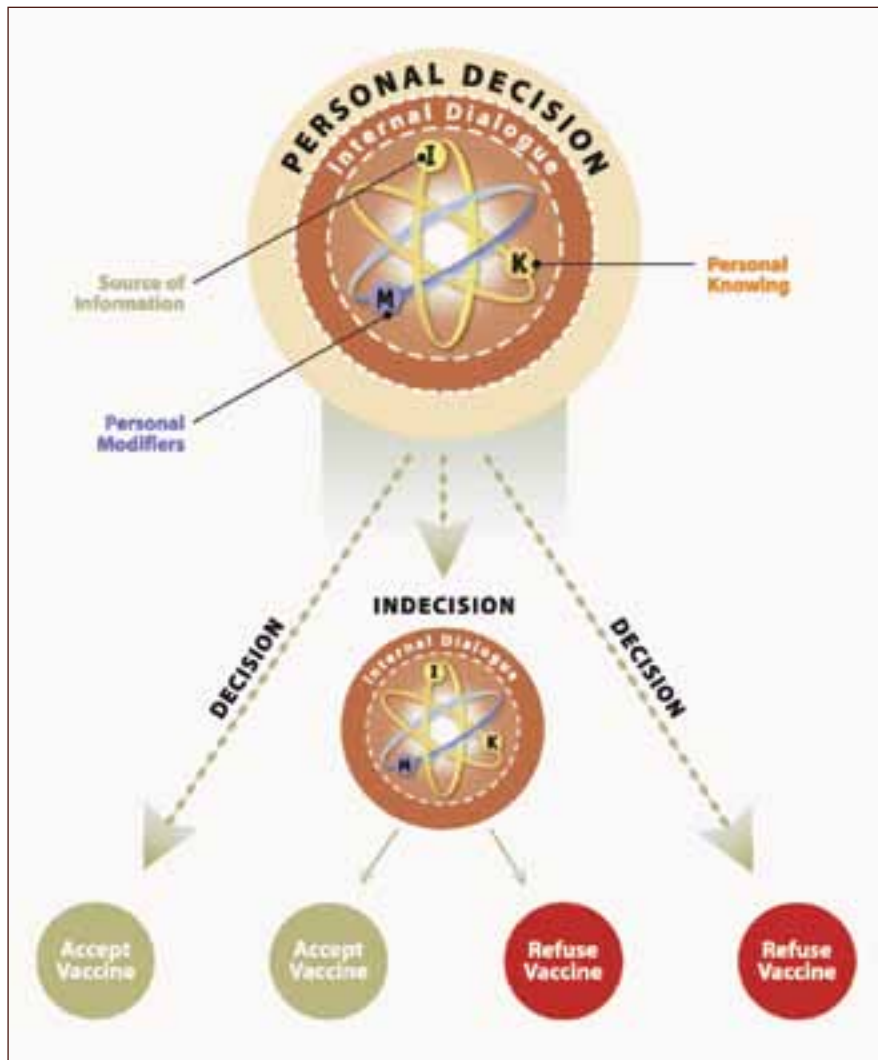
phenomenon of decision-making about influenza vaccination by RNs. The process of theoretical sampling continued until no new concepts were emerging and the theoretical categories were saturated with data.

The final sample consisted of 11 RNs who 1) were registered with the College of Registered Nurses of Nova Scotia; 2) had at least one year of nursing experience; 3) were able to read and write in English; and 4) were willing to participate. The sample consisted of nine females and two males. Their ages ranged from 32 to 64 years. The average age was 47 years. Ten participants were Caucasian and one was Black. Location of residence and work consisted of three main areas in the province that included Halifax, Antigonish, Guysborough and Cape Breton. Participants had varying qualifications including diploma (n=4), baccalaureate (n=4), and master's education (n=3). Years of nursing experience ranged from 3.5 to 35. Nursing employment settings included long-term care, acute care, public health, mental health and education. Of the participants, seven were vaccinated and four were not vaccinated against influenza.

Data collection and analysis

In grounded theory studies data collection and analysis occur simultaneously (19). It is assumed that the researcher does not know in advance what questions to ask because he or she does not know how the interviewee defines the issue. The first few interviews were unstructured and conversational to allow the categories and processes to emerge to ensure that the informant's views are foremost. Each interview began by asking the question "As a registered nurse you are eligible to receive the influenza vaccine free of charge, how do you make the choice whether or not to be vaccinated?" After the analysis of each

Figure 1: Influenza Vaccination: A Personal Decision



interview tentative hypotheses were generated. The emerged hypotheses guided the line of inquiry with the next participant; this is necessary to confirm or discard the hypotheses in order to construct a substantive theory/theoretical model. Questioning becomes more directed as the researcher tries to fill in conceptual gaps and achieves saturation. Field notes and memos were written following each interview. Audio recordings of the interviews were transcribed and then entered into the Atlas.ti™ software data management program.

Analysis of the data was conducted using constant comparative methods, whereby each item of data is compared with every other item of data. This analysis guided further sampling and data collection. Data analysis included

open, selective and theoretical coding. The process started with open coding where the data was read line by line and the information was broken down and analyzed. After all the initial codes were developed, individual codes were placed in categories through selective or second-level coding. This helped to further develop the core category and the properties of the categories. Theoretical codes were then developed to construct categories by asking questions of the data using the 6 C's: causes, contexts, contingencies, consequences, covariance, and conditions (19). Theoretical coding revealed 10 conceptual categories. The process of analysis was enhanced by using memo writing and developing a visual version of the emerging theoretical model.

FINDINGS

The Core Variable: A Personal Decision

The core variable "a personal decision" is reflected in the narratives of the 11 RNs who participated in this study. This decision was considered personal, because no particular governing body or policy mandates influenza vaccines for RNs in the province of Nova Scotia. The participants in this study felt that the decision to accept or refuse the influenza vaccine was their own, even though most of the participants were influenced by outside factors such as the opinions of family and friends and organizational pressures. A stated simply "It is just a personal health choice." E stated that he has never felt "guilted" into getting the vaccine and voiced the hope that other nurses felt the same. "I would hope that others would have enough backbone to make their own decisions."

The content of the interviews revealed that most participants entered into internal dialogue where they considered alternatives, but the amount of consideration given varied among participants. Some had thought about the decision in advance while others made the decision quickly, with little contemplation. Some of the participants went through a process of considering the variables that affected their decision. These variables included their education about the risks and benefits of vaccination, work-place risk, and past experiences. S said:

"In terms of making a decision, I'd say probably the education, and also the awareness that you're not only protecting yourself, you're protecting the people you're caring for, and I think if you're a good nurse, that's why you're there, is to help people, so you wouldn't want to complicate the situation by giving them influenza."

E gave an alternate perspective: "I guess to this point in my life, I haven't given it a whole lot of thought."

The participants who had spent more time in contemplation, or had considered the options in more depth, seemed more set in their decisions. Individuals in the group that accepted

the vaccine would go out of their way to receive the vaccine and were not swayed by barriers to receiving the vaccine. S said, "I would seek it out. If I couldn't get it in one place, I would go somewhere else."

Commitment to accepting the vaccine also had a strong moral component where participants took into account the effects of their actions on relatives and friends. These participants believed that their decisions were best and that no other option was morally justifiable. W said:

*"When it first became available at the hospital, I just thought it was a good thing to do. I don't want to be missing time from work. That was one of my biggest things. I don't want to get the flu... I don't want to pass it on to *, that's another one of my big concerns, with him being diabetic. I don't want to pass it on to people who are vulnerable in the OR."*

Commitment to refuse the influenza vaccine was also evident in some of the narratives. This decision seemed somewhat stable for these participants and information given to them on the benefits of the vaccine was met with resistance. It appeared little could be done to change their decision. As an example, A states it would take a life-altering event, such as being diagnosed with cancer, to change her mind about accepting the vaccine:

"I feel right now, and I guess basically my strongest reason is I feel that I'm able to combat whatever flus that come by...my history has been that I'm very healthy. And that I haven't really had illness, thank God. So, you know, as long as I can continue like that, I will continue not to take the vaccine."

Commitment to refuse or accept the influenza vaccine often followed one of two paths after the decision was made. The decision to accept was often followed by choices including where to receive the vaccine, from whom, and when.

Other participants were aware of the issue of influenza vaccination but exhibited a smaller degree of commitment to the decision.

They tended to vacillate between acceptance and refusal from year to year. This vacillation was often mitigated by circumstances, such as having the vaccine readily available. E illustrates this point: "If it's readily available, I'll probably have it. If it's not readily available, I probably won't have it. I'm lazy, won't go out of my way to go look for someone to stick me with a needle." These decisions may be better labeled as passive because there is no conscious weighing of the alternatives.

Results of this study indicated that decisions about the influenza vaccine were often seen as unimportant and other more pressing life issues were often given more attention. E said "Well, I've got a lot of things on my mind right now that kind of come to the forefront as more important."

The decision to accept or refuse vaccine was often based on what was best for the participant at the time, given the circumstances. J said, "I have to survive now first. I am in a survivor

mode, finish my education, feed my children and then the health promotion things will come. It's not something I give a priority in my life."

Participants with less-defined positions also seemed more receptive to information and were less resistant to changing their decision. Often these participants would question their intent to act during the interview or would request information about the vaccine. J supported that idea: "So how important is this? You educate me. Would you compare it to, the risk associated with influenza, with that associated with tuberculosis?"

It appears that many of the participants, who vacillate between acceptance and refusal, may be experiencing some degree of decision conflict stemming from lack of knowledge, unclear values, social pressure and lack of resources. E said, "In light of things such as SARS and the response throughout the world to those kinds of things, I guess maybe I need to rethink my approach to this stuff."



BioScience Laboratories, Inc.

GLP, GCP, FDA registered laboratory

BioScience Laboratories has been a leader in topical antimicrobial testing in the United States for the last 18 years, performing ASTM, EN, AOAC, and customized test methods. Our active involvement in the development of the new Health Canada guidance document for Human-Use Antiseptic Drugs, gives us the expertise to guide you through the required testing.

**Microbiology - Virology - Clinical Trials
Safety Testing - Disinfectant Testing**

Experience Scientific Expertise with Montana Hospitality

www.BioScienceLabs.com 877-858-2754

Categories

The core variable was supported by three categories: a) sources of information; b) personal knowing; and c) personal modifiers. Subcategories were constructed to capture the multiple dimensions of the processes within each category.

Sources of information

Formal education, continuing education and the media were cited as the sources of information that were most influential in RNs' decisions about the influenza vaccine. Only three out of the 11 nurses stated they had received information about influenza vaccination in their formal educational preparation. A was typical of the participants' experience learning about the influenza vaccine stating, "No. Nothing. Not anything formal." More stated they had learned general immunization principles.

Education programs offered through work seemed to be the most prevalent source of immunization education across all areas of the healthcare sector. Continuing education offered by the provincial Department of Health was viewed as "excellent" and seemed to prompt nurses to reconsider their decisions about the importance of the influenza vaccine. S:

"Now I had separate things through my workplace, because I worked with an elderly population, so there was a real push from the health department for influenza vaccine, especially the last couple of years. I went to a half-day workshop put on by the Department of Health, which was excellent...so, because of that, I think, it made me really consider it again."

The Medical Officer of Health of one District Health Authority was considered an authority about influenza vaccine. C:

"I think it's important to walk the talk and talk the walk. I also think that if you have a champion that's willing to go the extra mile, like Dr. X, he has done a tremendous amount of work, promoting the vaccine. He gets all the other MOHs on board to participate."

Continuing education developed and presented by individual institutions seemed to have a smaller degree of

influence over the participating RNs' decision to accept or refuse the influenza vaccine. Dissemination of influenza information as provided by the media was described with ambivalence. Some described the media as an important vehicle for information dissemination; others believed the media provided misinformation.

Personal knowing

The second category, *personal knowing*, includes personal philosophy, perceived risk to self and others, and personal experiences. One component of personal knowing is the RN's philosophy of how health and illness are viewed. Most nurses placed value on individual and aggregate models of healthcare; few considered the health of the population when deciding whether or not to have an influenza vaccination. C:

"I think oftentimes vaccines are seen as a task in delivering and I need to get the vaccine to the arms and it's not really the big picture view of what you're seeing in terms of from an outcome perspective or from a coverage perspective or the health of the population."

Some nurses consider the ethics of beneficence, the activity of benefiting others, to be central in the decision to vaccinate; others considered the ethic of autonomy. Some RNs who view vaccination from an individual perspective feel that they are not a risk to others. A, who works in mental health, stated that she did not consider others because she is healthy and her patients not high risk:

"I don't think I am a threat to others based on my history, I have been very well. As I say, if I had it once or twice in my life, that would be different. So I really don't think that I am a threat to anybody. Also, the patients that we have are for the most part physically fit. Generally the people that we have are not medically or seriously compromised at the time we're working with them."

C believes that many nurses underestimate the protective value of the vaccine in safeguarding patients from the influenza virus.

"I know that I'm a carrier to other people who are very vulnerable, and I think that if I'm going to be in that workplace, it's my responsibility to try and protect those people as their caregiver. Because a lot of what you hear is, oh, either I never get the flu or I had the flu and it wasn't that bad. They don't realize the protective value for other people having it."

Perception of risk refers to nurses' understanding of adverse effects of influenza vaccination. Perceived risk is linked to factors including the nurse's age, place of employment, perceived seriousness of the disease and the science of the vaccine. Perception of risk seemed to influence on a participant's decision to accept or refuse the influenza vaccine.

The final component in this category is personal experience. Factors that contributed to the decision to accept or refuse the influenza vaccine included: 1) age; 2) stories from family members; 3) work life experiences; 4) experiencing the side effects of the vaccine; and 5) suffering from influenza or chronic disease.

Personal modifiers

Some participants were less committed to either accepting or refusing the vaccine. These RNs were heavily influenced by the availability and accessibility of the vaccine. Less committed participants cited convenience, incentives and seeing their colleagues or nurse manager receive the vaccine as influencing their decision. For example, M said:

"Convenience is probably my big thing this year; I didn't get it this year because I wasn't in a healthcare facility. They say, go to public health...And, no, it was inconvenient, to be honest, you know, to go over and get it. If they had it on site, closer, I wouldn't think about it."

C states that seeing co-workers receive the vaccine provides incentives for others:

"Well, sometimes seeing their co-workers do it. And having someone that they know go with them, or seeing somebody that they thought would

Continued on page 24

SUPERVISION



A CRITICAL STEP IN COUNTLESS PROCEDURES STARTS WITH LOCATING A VEIN. SOMETIMES, DESPITE YOUR PROFICIENCY AND SKILL, DOING SO CAN BE A FRUSTRATING TASK. BUT WITH VEINVIEWER, YOU HAVE A PARTNER TO A BETTER WAY.



THE VEINVIEWER IMAGING SYSTEM IS A REVOLUTIONARY, HANDS-FREE MEDICAL DEVICE THAT INCREASES YOUR SUCCESS OF FINDING THE VEIN ON THE FIRST ATTEMPT. A REAL-TIME IMAGE IS PROJECTED DIRECTLY ONTO THE SKIN, ALLOWING YOU TO CONFIRM THE OPTIMAL VENOUS ACCESS SITE.

NURSES ARE ON THE FRONT LINE OF PATIENT ADVOCACY. COMMITTED TO FINDING NEW METHODS OF ENHANCING THE LIVES OF THOSE IN THEIR CARE. WITH A "FIRST STICK" SUCCESS RATE TWO TIMES THAT OF TRADITIONAL METHODS*, VEINVIEWER BY LUMINETX® IS LIGHTING THE WAY TO BETTER PATIENT CARE. ASK FOR VEINVIEWER BY NAME AND SEE WHAT THOUSANDS OF CLINICIANS AND PATIENTS HAVE SEEN. A BETTER WAY™



DISTRIBUTED BY:

 **CAREstream**
Medical Ltd.

TEL: 1-888-310-2186 FAX: 1-888-310-2187
WWW.CARESTREAM.COM

WWW.VEINVIEWER.COM

VeinViewer 
by Luminetx

*Hess H. The Effect of a Near-Infrared Light Vein Viewing Device on the Venipuncture Success Rate in Pediatric Patients. Wolfson Children's Hospital, Jacksonville, FL 2007-2008.



never have it, seeing them in the chair receiving their vaccine, she does it, maybe it's not so bad... But if they can see that the 15 other people that had it, had no problem with it, then they, it starts to kind of break down the fears a little bit."

Availability and accessibility are not important indicators for nurses who have already made the commitment to accept the influenza vaccine for themselves. They will actively seek out opportunities to receive the vaccine.

Personal decision-making model

The theoretical model that emerged from this study is entitled *Influenza Vaccination: A Personal Decision*. The core variable "personal decision-making" is supported by the three categories labeled a) sources of information b) personal knowing; and c) personal modifiers. See Figure 1.

DISCUSSION

This study revealed that the decision to accept or refuse the influenza vaccine is affected by a complex interplay of cognitive, emotional and social interactions and is shaped by contextual factors among the nurse, other health-care providers, peers and organizational structures.

In the initial phases of the decision-making process, the nurse considers a multitude of factors (sources of information, personal knowing and personal modifiers) that affect the decision to accept or refuse vaccine. At that point, the nurse consciously or subconsciously weighs the pros and cons of accepting or refusing the influenza vaccine through an internal dialogue or "self talk". For instance, the nurse may wonder, "Have I been convinced by the information I have received?" or "What are my past experiences and how does this affect my present knowledge and beliefs?" and "Is the vaccine available and accessible?" According to Arnold and Boggs (2003) self talk is a cognitive process that produces thoughts, which then lead to feelings about a particular situation (20). It is important to note that in the internal dialogue there is reciprocity among sources of information, personal knowing and personal modifiers.

Figure 1 illustrates this phenomenon, indicating the circular nature of the interaction among the categories.

This internal dialogue may result in three outcomes: 1) accepting the vaccine; 2) refusing the vaccine; or 3) remaining undecided. Those who accept go through another decision process as they consider where, from whom, and when to receive the vaccine. Some then are committed to their decision; others not. Janis and Mann (1977) state that "the higher the degree of commitment... the greater the decision maker's resistance to any challenging event or communication that is capable of making him momentarily regret his decision" (21).

In this study most RNs who refused the vaccine or vacillated between acceptance and refusal cited lack of personal risk as a reason for their decision (22). If personal risk was an issue or a situation occurred that placed the participant at higher risk, reconsideration of the decision to accept would occur. For instance, if a participant's health deteriorated (perhaps several bouts of flu or pneumonia) or the participant was working in an area where flu was prevalent, then reconsidering the vaccine might become an option for someone. The degree of personal risk was also linked to nurses' moral perspective on uptake of the influenza vaccine. Where risk to self or others was thought to be high, nurses would engage in a reasoning process based on their ethical values and professional obligations. Janis and Mann (1977) described the concept of "moral decision-making states" (21). Once an individual realizes someone requires aid and there is an obvious way that help can be initiated, the individual takes action without considering other alternatives. This was evident for some of the participants in the study, particularly those who worked with the vulnerable elderly or had family members living with a chronic illness. Further, Janis and Mann (1977) say when a decision-maker does not accept responsibility or is otherwise engaged in another person's problem, he is not likely to use moral reasoning as a decision rule (21). The greater the responsibility felt, the greater the

chance a person will follow a normative prescription of offering assistance (21).

Nurses who remain undecided are frequently not personally engaged in the issue. So many issues compete for the RNs limited time and attention that someone may know about a health concern without seriously considering if they need to do something about it (22). Many participants stated they had no time to obtain the vaccine or had not given the subject much thought. As a consequence, they did not form definite opinions on getting the influenza vaccine. Many authors agree that individuals who have not formed a definite opinion about an issue are more likely to be persuaded by others to accept health behaviour (23-24). Thus it is appropriate to aim interventions at RNs who are undecided.

RNs who showed a lack of commitment to their decision had not spent much time considering the influenza vaccine. They tended to vacillate between acceptance and refusal from year to year. This vacillation was prompted by one's source of information, personal knowing, and personal modifiers. The most notable effect was from the "personal modifiers" at the workplace, which either facilitated or discouraged vaccination, independent of intention (25). Triandis describes "facilitating conditions" as the characteristics of an individual (knowledge or ability) or the environment that make it easier or more difficult to perform a behaviour, independent of a person's intention. Facilitating conditions moderate the effect of intention on behaviour (25) particularly for participants who fluctuate between acceptance and refusal and those who make a passive decision to accept the influenza vaccine, or do not consciously weigh out the pros and cons of the decision. Making the vaccine readily accessible at the workplace may facilitate these individuals receiving the vaccine.

Decisional conflict was also evident in the group of participants who vacillated between acceptance and refusal of the vaccine. Decisional conflict is the uncertainty about which course of

Continued on page 26

Isolation Unit - ISO

Isolation room

This unit is designed for moving items required to protect the patient, as well as staff and visitors. The unit is placed in the corridor near the door of an isolation room. Its casters enable the unit to be tilted and moved easily from one room to another.

It's very practical !

It takes up very little space, only 16" in depth, and can easily stand against the wall of any corridor

16"

The isolation unit model "ISO" has been designed on the same lines as the very popular model "B".

The unit may be customized to accept any kind of product or accessories required.



"I'm really satisfied with your isolation units, and I must say I've made some other people jealous..."

"The staff is really happy with our new acquisition."

"It's much more practical."


Medic Acces 

For more information, contact Medic Acces at 450-602-1556 or visit www.medicacces.com

Nancy McMullen
Head of UCD department and liaison with
CSSS Vallée-de-la-Gatineau

action to take when choice among competing actions involves risk, loss, regret or challenge to personal life values (26). In this study uncertainty or conflict stemmed from a challenge to personal values, lack of knowledge about the influenza vaccine and lack of resources in terms of availability and accessibility, suggesting employers could offer decision support to individuals experiencing decisional conflict to help them make an effective and timely decision.

CONCLUSION

This study provides a theoretical model that reflects the many facets of a nurse's decision to accept or refuse the influenza vaccine. The study findings can be used to understand the context in which nurses make decisions about getting influenza vaccine. In particular, the data generated has highlighted the decision-making process nurses use and illuminates the many factors that contribute to the adoption or refusal of the influenza vaccine. This knowledge provides a framework for creating more effective influenza immunization education and delivery programs. A multiple-intervention, socio-ecological approach offers an expansive framework for understanding and modifying the range of social and environmental factors that shape nurses' decision-making. 

References

1. Begue R, Gee S. Improving influenza immunization among health-care workers. *Infect Control Hosp Epidemiol* 1998; 19(7): 518-520.
2. Christian M. Influenza and hepatitis B vaccine acceptance: A survey of health care workers. *Am J Infect Control* 1991; 19(4):177-184.
3. Harbarth S, Siegrist C, Schira J, Wunderli W, Pittet D. Influenza immunization: Improving compliance of health-care workers. *Infect Control Hosp Epidemiol* 1998; 19(5): 337-342.
4. Nichol K, Hauge M. Influenza vaccination of health-care workers. *Infect Control Hosp Epidemiol* 1997; 18:189-194.
5. Pachucki C, Lentino J, Jackson G. Attitudes and behaviour of health-care personnel regarding the use and efficacy of influenza vaccine. *J Infect Dis* 1985; 151(6): 1170-1171.
6. N, Aoki F. Influenza immunization: Knowledge, attitude and behaviour of health-care workers. *Can J Infect Control* 1994; 9(4):103-108.
7. World Health Organization. Influenza (fact sheet No 211). 2003: <http://www.who.int/mediacentre/factsheets/fs211/en/>
8. Heymann, D. Control of communicable diseases manual (17th ed.). Washington, DC: American Public Health Association. 2004: 270-276.
9. World Health Organization. Ten things you need to know about pandemic influenza. 2005: <http://www.who.int/csr/disease/influenza/pandemic10things/en/index.html>
10. Skowronski D, Parker R, Strang R. The importance of influenza immunization for health-care workers. *BCM J* 2000; 42(2): 91-93.
11. Nguyen-Van Tam J, Granfield R, Pearson J, Fleming D, Keating N. Do influenza epidemics affect patterns of sickness absence among British hospital staff? *Infect Control Hosp Epidemiol* 1999; 20:691-694.
12. Potter J, Stott D, Roberts M. Influenza vaccination of health-care workers in long term care hospitals reduce the mortality of elderly patients. *J Infect Dis* 1997; 175: 1-6.
13. National Advisory Committee for Immunization. Statement of influenza vaccination for the 2006-2007 season. *Can Commun Dis Rep* 2006; 32(ACS-7):1-28.
14. Qureshi A, Hughes N, Murphy E, Primrose W. Factors influencing uptake of influenza vaccination among hospital based health care workers. *Occup Med* 2004; 54: 197-201.
15. O'Rourke C, Bourke W, Bedford D. Uptake of influenza vaccine by health care workers in an acute hospital in Ireland. *Ir Med J* 2003; 96(7). http://www.imj.ie/news_detail.php?nNewsId=2769&nVo1Id=104.
16. Gene J, Espinola A, Cabezas C, et al. Do knowledge and attitudes about influenza and its immunization affect the likelihood of obtaining immunization? *Fam Pract Res J* 1992; 12(1): 61- 73.
17. Duclos P, Hatcher J. Epidemiology of influenza vaccination in Canada. *Can J Public Health* 1993; 84(5): 311-315.
18. Streubert H, Carpenter D. Qualitative research in nursing: Advancing the humanistic imperative (2nd ed.). Philadelphia: Lippincott Williams & Wilkins. 1999.
19. Glaser B. Theoretical sensitivity. Mill Valley, CA: Sociology Press. 1978: 36-80.
20. Arnold E, Boggs K. Interpersonal relationships: Professional communication skills for nurses. Saunders: Elsevier Science. 2003: 96.
21. Janis I, Mann L. Decision making: A psychological analysis of conflict, choice and commitment. New York: The Free Press. 1977
22. Weinstein N, Sandman P, Klotz M. Public response to the risk from radon 1986. New Jersey: Environmental Communications Research Program, Rutgers University: 1987.
23. Anderson C. Abstract and concrete data in the perseverance of social theories: When weak data lead to unshakeable beliefs. *J Exp Psychol* 1983; 19: 93-108.
24. Ditto P, Lopez D. Motivated scepticism: Use of differential decision criteria for preferred and nonpreferred conclusions. *J Pers Soc Psychol* 1992; 63: 568-584.
25. Triandis, H. Values, attitudes and interpersonal behaviour. *Nebr Symp Motiv* 1980; 27: 195-259.
26. O'Connor AM, Tugwell P, Wells, GA et al. A decision aid for women considering hormone therapy after menopause. Decision support framework and evaluation. *Patient Education Counselling* 1998; 33: 267-279.



the next
generation
of sterility assurance
is here.

Introducing the new Class 6 Verify® SixCess™ Challenge Packs and Indicators

- › **Reduce the wait:** immediate release of all loads
- › **Reduce the risk:** eliminate "blind" release
- › **Reduce the work:** no readers or incubation required

For more information, contact STERIS Canada Inc.
at 1.800.661.3937 or visit www.steris.com



Buea Town: water, sanitation, Millennium Development Goals, and local realities in Cameroon

Jacob Nkwan,
Department of Nursing,
Faculty of Health Science,
University of Buea,
Cameroon

INTRODUCTION

Every year in Africa there are 1.7 million deaths related to unsafe water, sanitation and hygiene, mainly through infectious diarrhea. Water is a resource we can't live without, but it is a resource that is so limited, especially in developing countries. That is why in 1992 the United Nations Conference on Environment and Development established World Water Day. The fact that provision of safe drinking water was added to the eight components of Primary Health Care policy found in the Alma Ata in 1978 is an indication that the scarcity of safe drinking water has been a problem for more than 40 years.

Global warming is a further threat to water and food sufficiency. Increased temperatures alter seasons and vegetation; reduce rainfall, therefore reducing streams and rivers. The current food crisis all over the world, including Cameroon, is just a warning that bad days lie ahead. Much has been said about global warming in Cameroon but very little is being done.

Today many families in Cameroon cannot afford a meal on their tables each day. Prices of basic food commodities are skyrocketing every day. A bag of rice that used to be sold at \$28 two years ago now sells for \$46. According to the World Health Organization (WHO), six in 10 Africans remain without access to proper toileting facilities, while poor sanitation threatens public health. According to Ann Veneman, nearly 40% of the world's population are denied access to toileting facilities, as well as the dignity and security they provide.

Dr. Margret Chan states that, "Sanitation is a cornerstone of public health." Improved sanitation contributes enormously to human health and wellbeing. The absence of adequate sanitation has a serious impact on health and social development. Poor personal hygiene, sanitation, and contamination

of water sources, especially with human waste, are thought to be the main causes of diarrheal diseases and schistosomiasis in developing countries. Just like Zimbabwe in August 2008, outbreaks of cholera due to contamination of water sources are reported frequently in developing countries like Cameroon, which has recorded many of such outbreaks in the past five years.

BACKGROUND

According to a 2004 Demographic Health Survey, the population of Cameroon has been estimated at 18 million. As in other developing countries, 80% of the population was thought to live in rural areas. However, for the past decade, the township population has increased alarmingly due to rural exodus, creation of institutions of higher learning, along with many other reasons.

According to an unpublished report from the Ministry of Health, only 23% of the population in urban areas has access to good potable water and less than 10% in rural areas. In addition, less than 30% of the urban population has access to acceptable toileting facilities. Though the situation is worse in rural areas, the health impact is greater in urban areas due to population pressures, and poor waste disposal practices. For example, a spring in the rural areas is less contaminated than one in urban areas.

The situation in Buea Town

Buea Town is the regional capital of the South West Region of the Republic of Cameroon. It is located at the foot of Mount Cameroon, approximately a 60-minute drive from the west coast chief town of Douala. It is an evolving town with a population of roughly 120,000. This number has increased from less than 40,000 people before 1993. The alarming population increase is not matched by increase in basic resources like water and electricity. Though situated

between many large rivers which can be utilized for domestic use, little or nothing is being done to improve the situation. People experience electricity and water shortage on a daily basis, with water shortage being more detrimental because it has no substitute and its vital role in the maintenance of life.

Water shortages in developing countries such as Buea and other towns in Cameroon is a very chronic problem. Many peoples' homes do not have water. Even those who have water piped into their homes sometimes go for weeks without it due to shortages. The result of the water shortage is overcrowding at public taps, which usually ends up in quarrelling, fighting and breaking of buckets due to population pressure. In order to fetch water, students, children,

and women spend long precious hours at the taps, usually late in the night or early in the morning. They are exposed to mosquito bites and cold temperatures which lead to increased risk for malaria and respiratory tract infections.

Those who can afford vehicles cover many miles with their cars to fetch water in nearby communities. Those who are without access to automobiles simply carry water from contaminated nearby streams, which are also used for laundry, gardening, bathing, dumping of wastes, and sometimes defecation.

Ironically, in a community like Molyko where water shortage is so chronic, 90% of the toilets are water systems. When people do not have water to flush their toilets they simply defecate in nearby streams, or on the ground, where it is

eventually washed in to the streams when it rains. Some households use buckets to flush their toilets, while others continue to use their dry toilets until they have water to flush. All of which are serious threats to health.


The absence of a proper functioning waste management plan has made things worse. Waste disposal practices are very poor. Most households dispose of household waste on the surrounding streets, streams, and water runways.

The situation in Buea is a true reflection of what is showcased in other towns in Cameroon.

In schools

The situation in schools is the same as in households. Unfortunately, many schools have no functioning water systems. The toilets remain closed most of the times, especially during the dry season (January to March), due to lack of water. Sometimes even during the rainy season the taps are very unpredictable.

CONCLUSION

Much has been done but much still needs to be done in Cameroon. Considering the situation, and being 60% of the way into the Millennium Developmental Goal (MDG) (2000-2015) while also being a few months away from celebrating World Water Day, it is clear we are lagging behind. Improving sanitation facilities and promoting proper hygiene in schools increase both the learning and health of children. Increasing investments aimed at improving access to water and sanitation, involvement of local communities in project identification, need assessment and management will help to progress toward the MDG and alleviate suffering of the rural masses in Cameroon. 

References:

Alma Ata Declaration 1978

Ann M. Veneman,
UNICEF Executive Director.

2008 WHO/UNICEF
Joint Monitoring Programme
for Water Supply and Sanitation

Dr Margaret Chan,
WHO's Director-General

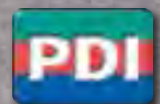
Community as partner, Theory
and Practice, by T. Anderson, 1996



Photo courtesy of: Water For People



**From patient
to patient...
We can make
a difference.**



OUR PASSION IS PREVENTION™

Learn more at pdipdi.com or call 1-800-999-6423

© 2009 Professional Disposables International, Inc. ISO 9001:2000 Certified
Sani-Hands® ALC is a registered trademark of Professional Disposables International, Inc.

2009 Conference Sponsors
(at time of printing)

- Platinum: 3M, BD, Ecolab
Gold: Baxter, Virox
Silver: Vernacare
Bronze: Cardinal Health
Sponsor: Provincial Infection Control Network (BC)
Supporter: Draeger, Getinge, Überloo, Les entreprises Solumed – A 3M Company



2009
NATIONAL
EDUCATION
CONFERENCE

MAY 9-14, ST. JOHN'S, NEWFOUNDLAND



Online registration now available! www.chica.org

How you can influence the CHICA-Canada National Education Conference

Many voices are guiding CHICA-Canada. Yours is one of them.

CHICA-Canada has appointed a National Scientific Program Committee to plan the education sessions of the annual conference. The 2007 national conference was the first conference for which the education sessions were developed by a committee made up of CHICA-Canada members from across Canada. The CHICA-Canada Scientific Program Committee members represent community, long-term care, acute care, and microbiologists/infectious disease physicians, and include representatives from the local chapter and board. As of 2011, the committee will include one member-at-large, chosen from CHICA chapters in rotation. One way to have a voice in conference planning is to participate as a member of the National Scientific Program Committee. Committee members are all volunteers and appointed by the board of CHICA-Canada after an application process. An application to participate on the 2011 Scientific Program Committee is on page 73.

Conference attendees can have a great influence on conferences of the future. All conferences have evaluations for attendees to indicate what they liked, disliked, and suggestions for the future. It may be hard to believe, but the committee and the Conference Planner read all of these, compile the comments and suggestions, and discuss the merits of each. Suggested topics will be explored by the committee for possible inclusion in an upcoming conference. In addition, feedback is sent to the

speakers so they can learn and improve their education sessions. Scientific program planning for both the 2009 conference in St. John's and the 2010 conference in Vancouver commenced with the evaluations from previous conferences.

Your voice is powerful, yet we only receive 10-15% of evaluations back. We hope that sharing how future conferences are planned will help all conference attendees appreciate they have a voice in this planning. Let us hear that voice.

In addition, conference attendees play a large role in rewarding the authors of the best poster and best oral presentations. These two awards are presented each year at the end of the conference. We would especially like to thank Les enterprises Solumed – A 3M Company for providing the annual prize for best oral presentation. The Abstract Selection Committee identifies which abstracts are selected for oral or poster presentation but the winners, both for the best oral presentation and for the best poster, are determined by your votes.

We need you to do a bit of work for us: VOTE! Different methods of voting will be used for the oral sessions and the poster presentations. All voters will be entered in a draw for a participation prize, to encourage all conference attendees to vote for their favourite presentations.

Your Scientific Program Committee is looking at new ways to get feedback on the oral presentations that will allow the best



presentation to stand out. This is a difficult process as an attendee cannot get to all oral presentations; at the 2009 conference there will be four different sessions of oral presentations occurring at the same time, on both Tuesday and Wednesday of the conference. This is a result of the increase in submissions of excellent abstracts. Understanding that dilemma, the committee has developed a rating system, where you would evaluate each oral presentation that you attend on a fixed-point scale. The oral sessions will all be listed on a form to make it easier for you to rate the presentations you attend; hand in the form at the end of the last oral presentation sessions (Wednesday, May 13). Each speaker then receives a score, and the speaker with the overall highest average score would win the Solumed Oral Presentation prize.

To vote for best poster presentation, rather than rating each poster, we are asking attendees to fill out a card identifying the best poster presentation they experience. The poster with the most votes will win the award. Please read over the abstracts in this journal (abstracts are also posted to www.chica.org). Mark those abstracts that catch your attention, either because of the subject matter, or the innovations discussed. Poster viewing time is limited because of our busy program, so you need to plan your time at the poster sessions carefully. Posters will be arranged numerically so you can find the ones that interested you quickly. Spend time with the author who will be present at the poster during scheduled times. The presentation schedule for Tuesday and Wednesday will be posted to www.chica.org shortly before the conference and will also be in the on-site program. Use your own rating criteria (e.g., relevance to you, clarity of presentation,

lessons learned), so you can fill out your ballot card with your favourite poster. Hours of work go into preparing these posters, and the extra time you spend both in this analysis and voting help our entire organization.

At the St. John's conference, each member of the Scientific Program Committee will be identified by a ribbon on their name tag. Stop us to have a chat and offer suggestions. All of us work on two consecutive conferences so your voice will be heard.

The annual CHICA-Canada Conference is gaining an international reputation as one of the finest venues for infection prevention and control education. This is your annual conference, your opportunity to meet with your peers and experts in the field of infection prevention and control. It is also the chance for your voice to shape future conferences. Give us your feedback on this year's conference, and vote for your favourite oral and poster presentations!

Jim Gauthier, MLT, CIC
 Donna Moralejo, PhD
 Gerry Hansen, BA

Jim is the Scientific Program Committee Co-chair for the 2009 conference, and the Scientific Program Chair of 2010.

Donna is the Scientific Program Committee Chair for the 2009 conference and is CHICA-Canada's Director of Education.

Gerry is the Executive Administrator and Conference Planner for CHICA-Canada.

DISINFECTORS
 A full range to suit your needs

ARJOHUNTLEIGH

Suit your infection control goals, your space, and your budget.

Reduce splatter, outbreak & cost. Improve your quality of care.

Infection control...with people in mind

ArjoHuntleigh Canada Inc. • (T) 800.655.4831
 info@arjo.ca • www.ArjoHuntleigh.com

Ask us about the AMIGO our new top load disinfectors

Annual General Meeting

NOTICE IS HEREBY SERVED that the Annual General Meeting of the Community and Hospital Infection Control Association – Canada will be held on Thursday, May 14, 2009 at the Delta St. John's, St. John's NL, 0700 hrs. A Town Hall meeting will be held immediately following the Annual General Meeting. CHICA-Canada members must register and pick up voting card before entering the AGM.



Solumed Oral Presentation Award

CHICA-Canada and Les entreprises Solumed are pleased to announce the formation of the Solumed Oral Presentation Award. The award for Best Oral Presentation, as chosen by attendees of the 2009 Education Conference, will be presented a prize of \$1,000 at the conference closing ceremonies.

SOLUMED
a 3M Canada Company



STEVENS

"Where service is a commitment"



Est 1874

Providing CS Products and Services in Canada since the day your CS Department opened.

3M Innovation

BURNISHINE[®]
PRODUCTS

TimeMed[®]

MEIKO

WIPAK MEDICAL

Pharmax

ARJOWIGGINS
VIROX
TECHNOLOGIES INC.

Ontario

425 Railside Drive
Brampton, Ontario L7A 0N8
Tel (905) 791-8600
Toll free 1-800-268-0184
Fax (905) 791-6143
Toll free fax (866) 222-3317

Manitoba/NW Ontario

38 Terracon Place
Winnipeg, Manitoba R2J 4G7
Tel (905) 791-8600
Toll free 1-800-268-0184
Fax (905) 791-6143
Toll free fax (866) 222-3317

Alberta/Sask

2620 - 61st Avenue S.E.
Calgary, Alberta T2C 4V2
Tel (403) 640-2858
Toll free 1-800-665-0368
Fax (403) 640-2976

British Columbia

8188 Swenson Way
Delta, B.C. V4G 1J6
Tel (604) 634-3088
Toll free 1-800-565-8444
Fax (604) 585-0193

Nova Scotia

50 Troop Avenue,
Unit 200, Burnside Industrial Park
Dartmouth, N.S. B3B 1Z1
Tel (902)-468-7582
Toll free 1-800-565-0765
Fax (902)-468-7824

DERMA PRENE®

Our family of latex-free surgical gloves protects against latex allergies and offers a chemical accelerator-free alternative.

Ansell is the only major surgical glove manufacturer that offers surgical gloves that protect against both Type I and Type IV allergies.

Introducing our newest latex-free, powder-free surgical glove, **Derma Prene® IsoTouch™** and **Derma Prene® IsoTouch™ Micro**. Ansell's polyisoprene formulation provides the same comfort, fit and feel as natural latex rubber and provides protection against Type I latex allergy.

Be ultra safe with Ansell's latex-free and accelerator-free surgical glove, **Derma Prene® Ultra**. Ansell's neoprene formulation contains no chemical accelerators, eliminating the risk of both Type I and Type IV allergies.

And our latex-free surgical gloves have our SureFit Technology—an Ansell exclusive! They're simply the best latex-free surgical gloves in the market.

For samples and more details, contact Ansell Customer Service at infoclientcanada@ansell.com or 1 800 363-8340



Ansell

4th ANNUAL RUN FOR IFIC

— Fun 5Km RUN and 2.5Km WALK



Monday, May 11, 2009 – 6:30 a.m.

(No rain date)

Starting Point and Route to be announced

Hosted by CHICA Newfoundland Labrador

In support of the IFIC* Scholarship fund

*International Federation of Infection Control

Please help support IFIC in its effort to support Infection Prevention and Control Professionals. Collect sponsors and then come and run or walk with us on a picturesque route through St Johns. Registration will be at the Delta St. Johns (look for the CHICA Newfoundland Labrador booth near the Registration area). Starting point and route to be announced.

The 2009 Run or Walk for Fun is in aid of the International Federation of Infection Control Scholarship Fund which assists Infection Control Professionals from under-funded or under-resourced countries to attend the annual IFIC education meeting.

Prizes will be awarded for fastest male and female, and fastest ICP and M.D. There will also be a prize for the person who raises the most sponsorship dollars. Help us reach our goal of \$2,500.00.

Entry fee and sponsorship will be paid at the conference. Do not send with your conference registration. The cost is 25\$ for runners and walkers. All participants will receive a race t-shirt.

When collecting sponsorship for your run or walk, please present the total sponsorship by way of a cheque made payable to CHICA-Canada. Sponsorship monies and sign up forms will be collected at race registration. A sponsorship form is attached. Sponsors will be provided with a charitable receipt from CHICA-Canada.

Participants will be required to sign a liability waived at time of registration. Medical assistance and water will be available en route. Participants are responsible for ensuring their own health and safety while on this run.

For more information, contact CHICA-Canada

Telephone 1-866-999-7111 or email chicacanada@mts.net

This event is approved by the City of Montreal and adheres to all City by-laws.

THANK YOU FOR YOUR SUPPORT!

Name of Runner _____

Telephone Number _____

NAME (Please Print)	ADDRESS	TELEPHONE	PLEDGE	PAID

Community and Hospital Infection Control Association – Canada
 Association pour la prévention des infections à l’hôpital et dans la communauté – Canada

PO Box 46125 RPO Westdale, Winnipeg MB R3R 3S3
 Courier Address only: 67 Bergman Crescent, Winnipeg MB R3R 1Y9
 Telephone: 1-204-897-5990/1-866-999-7111 Fax: 1-204-895-9595
 Email: chicacanada@mts.net <http://www.chica.org>
 CHICA-Canada Charitable # 11883 3201 RR0001

ActiFlo

Indwelling Bowel Catheter



Reliable Protection Starts Here



Fecal incontinence is a significant problem in the critical care setting, where it can expose patients and clinicians to potentially infectious stool, lead to pressure ulcers, and contribute to economic burden.

In an independent study, combined mean bed linen and dressing changes due to fecal incontinence were reduced 79% when using the ActiFlo Indwelling Bowel Catheter.¹

Reliable protection helps improve patient outcomes.

For more information, contact your Hollister sales representative today or visit www.Hollister-ActiFlo.com.



Attention to Detail. Attention to Life.

Caution: Federal (USA) law restricts this device to sale by or on the order of a physician. Prior to using the ActiFlo Indwelling Bowel Catheter System, be sure to read the entire ActiFlo Indwelling Bowel Catheter System Instructions for Use package insert supplied with the product for device Intended Use, Description, Contraindications, Warnings, Precautions, Adverse Events, and Instructions For Use.

1. Keshava A, Renwick A, Stewart P, Pilley A. A nonsurgical means of fecal diversion: the Zassi Bowel Management System. *Dis Colon Rectum*. 2007; 50:1017-1022.

Hollister and logo, ActiFlo and "Attention to Detail. Attention to Life." are trademarks of Hollister Incorporated. Covered under one or more of the following patents: US Patents 5569216, 7147627, Australian Patents 2003207608, 2000274575, Canadian Patent 2421405 and other patents pending.

© Copyright 2009, Hollister Incorporated.

INTRODUCING !!! A COMPACT LOW TEMPERATURE STERILIZER

MEETING THE UNIQUE NEEDS OF
HOSPITALS AND CLINICS



STERRAD[®] NX[™] Sterilization System

With over 230 **STERRAD[®]** sterilizers installed across Canada, **ADVANCED STERILIZATION PRODUCTS**, a unit of Johnson & Johnson Medical Products is pleased to present the **STERRAD[®] NX[™]**.

Equipped with the same patented low temperature sterilization technology for heat and moisture sensitive items such as flexible endoscopes and rigid telescopes, the compact **STERRAD[®] NX[™]** also allows for portability at a fraction of the price. The **STERRAD[®] NX[™]** is fast and delivers wrapped, sterilized product in less than 40 minutes with no health risk to your staff or harmful emissions into the environment.

The Time Has Come. Low temperature sterilization can be
FAST, EASY, SAFE, PORTABLE and **AFFORDABLE**, all at the same time.

**FOR MORE INFORMATION ON THE STERRAD[®] NX[™]
PLEASE CONTACT YOUR ASP REPRESENTATIVE**

ASP ADVANCED STERILIZATION PRODUCTS

Western/Atlantic Provinces: 1-800-668-9045

Ontario: 1-800-268-5577

Quebec: 1-800-668-9067

Toronto: 905-946-9501

STERRAD[®] NX[™] is a registered trademark

PRODUITS MÉDICAUX

Johnson & Johnson

MEDICAL PRODUCTS

A DIVISION OF Johnson & Johnson, INC.

ORAL PRESENTATIONS

TUESDAY, MAY 12/WEDNESDAY, MAY 13, 2009 –

2:00 p.m.-3:00 p.m.

DELTA ST. JOHN'S (ROOM TBA)

Tuesday, May 12, 2009
Salon E, Mental Health

REDUCING THE RISK ASSOCIATED WITH ALCOHOL BASED HAND RUB (ABHR) IN MENTAL HEALTH

Keith Sopha, Jill Richmond, Norma Richards; *Homewood Health Centre, Guelph, Ontario, Canada*

Issue: There are many challenges associated with alcohol based hand rub (ABHR) in Mental Health Facilities. An incident of ingestion occurred involving an unsecured bottle of ABHR gel.

Project: As a result of the incident, a multidisciplinary team was established to identify and address all concerns related to ABHR in the facility. Point of care is very different as patients are mobile and not always treated within a typical healthcare bed space. Patient to patient transmission is more of a concern because of mobility and requires different strategies. As well, safety concerns related to misuse by ignition. Facilities with addictions programs need to consider the triggering effects of ABHR. Special consideration is also required in high risk mental health units.

Results: The team implemented a change from gel products to foam, as it was felt that foam would be less likely to be ingested in large quantities. Unsecured bottles were replaced with wall mounted, secured dispensers. The number of dispensers was substantially increased making it more accessible at point of care. Service providers on high risk units were issued pocket sanitizers. An auditing system to monitor usage was established by collecting returned empty cartridges. Portable, touchless ABHR stands are now available for placement outside isolation rooms and during outbreaks.

Lessons learned: We experienced an unfortunate incident involving arson to one of the wall mounted dispensers. The ABHR ignited easily and resulted in some reassignment of ABHR dispensers. The multidisciplinary team approach and involving front line staff from all departments during the product evaluation/selection process helped with product acceptance and change. The ABHR project created a new project of glove selection, use and training.

LINKING THE PLACEMENT OF ALCOHOL HAND SANITIZER (AHS) DISPENSERS TO YOUR FACILITY'S HAND HYGIENE STRATEGY, A SYSTEMATIC APPROACH

Ted Pincock, Daphne Murray; *Capital District Health Authority, Halifax, Nova Scotia, Canada*

Issue: Health care facilities across Canada have adopted a national initiative, the "4 Moments for Hand Hygiene", to improve hand hygiene compliance among healthcare workers. We describe the impact of a change in supply contracts for alcohol hand sanitizer (AHS) during the implementation of a new district wide hand hygiene campaign, reviewing its challenges and opportunities.

Project: A well-planned and well-executed installation of hand hygiene products is an essential step in any program to enhance hand hygiene adherence in health care settings.¹ AHS dispensers act as visual cues for hand hygiene behavior, and their strategic and ubiquitous placement renders the product highly accessible for frequent use.^{1,2} Does this fact offer an opportunity to integrate the national hand hygiene campaign "4 Moments for Hand Hygiene" into a strategy for dispenser placement in all areas of the healthcare spectrum?

Results: Based on our experience, we enumerate strategies to avoid logistical difficulties, integrate dispenser placement with the current hand hygiene program, and amplify the positive momentum gained through the installation of a new AHS dispensing system.

Lessons Learned: We suggest steps to performing dispenser needs assessments, developing dispenser placement guidelines, setting down rules for the installers, and linking the installation process to a hand hygiene program. A Pre-installation Matrix is also provided to assist practitioners prepare and communicate a thorough systematic approach.

CHALLENGES TO IMPLEMENTING A DAILY FEBRILE/ENTERIC SURVEILLANCE FORM AS A PATIENT SAFETY TOOL IN A MENTAL HEALTH CENTRE

Jo-Anne Burt, Darlene Fawcett, Linda Fletcher; *Whitby Mental Health Centre, Whitby, Ontario, Canada*

Background: Patient care units reported infections to Infection Control at months end and completed FRI screening on admission. With a mental health focus, there was no daily FRI assessment. IPAC staff was contacted when multiple patients were showing similar symptoms and mental health programs were impacted. The need for a patient safety tool that was user friendly and identified patients with potential infections was necessary. The tool would provide daily information to prevent transmission and/or outbreaks.

Development of a tool: A form was developed using the basic assessment tool appended in the FRI document (PIDAC 2006). We added other physical symptoms to the tool that could help identify early stages of respiratory illness or gastro. A column for visual assessment by staff was added for patients who were unable/unwilling to respond to questions. After education of managers and staff, the new daily surveillance tool was implemented February 1, 2008.

Challenges: Implementation of the daily tool was perceived as an additional task by nursing staff. Staff expressed objections "we are mental health and not acute care". Staff

lacked computer skills and or access to a computer and the form was designed to be available on the intranet.

Conclusion: With ongoing support from IPAC, the daily surveillance tool compliance rate for the first year is > 75%. The implementation of this tool allows IPAC to implement prompt interventions to prevent or control transmission of HAs. Despite initial resistance, the daily febrile/enteric surveillance form has become a most effective working tool.

CHICA-MENTAL HEALTH INTEREST GROUP REPORT: PRELIMINARY FINDINGS ON CURRENT IPAC PRACTICES

Rebecca Yu¹, Robert Nguyen², Vytas Velyvis²; ¹CHICA-Mental Health Interest Group, Co-Chair, Canada, ²Whitby Mental Health Centre, Whitby, Ontario, Canada

Background: CHICA-CANADA Mental Health Interest Group (MHIG) was established to support members interested in infection prevention and control in mental health settings. Members often express the lack of publications and references for their unique patient population IPAC programs. Because of this there is a need to establish the Best Practices/Position Statement.

Project/Method: CHICA-MHIG has set out a 6 stage plan working towards a Best Practices/Position Statement. In Nov. 2008, Stage 1 was launched. The objective was to establish current data on staff ratios, surveillance programs, admission screening protocols, immunization program, hand hygiene program, physician support, signage, fixation behavior and guidelines/standards currently used. A 36-item questionnaire was sent out to 32 facilities across the country. Of the 36 questions, 21 were close-ended while 15 were open-ended.

Result: 15 out of 32 (47%) facilities responded, with the majority from Ontario. The average number of beds across the facilities was 215 with an average of only 1.3 infection control practitioner. Surveillance programs were in place at 9 of the sites. 12 facilities screen for MRSA and 10 screen for VRE upon admission. Most had a written hand hygiene program and referred to the PIDAC and APIC for their surveillance and IPAC programs. About a third of the facilities did not have an infectious diseases physician.

Lessons learned: Feedback shows that a more user friendly questionnaire is needed for the next round of survey which will be extended to regional mental health settings. This presentation will share the initial data collected so far for this project.

Tuesday, May 12, 2009
Salon D, Long-Term Care

LIGHTS, CAMERA, ACTION! CREATING AN EDUCATIONAL VIDEO ABOUT THE PROPER USE OF PERSONAL PROTECTIVE EQUIPMENT IN LONG-TERM CARE

Tim Cronsberry, Christine Moussa; *South Western Ontario Infection Control Network, St. Marys, ON, Canada*

Video resources outlining the proper use of personal protective equipment (PPE) often tailor messaging to the acute care setting. Staff in long-term care (LTC) are at a disadvantage because few Infection Prevention & Control (IPAC) learning resources are geared specifically to their setting.

Principles of adult learning suggest that adults prefer resources that are applicable to their current experiences and that the use of humour can be an effective means of engagement. IPAC education videos often do not incorporate these principles.

The South Western Ontario Infection Control Network created a professionally produced 15 minute video targeted to LTC addressing PPE use. The video was filmed in a long-term care home and depicts scenarios familiar to LTC staff.

The video was distributed to approximately 2000 stakeholders in Ontario. The package included a DVD, teaching guide, and CD containing companion resources. The resource was marketed as an "in-service in a box".

Feedback to date has been outstanding. Although the resource has been created and marketed for LTC, acute care settings and community agencies have requested and used the video. A formal evaluation of the resource package will be conducted in early 2009. Healthcare workers are constantly faced with competing messages. Humour is an effective means of engaging an adult audience, and cutting through message clutter. In addition, creating resources that are sector specific increases the applicability of the messages, in turn augmenting the viewer's learning experience.

IMPACT OF HAND HYGIENE (HH) COMPLIANCE ON A NOROVIRUS OUTBREAK IN A LONG TERM CARE HOME (LTCH)

Olivia Yow, Sandra Callery, Mary Vearncombe; *Sunnybrook Health Sciences Center, Toronto, Ontario, Canada*

Background/Objectives: Norovirus outbreaks are common in LTCHs. Norovirus is highly infectious and is transmitted via the fecal-oral route, including by contaminated hands. In January 2009, a norovirus outbreak was observed in our hospital's 535-bed LTCH. We examined the impact of HH compliance on a norovirus outbreak in our LTCH.

Methods: HH compliance was collected using standardized, validated audit tool prior to the outbreak. During the outbreak, resident and staff cases were followed. Attack rates (AR) for all outbreak-affected units were calculated. Linear regression analysis was used to examine the relationship between unit HH compliance and unit AR for all affected units.

Results: The outbreak involved all 9 wards within one building and lasted 34 days. 111 people were affected, 72 residents and 39 staff. The mean ward AR was 18% (range 1-51%); mean resident - AR was 27% (range 0-80%) and mean staff - AR was 12% (range 0 - 47%) Mean ward HH compliance rate was 51% (range 12-81%). Individual ward HH compliance rate and AR were inversely related: the higher the ward HH compliance rate, the lower the ward AR. The relationship is statistically significant (p=0.001).

Conclusions: HH compliance rate may be used as an indicator to predict the impact of a norovirus outbreak. Improving HH compliance in LTCHs may decrease the impact of norovirus outbreaks.

LONG-TERM CARE REGISTERED NURSES' PERCEIVED BARRIERS AND FACILITATORS TO IMPLEMENTING INFECTION CONTROL BEST PRACTICES

Anne Bialachowski, *Regional Infection Control Networks, Dundas, ON*

The purpose of this study was to describe long term care registered nurses' perceived barriers and facilitators to implementing infection prevention and control best practices. Three focus groups composed of long term care professionals from southern Ontario were conducted. A researcher-developed semi-structured focus group guide adapted from the Barriers Scale was utilized and barriers and facilitators were identified using a conceptual mapping grid. Themes were identified from question to question and across questions and the barriers and facilitators were identified. Participants perceived key barriers to implementing infection prevention and control best practices were role design, staffing shortages, best practice document design, and long-term-care facility design. The key facilitators identified were administrative support and connections to external networks.

ANTIBIOTIC RESISTANT ORGANISMS AND ANTIBIOTIC PRACTICES IN CANADIAN LONG-TERM CARE FACILITIES: FOCUSING ON THE RELATIONSHIP OF INFECTION SURVEILLANCE AND CONTROL ACTIVITIES AND ANTIBIOTIC PRACTICES WITH MRSA RATES

Dick Zoutman^{1,2}, B. Douglas Ford¹, Jim Gauthier³

¹Department of Pathology and Molecular Medicine, Queen's University, Kingston, ON, Canada, ²Infection Control Service, Kingston General Hospital, Kingston, ON, Canada, ³Infection Control Service, Providence Care, St. Mary's of the Lake and Mental Health Services, Kingston, ON, Canada

Background: Long-term care facility (LTCFs) residents are at risk from AROs. The examination of the relationship of infection surveillance and control activities and antibiotic practices with MRSA will identify strategies to manage AROs in LTCFs.

Methods: A survey was sent in 2005 to all Canadian LTCFs to assess infection surveillance and control resources and activities (In Press). Items assessing antibiotic use practices and AROs were included in the survey. Regression analyses were used to examine the association of infection surveillance and control activities and antibiotic practices with MRSA rates.

Results: One third of LTCFs responded (34%, 488 of 1,458). The mean MRSA rate was 0.8 (SD 1.3) per 10,000 patient days, mean *C. difficile* rate was 0.3 (SD 0.4), mean VRE rate was 0.06 (SD 0.2), mean ESBL-E. coli rate was 0.9 (SD 2.2), and mean ESBL-Klebsiella pneumoniae rate was 0.5 (SD 1.2). 47% of LTCFs reviewed antibiotic prescribing. A quarter (25.1%) have minimum criteria for initiating antibiotics for respiratory infections. Residents with asymptomatic bacteriuria received antibiotics more than half the time in 31.9% of LTCFs. Few LTCFs (11.8%, 50 of 422) developed antibiotic resistance pattern summaries. Surveillance index scores ($r=-0.21$, $P=.001$), resident morbidity ($r=0.15$, $P=.02$), and antibiotic practices scores ($r=0.16$, $P=.02$) were associated with higher MRSA rates.

Conclusion: Infection surveillance activity was associated with lower MRSA rates. There is need for further investment in infection surveillance to protect vulnerable LTCF residents. The authors have reported elsewhere surveillance in Canadian LTCFs does not meet recommended levels.

Tuesday, May 12, 2009
Salon C, Acute Care

THE IMPACT OF PEER ADMINISTRATION ON HEALTHCARE WORKER INFLUENZA VACCINATION RATES

Victoria R Williams, Wendy Morgan, Sandra Callery; *Sunnybrook Health Sciences Centre, Toronto, ON, Canada*

Background: Yearly influenza vaccination is recommended for all healthcare workers (HCWs) who have direct patient contact to protect patients and prevent transmission. In order to achieve adequate HCW influenza vaccination compliance a multifaceted strategy is necessary. The objective of this study was to determine if the addition of peer administration of the vaccine to the annual influenza vaccination campaign increased HCW compliance.

Methods: During the 2008-09 influenza season a HCW vaccination strategy was rolled out facility-wide that included management support, staff education, promotional materials, and ready access to the vaccine. Members of the nursing staff of the perinatal and gynecology (P&G) program were trained in the administration of the influenza vaccine and vaccinated their coworkers. HCW influenza vaccination rates were collected up to February 1, 2009 and the mean change in HCW compliance between the 2007-08 and the 2008-09 seasons were compared between the P&G program and programs that did not receive peer administration.

Results: The mean increase in HCW compliance with influenza vaccination from 2007-08 to 2008-09 was 15.5% for the P&G program as compared to 8.3% for the remainder of acute care programs ($P=0.25$). Comparison of the P&G program to elective orthopaedics, both programs that are located offsite and have similar access to occupational health and safety, demonstrated a significant mean difference in HCW immunization compliance (23.7%, 95% confidence interval 6.8-40.6, $P=0.013$)

Conclusion: Peer administration has the potential to increase HCW compliance as one component of a facility-wide influenza vaccination strategy.

ACCESS YOUR SURVEILLANCE DATA MORE EASILY WITH MS-ACCESS®

Marion Yetman¹, Paula Price², Jeff Boone³, Dana Malone³, Kelly Butt¹

¹Department of Health & Community Services, St. John's, NL, Canada, ²Western Health, Corner Brook, NL, Canada, ³Office of the Chief Information Officer, St. John's, NL, Canada

Issue: One of key components of an infection control program is the collection and

analysis of surveillance data. Management of the data has plagued ICPs who often have limited expertise in the area of information technology. This report describes the process of the development of an ACCESS® database for ICPs' surveillance data requirements.

Project: The Provincial Infection Control (PIC-NL) group met in 2007 and identified MRSA and CDI as targets for focused surveillance. A decision was made to have the Information Technology (IT) experts write a program specifically designed for data management of the surveillance projects. In addition to the IT experts, the design process required the involvement of ICPs, an epidemiologist, a privacy analyst and IT support in the regional facilities. A protocol was written to ensure consistency in the data collection requirements and a user manual was developed. The database was created using MS ACCESS® and included 3 parts: data entry, reports and charts.

Results: In November 2008 the database was deployed to the Western region as a pilot project. An orientation was provided via teleconference to the ICPs and IT support staff.

Lesson learned: The project was much larger in scope than anticipated. The delays in the process were frustrating for the development team and the users waiting for the product. It is challenging to develop a database to meet the needs of four different regional infection control programs. However, feedback from the ICPs included enthusiasm and satisfaction with the database making it a worthwhile initiative.

ACCREDITATION CANADA: SERVICE EXCELLENCE STANDARDS FOR REPROCESSING AND STERILIZATION OF REUSABLE MEDICAL DEVICES

Mireille Cyr-Hansen; *Accreditation Canada, Ottawa, Canada*

Accreditation Canada, formerly known as the Canadian Council on Health Services Accreditation, is a national, non-governmental, not-for-profit body that accredits health care organizations across Canada. Through accreditation, organizations evaluate and improve the quality of the services they provide. The accreditation process includes examining daily activities and services and comparing them to standards of excellence. Accreditation Canada's standards of excellence cover more than 25 healthcare and service areas. Responding to requests from organizations across the country, Accreditation Canada in partnership with the Canadian Standards Association began developing accreditation standards for Reprocessing and Sterilization of Reusable Medical Devices in the fall of 2005. As part of Qmentum, our new accreditation program, these sterilization standards will be in use by organizations in 2009.

The presentation will inform attendees of the history behind the development of these standards, provide an outline of the Reprocessing and Sterilization of Reusable Medical Devices standards, share general findings of survey visits to date and will provide updates in relation to sterilization.

TIME IS MONEY. DOES PROPHYLACTIC ANTIBIOTIC TIMING (PABT) AFFECT HIP AND KNEE JOINT REPLACEMENT SURGICAL SITE INFECTION (SSI) RATES?

Diane Weinwurm, Krystyna Ostrowska; *Trillium Health Centre, Mississauga, Canada*

Objective: Surveillance of post-op SSIs and correct PABT was conducted from November 1, 2004 to June 22, 2007 on 643 clean elective hip and 1,331 clean elective knee joint replacement patients. SSI data was compared to the National Healthcare Safety Network (NHSN) Report, 2008.

Method: AICE (Automated Infection Control Expert) was interfaced with the operating room's program to download data which the Infection Control Practitioner (ICP) used to generate a record on every patient. The record includes patient and surgical information, wound classification, surgery start and stop times, American Society of Anaesthesiology (ASA) score, prophylactic antibiotics and timing. AICE calculates the composite index (0,1,2,3) for predicting the risk of the patient developing a SSI after surgery. CDC (Centre for Disease Control) definitions for SSIs were followed and rates compared to NHSN. Surveillance includes 30 days post-op for superficial SSIs and 1 year for deep, organ/space SSIs. The ICP reviewed microbiology reports, emergency/urgent care visits, re-admissions, consultation notes, antibiotic prescribing and surgeon post-discharge feedback.

Results: The hip and knee SSIs rates detected in-hospital were comparable to NHSN rates. Comparing in-hospital plus post-discharge SSIs from 2004-2007, hip SSIs rates were 3.9%, 0.5%, 3.0% and correct PABT started in 90%, 92%, 96% cases respectively. Comparing in-hospital plus post-discharge SSIs from 2004-2007, knee SSIs were 2.8%, 2.8%, 2.6% and correct PABT started in 90%, 93%, 96% cases respectively.

Conclusions: The additional 8 hip and 25 knee SSIs detected post-discharge suggests that a more active post-discharge surveillance is necessary for accurate rates. In our study overall SSIs rates decreased and correct PABT improved. PABT is a key component of perioperative care.

Tuesday, May 12, 2009
Salon F, Pediatrics

SERRATIA MARCESCENS (SM) OUTBREAK IN A NEONATAL INTENSIVE CARE UNIT (NICU) RELATED TO THE EXIT PORT OF HIGH FREQUENCY OSCILLATOR (HFO)

Tracy M. Macdonald^{1,4}, Joanne M. Langley^{1,3}, Timothy Mailman^{1,3}, Kim Allain¹, Michael Mulvey², Dora Stinson^{1,3}, George Nelson¹

¹IWK Health Centre, Halifax, Nova Scotia, Canada, ²National Microbiology Laboratory, Winnipeg, Manitoba, Canada, ³Dalhousie University, Halifax, Nova Scotia, Canada, ⁴Central Newfoundland Regional Health Centre, Grand Falls-Windsor, Newfoundland & Labrador, Canada

Background: SM is known for its role in NICU nosocomial infection. We report an outbreak thought to be related to aerosols from the HFO exit port of a colonized infant.

Methods: The level 3 NICU's outbreak unit is a 3067 feet² space divided into three pods. The index case was <1500 gm premature infant with respiratory tract colonization.

Because of the morbidity associated with SM Infection Control placed the patient on contact isolation(CI).Three weeks later a second colonized infant who had spent 48 hours in the NICU was found. Over the ensuing months 5 more infants were identified and placed on CI. A line listing showed the only common risk factor was residency in the same pod. The unit was closed to further admissions. All children were placed on CI. A multidisciplinary team gathered and multiple (n=16) environmental samples were taken. A small puddle of water directly under the HFO exit port was noted and sampled. Samples positive for SM were processed according to the CDC 1 day E. coli pulsed field gel electrophoresis protocol at the National Microbiology Laboratory, Winnipeg. **Results:** Seven patients were colonized(n=5) or infected(n=2). Of environmental samples,only the HFO exit port of the index case grew SM. This isolate and that of the index case were genotypically identical. Two of the clinical specimens were identical (A1); three more were related (A2,A3).Conclusions: A SM outbreak was terminated through a combination of CI, education, increased hand hygiene, closing the unit,and retrofitting of the exit port of HFO. We hypothesize that small particle aerosols generated by the HFO may have dispersed the organism and facilitated patient-patient and HCW-patient spread.

HAND HYGIENE IN THE NICU: WHERE DOES THE BABY'S ENVIRONMENT END AND NICU SPACE START?

Anna O'Shaughnessy, Edmond Kelly, Karel O'Brien, Ann Tozer, Rheney Castillo, Mary Ann Tomek, Lidia Xhaholli, MSH NICU Infection Prevention and Management Committee, MSH Infection Control Team
Mount Sinai Hospital, Toronto, Ontario, Canada

Issue: Hand hygiene is an important measure to prevent the spread of hospital acquired infections. Initial adherence to the "4 moments" of hand hygiene audits in our neonatal intensive care unit (NICU) was 59%. Follow up discussions identified that application of the 4 moments in our open NICU provided a unique challenge because the physical environment within and surrounding the isolette made it difficult to define what constituted the "patient environment".

Project: A multi-disciplinary group reviewed the 2007 hand hygiene results during education sessions and determined that there was uncertainty about what constituted the patient's environment in our open concept NICU. Patient care scenarios were reviewed and clear definitions for "baby space/environment" and "NICU space/environment" were developed. Two hand hygiene reference documents specific to the NICU were developed. One detailed the process for hand hygiene in the NICU and the other included scenarios to demonstrate application. Follow up education and feedback sessions will be conducted incorporating the new definitions and reference documents will be distributed.

Results: Clearly defining the "patient environment" in the NICU through consultation and feedback provided clarity to the staff on when to perform hand hygiene. Adherence to hand hygiene improved to 68% in 2008.

Lessons Learned: In at least some specialty care and open concept care areas, teaching hand hygiene by the "4 moments" requires clear, accepted and well-understood definitions of patient vs hospital environment. Feedback from the multidisciplinary team is helpful in clarifying definitions and improving hand hygiene adherence.

DELEGATES FOR INFECTION CONTROL: FOSTERING AN INFECTION PREVENTION AND CONTROL CLIMATE

Lyne St-Martin; McGill University, Montreal, Quebec, Canada

The Infection Control Practitioner's (ICP) role is a complex and challenging one. To diffuse information to all health care workers of a hospital requires much creativity. Our IPC team needed to identify and train Delegates for Infection Control to act as role models and to diffuse IPC information.

The ICP from this tertiary care hospital envisioned one Delegate for Infection Control from each patient care unit. Several steps were undertaken to define and expand their role: developing a mandate for the Delegates for Infection Control, obtaining buy-in from hospital administrators, describing the roles and responsibilities, officializing the function of this working group, offering train-the-trainer sessions and creating and distributing "Infection control toolkits".

The sum of the actions undertaken has contributed to the success of this project. The educational sessions have given the Delegates a sense of confidence in their ability to act as role models, which has fostered a sense of ownership for issues related to IPC. The most impressive result is that unit specific initiatives have been proposed and organized by Delegates. This has created a positive influence on all health care workers and has shifted the focus on preventing infections rather than controlling them.

To foster an IPC climate within a hospital requires time and energy. In a hospital with 1.5 ICPs, Delegates for Infection Control are essential to become the eyes and ears of the ICP and to become role models amongst their peers.

AN OUTBREAK OF CA-MRSA 10 INVOLVING NEWBORNS AND PARENTS ASSOCIATED WITH A COLONIZED HEALTHCARE WORKER.

Jo-Anne McConnell¹, Paul Dick¹, Elizabeth Gregg¹, Michael Gardam²

¹Grey Bruce Health Services, Owen Sound, Ontario, Canada, ²University Health Network, Toronto, Ontario, Canada

Introduction: We identified 3 previously admitted newborns with MRSA infections between February and August 2008. Concurrently, infection control was contacted by physician's offices regarding other clinical cases. There was concern of an outbreak; however no baseline data existed for comparison.

Methods: An outbreak committee was struck and expert advice was sought. We conducted a look back study by contacting internal and external physicians and Emergency Departments asking them to identify clinical cases of MRSA in newborns or their families, and to culture newborns born after February 1 2008 for MRSA. An active admission and discharge surveillance program was instituted on the affected unit. All unit

staff and physicians were screened for MRSA. The unit was terminally cleaned, visitors restricted, contact precautions used for all patients, and education provided to staff.

Results: Between February 1 and December 1 2008 we identified 25 infants (16 colonized, 9 infected); 10 mothers (4 colonized, 6 infected); 2 fathers (2 infected); and 1 healthcare worker (colonized). Molecular fingerprinting revealed that 36/37 cases and the healthcare worker had an identical CA-MRSA 10 strain. Review of staff assignments revealed that the colonized healthcare worker was in contact with 88% of affected mothers and babies. The outbreak ceased when the healthcare worker stopped working, recurred upon return, and stopped again when they left on sick leave.

Conclusions: This outbreak was environmentally and temporally associated with a colonized healthcare worker. Staff screening was a very important measure in identifying and halting this outbreak.

Wednesday, May 13, 2009

Salon E, Alternate Groups/Settings

TO BOLDLY GO WHERE NO MAN HAS GONE BEFORE: AUDITING REPROCESSING PRACTICES IN PHYSICIAN OFFICES-THE ALBERTA EXPERIENCE

Tracey Lubkey¹, Susan Lafferty²; ¹College of Physicians and Surgeons of Alberta, Edmonton, AB, Canada, ²Regional Infection Prevention and Control Program, Alberta Health Services, Edmonton, AB, Canada

Issue: In response to concerns about breaches in infection control, Alberta's government ordered each professional regulatory College to ensure that its members practice in accordance with accepted infection control practices.

Project: Following dialogue with the Provincial Medical Officer of Health about priorities, the College of Physicians and Surgeons established an Infection Prevention and Control Advisory Committee, created an awareness campaign for physicians and initiated inspections of offices in regards to the cleaning, disinfection and sterilization of reusable medical equipment.

The College began inspecting office reprocessing practices in April 2008. As of February 2009 the College has contacted 2600 specialists and has inspected 158 offices. The next round of office inspections to begin in the summer of 2009 will involve over 3,000 family practitioners and will likely result in an additional 200 offices for inspection.

Results: Results of the 158 office inspections revealed that deficiencies were common and included a lack of documented policies, procedures and training protocols, biological monitoring, appropriate rinsing following HLD and wearing required PPE.

Lessons Learned: The feedback from physicians about our audit and education program has been encouraging. Out of the first 55 offices surveyed 44 offices have resolved deficiencies and continue to reprocess, and the remainder either chose to use disposable devices(6), outsourced reprocessing (2) stopped procedures (2) or retired (2). Our major challenge remains the urgent need for ongoing education for physicians and healthcare workers who reprocess.

MULTI-PURPOSE EQUIPMENT WASHER

Free Trial!
Free Delivery

You too can reduce bacteria by 99.9%
As demonstrated in an independent laboratory study

5 Minutes Per Cycle • All Stainless Steel • Portable • Washes Two Wheelchairs At Once

OVER 1600 WASHERS NOW IN USE!

CALL US TOLL FREE 800-717-3626

FREE NO OBLIGATION TRIAL!

MEDCO EQUIPMENT INC.

OUT OF THE BASEMENT: CERTIFIED MEDICAL DEVICE REPROCESSING TECHNICIAN (CMDRT) PERSONNEL CERTIFICATION PROGRAM

Miles Murphy¹, Susan Lafferty²: ¹Canadian Standards Association, Mississauga, ON, Canada, ²Regional Infection Prevention and Control Program, Alberta Health Services, Edmonton, AB, Canada

Issue: Recent adverse events in delivery of health care have highlighted improper cleaning, disinfection and sterilization of reusable medical devices that have potentially exposed patients to infection. Lack of a Canadian certification process to ensure competency of medical device reprocessing staff has been noted as a contributing risk factor.

Project: To mitigate risk, Canadian Standards Association (CSA), an organization with expertise in personnel certification, moved forward with developing a national personnel certification program in September, 2008. A certification scheme committee, representing a broad range of stakeholders from across Canada, worked closely with CSA to steer the development of a robust certification to meet the requirements of ISO 17024 for independent, third party and neutral certification of medical device reprocessing technicians (MDRT). The program is intended to: (1) Promote public health by improving safety of use of medical devices (2) create a national standard of practice for Canadian MDRT personnel (3) lend credibility and authority to MDRT personnel while meeting needs of industry and regulators for relevant, standardized training (4) reduce number of hours needed for on-the-job training.

Results: The program is scheduled to be launched in the spring of 2009 and represents the first Canadian national certification program for eligible personnel who reprocess reusable medical devices.

Lessons Learned: A significant number of stakeholders from health care, industry and ministries of health were willing to volunteer their time and expertise in the development of this much-needed certification process. The role of CSA in managing and facilitating the process cannot be underestimated.

EMPLOYING AN ESTABLISHED TRAINING MODEL TO INTRODUCE ROUTINE PRACTICE AND INFECTION CONTROL TO POLICE OFFICERS IN A LARGE MUNICIPAL SERVICE

Natalie Hiltz¹, Alexis Silverman²: ¹Peel Regional Police Service, Brampton, Ontario, Canada, ²Peel Public Health, Brampton, Ontario, Canada

Issue: Peel Regional Police Service is the 3rd largest municipal service in Canada with more than 1,800 front line officers responding to over 250,500 calls annually. The region consists of Brampton & Mississauga, which are home to over 1.2 million residents. Due to the substantial diversity of the Region and the nature of policing itself, Peel Police Officers are frequently required to interact with individuals who may put them at risk of exposure to communicable diseases. Despite this danger, there is no requirement to provide training to Police on infection control.

Project: The "Personal Protection Strategy, (PPS) Model" was developed in collaboration with Peel Public Health to teach routine practice and infection control in a way that was readily accessible to Police Officers.

Results: The PPS model incorporates the design and colour-scheme of the Ontario Ministry of Community Safety and Correctional Services' Use of Force model, which is a well-known and widely accepted training tool for assessment of physical risk. The PPS Model has Officers use the same critical thinking that allows them to assess and avoid physical risk, and apply it to communicable disease. Thirty randomly-chosen Officers evaluated the model, using questions designed to assess its effectiveness in introducing the concepts of Routine Practice and Infection Control. All Officers questioned stated that the model and its concepts were useful, important and readily adaptable and applicable to their work environment. The majority of respondents, (80%) found the model satisfactory in its current format and felt it would be useful as a training aid.

OFFENDER HEALTH AND INFECTION PREVENTION AND CONTROL: THE CHALLENGES AND TRIUMPHS OF THIS UNIQUE ENDEAVOR

Dean Smith; *Capital District Health Authority, Halifax, Nova Scotia, Canada*

Nova Scotia is the only province in Canada in which a District Health Authority provides Infection Prevention and Control expertise to offenders within the Department of Justice. For greater than two years, CDHA Infection Prevention and control has been developing a program for Offender Health Services that attempts to address the infection prevention and control needs of its clientele. The purpose of the discussion will be to give an overview of the many challenges in developing the Infection Prevention and Control program in a climate of isolation, social stigma, fiscal limitations and multiple bureaucracies. With little bench marking data for comparison or offender health infection prevention and control colleagues in this field, the discussion of the program will be both eye opening and entertaining while introducing the CHICA community to this unique field.

Wednesday, May 13, 2009
Salon D, Surveillance

CENTRAL VENOUS CATHETER(CVC)INSERTION PRACTICES AMONG INTENSIVE CARE UNITS(ICU) PARTICIPATING IN THE CANADIAN NOSOCOMIAL INFECTION SURVEILLANCE PROGRAM(CNISP)

Lynn Johnston¹, Dorothy Moore², Linda Pelude³, Joanne Langley⁴, Geoff Taylor⁵, Michael John⁷, Alice Newton⁷, Zahir Hirji⁸, Karen Olekson⁶, Betty Ann Henderson¹⁰, Kathryn Suh⁹, Denise Gravel³

¹Capital District Health Authority, Halifax,NS, Canada, ²Montreal Children's Hospital, Montreal, QE, Canada, ³Public Health Agency of Canada, Ottawa,ON, Canada, ⁴IWK Health Centre, Halifax,NS, Canada, ⁵University of Alberta Hospital, Edmonton,AB,

Canada, ⁶Health Sciences Centre, Winnipeg,MB, Canada, ⁷London Health Sciences Centre, London,ON, Canada, ⁸University Health Network, Toronto,ON, Canada, ⁹Children's Hospital Eastern Ontario, Ottawa,ON, Canada, ¹⁰Foothill's Hospital, Calgary,AB, Canada

Background: CVC insertion practices to reduce risk for bloodstream infection (BSI) have been identified and effectiveness demonstrated. Despite recommendations, proven strategies are inconsistently applied.

Objective: To report adherence to CVC insertion guidelines among ICU participating in CNISP.

Methods: Using a one-page checklist, CVC insertion practices were recorded by ICU nurses or infection control practitioners. Statistical analyses included variable descriptors by ICU type. Composite variables were created to assess the proportion of insertions adhering to most or some recommendations. Fisher's exact or Chi-square tests were used.

Results: Ten units provided observations on 283 insertions (74 pediatric(PICU)/neonatal ICU(NICU), 63 adult surgical, 146 adult medical/mixed ICU). Most were by residents (62%) and attending physicians (23%) using subclavian (33%), internal jugular (32%), and femoral (22%) veins. Hand hygiene was performed by physicians for 100% of PICU/ NICU insertions and 85% of adult ICU insertions. Sterile gown, gloves, & mask were worn for $\geq 98\%$ of insertions and cap for 78%. Full draping occurred for 65% of insertions (12% adult medical ICU and 77% NICU). Adherence to all recommendations was observed in 51% of adult ICU and 93% of PICU/NICU ($p < 0.0001$). Attending physicians were more likely to adhere to recommendations than medical students and residents (81% vs 38% vs 53%; $p = 0.005$).

Conclusion: There is incomplete adherence to CVC insertion recommendations in participating ICU. Practices vary between adult & pediatric/neonatal units and between attending physicians & housestaff. These practices likely mirror those in other Canadian ICU. As process outcomes reflect clinical outcomes, ICU should formally assess CVC insertion practices and provide educational programs where indicated.

COORDINATING SURGICAL SITE SURVEILLANCE BETWEEN TWO HEALTH AUTHORITIES: LESSONS LEARNED

Leslie Forrester¹, Janice Deheer², Lisa Harris¹, Missy Blackburn², Elizabeth Bryce¹

¹Vancouver Coastal Health, Vancouver, British Columbia, Canada, ²Interior Health Authority, Kelowna, British Columbia, Canada

Introduction: Surgical site infection (SSI) surveillance is often inconsistent between facilities and health regions. This three month pilot project examined the feasibility of developing standardized surveillance methodology across two health regions.

Methodology: Traditional surveillance was already in place at Vancouver General, Kelowna General and UBC Hospitals. Standardized definitions and data fields for SSIs were developed as well as a common patient phone survey (PPS) form and a voluntary physician reporting (VPR) form.

Results: All three hospitals were readily able to standardize surveillance following the creation of a Steering Committee and fulfillment of Privacy requirements. Traditional surveillance identified 7 SSIs (26.9% total infections), compared to 5 by VPR (19.2%) and 19 by PPS (73%). PPS was labour intensive, overly sensitive (90% of patients contacted did not have a SSI) and was unable to distinguish between deep and superficial infections. However, it did identify infections not otherwise detected by other methods.

Conclusions: Standardized methodology is feasible between different health regions but requires considerable infrastructure support. Facilities should recognize that SSI surveillance is both an assessment of perioperative quality as well as an evaluation of the impact of SSIs on the healthcare system; as such, detection of both superficial and deep infections is important. No one method of surveillance captured all infections; traditional surveillance suffered from the inability to detect cases outside the facility while VPR was subject to noncompliance and recall bias. The PPS detected the majority of infections, but also suffered from recall bias and was too sensitive a tool as drafted.

WHAT'S THE "DIFF"? SYNDROMIC SURVEILLANCE AND PROMPT IMPLEMENTATION OF ADDITIONAL PRECAUTIONS FOR DIARRHEA

Natasha Vrhovnik, Sandra Callery, Mary Vearcombe; *Sunnybrook Health Sciences Centre, Toronto, ON, Canada*

Background: Published data shows an increase in the incidence and severity of *C. difficile* associated disease (CDAD). Environmental contamination plays a significant role in the transmission of *C. difficile* spores. Prompt initiation of Contact Precautions with a dedicated toilet for patients presenting with new onset of unexplained diarrhea is important to prevent the transmission of CDAD in healthcare settings.

Sunnybrook Health Sciences Centre performs daily syndromic surveillance which includes diarrheal illness. A review of 2008 overall hospital data identified that 70% of patients/residents who were *C. difficile* toxin positive were placed on contact precautions at time of symptom onset. The remaining 30% did not have precautions implemented until toxin results were communicated. The delay in implementing appropriate additional precautions may contribute to the transmission of CDAD.

Project: A brief algorithm was developed outlining the steps to take when a patient/resident presents with new onset of diarrhea. Educational sessions were given to a pilot unit, a 36 bed trauma unit, utilizing case studies and a standardized stool chart, throughout September 2008.

Results: Compliance with the initiation of contact precautions based on symptom onset for CDAD patients increased from 25% to 100% after the educational intervention on the pilot unit.

Lessons learned: When new onset of diarrheal illness is identified through syndromic surveillance, prompt action can prevent transmission. Providing an easy to use algorithm together with targeted education can facilitate prompt implementation of additional precautions until an infectious cause can be excluded through appropriate microbiological testing.

UNIVERSAL SCREENING FOR METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) HAVE WE MISSED THE TARGET?

Sandra Callery¹, Mary Vearncombe^{1,2}, Andrew Simor^{1,2}

¹Sunnybrook Health Sciences Centre, Toronto, Canada, ²University of Toronto, Toronto, Canada

Background: Early identification of positive patients and instituting additional precautions have shown to be beneficial in reducing MRSA transmission. At SHSC a targeted approach of screening admitted patients considered to be at high risk for acquiring MRSA is used.

Objective: To determine if a universal MRSA screening protocol is more effective than targeted screening, to reduce MRSA transmission.

Method: From January 21, 2008 to July 31, 2008, all patients admitted to unit A (38-bed medical unit) and unit B (36-bed cardiology unit) were swabbed for MRSA within 72 hours of admission. Swabs were obtained from nasal, perianal and other wounds or exit sites. The organism was identified using selective chromogenic agar at 37°C for up to 48 hours. Infection Prevention and Control were notified of positive MRSA results and Contact Precautions were initiated. Additional information regarding MRSA risk factors was obtained from patient records and patient interviews.

Result: Of 2131 eligible patients, 1935 (90.8%) met inclusion criteria. Universal screening identified 33 MRSA-positive patients versus 29 patients by targeted screening. Universal screening added 1396 (65.5%) patients. The risk factor for the 4 additional cases was an outpatient clinic visit in the past year.

Conclusion: This study was limited to two inpatient units. Results may not reflect the entire facility. The current screening tool targeted 735 (34.5%) admissions and captured 87.9% of patients admitted with MRSA. Universal screening added 1396 patients (65.5%) for testing and identified 4 additional patients with MRSA. Universal screening is not recommended at this time.

Wednesday, May 13, 2009

Salon C, Assessing/Understanding Behaviour

HERETICS AND LUNATICS IN INFECTION CONTROL HISTORY (AND WHAT WE CAN LEARN FROM THEM)

Paul Webber; Webber Training Inc, Belleville, ON, Canada

The history of infection prevention and control is littered with heresy and (apparent) lunacy. Among the legion of examples: Dr.'s Snow, Semmelweis, and Daschner. John Snow's insistence that the contagion plaguing London of his day was the result of consuming contaminated water and the invisible creatures therein, rather than the widely accepted miasma theory, branded him a lunatic. Dr. Ignaz Semmelweis was not only considered a heretic and lunatic for his hand hygiene compulsion, he was ultimately driven to lunacy by ferociously intransigent opposition. And this practice continues even to modern times with Prof. Franz Daschner's heretical precepts of environmentalism in infection control. This presentation will explore several examples of how some contrary-thinkers evolve from heretics to heroes (and some who were just lunatics), and what lessons modern infection prevention and control can take away from our history.

EVALUATION TOOLS TO ASSESS HEALTHCARE WORKERS' KNOWLEDGE AND SKILLS RELATED TO THE USE OF PERSONAL PROTECTIVE EQUIPMENT

María Ozua, Donna Moralejo

Memorial University School of Nursing, St John's, NL, Canada

Issue and Purpose: One of CHICA-Canada's core competencies in Infection Prevention and Control for Healthcare Workers (HCWs) specifies that HCWs should demonstrate appropriate use of Personal Protective Equipment (PPE). Unlike hand hygiene, there are few tools available for assessing HCWs' knowledge and skills on PPE use. This project developed tools that are more comprehensive than those currently available, and that address recommendations from national guidelines as well as common errors.

Project Methods: 1) Literature was reviewed to identify tools and key issues with use of PPE, 2) tools were developed and 3) preliminary feedback was obtained from experts (Infection Control Practitioners, educators and students) for content validity and feasibility.

Results: Key issues with PPE identified include: noncompliance with recommendations, self-contamination when removing or wearing PPE, cross-transmission to the environment, skin/other reactions, and underutilization of hand hygiene. Five tools were developed: mask, respirator, gloves, gown, and goggles/face shield. Each tool consists of a performance checklist (for donning, removal and wearing when providing care), questions to assess knowledge, and answers to the questions.

Conclusion: The five PPE assessment tools are now ready to be used. These tools are applicable to students during basic education and practicing HCWs during orientation and in-service education.

A HUMAN FACTORS APPROACH TO HAND HYGIENE

Anjum Chagpar, Raquel Lopez, Carleene Banez, Leah Gitterman

University Health Network, Toronto, ON, Canada

Hand hygiene, like many healthcare processes, is complex due to the number of factors involved. There are a number of physical tools required, diverse environments in which the process must occur, different groups of healthcare workers required to comply, each with highly differentiated work cultures, varying work processes and task requirements. Because of this complexity, hand hygiene lends itself well to a human factors analysis; that is, an analysis of the people, tools, environments and processes involved, in order to design a system that matches human cognitive and physical strengths and makes allowances for human limitations.

Methods: A multi-phased user-centered approach was undertaken to explore barriers and enablers to hand hygiene in diverse environments (rehab, family medicine, emergency and intensive care) for a number of healthcare workers (physicians, nurses, allied health, housekeeping, patient support workers). Observational studies, interviews, focus groups,

and surveys were used to engage end users in solution development. Solutions were then validated through an environmental modification study, which sought to quantify the benefits of proposed solutions. This work was funded by the Canadian Patient Safety Institute.

Conclusions: This research highlighted the need to take into consideration the differences between healthcare workers, their environments and the tools they are provided when recommending solutions to barriers. Context specific recommendations resulting from this work will be formulated into a toolkit for dissemination by CPSI in April 2009.

MASTERS OF DISGUISE: CONDUCTING AN ANNUAL COVERT HAND HYGIENE AUDIT

Melody Cordoviz¹, Ian Albert¹, Janet Barclay¹, Samantha Woolsey¹, Amber-Leah Wolfe¹, Shelley Winton³, Sharon Wilson², Sue Lafferty², Ariel Hendin¹, Matthew Feldman¹, Niki Sibera¹, Sharla Manca¹, Mark Joffe¹, Elaine Belseck¹

¹Royal Alexandra Hospital, Edmonton, AB, Canada, ²Glenrose Rehabilitation Hospital, Edmonton, AB, Canada, ³Regional Infection Prevention and Control, Edmonton, AB, Canada

Issue: Performing hand hygiene audits on patient care units can be a challenge for infection control practitioners (ICPs). Selecting an appropriate method is important to ensure results are valid. Using direct observation may inflate hand hygiene rates due to Hawthorne effect. An unobtrusive method is preferable to obtain accurate hand hygiene rates. A disguise is created allowing an observer to move freely on a nursing unit and monitor hand hygiene performance. This imaginative disguise always involves impersonating a staff member who would normally be present in a patient room. The disguise usually has a background story and on occasion has required a homemade prop to make the ruse more believable.

Project: The hand hygiene audit is a direct observational study whereby staff is unobtrusively observed by the same data collector. There is no interaction or immediate feedback provided to observed staff necessitating the need for a disguise.

Results: The hand hygiene rates are provided to the infection prevention and control quality assurance committee, administration, and the management of the clinical areas.

Lessons Learned: Performing a yearly hand hygiene audit requires a great deal of planning, especially when creating an assumed identity is required. Hand hygiene rates fluctuate for various reasons. Rates are temporarily affected by hand hygiene campaigns. Deviating from a method that has been successful will lead to unusable data. Barriers to hand hygiene exist and need to be addressed. Utilizing a disguise is a good method to obtain true hand hygiene rates.

Wednesday, May 13, 2009

Salon F, Outbreaks

PARAINFLUENZA OUTBREAK INVESTIGATION IN A BONE MARROW TRANSPLANT UNIT (BMT)

Josee Shymanski, Jo Anne Janigan, Lothar Huebsch, Suzanne Madore, Kathryn Suh,

Virginia Roth

The Ottawa Hospital, Ottawa, Ontario, Canada

Background: Parainfluenza outbreaks in BMT recipients are associated with increased morbidity and mortality. Between July 26 and July 31st 2008, parainfluenza was identified in three BMT patients admitted to our 24 bed BMT unit, prompting an immediate outbreak investigation.

Methods: Virology results for the past 6 months were reviewed. Chart review was completed. Screening for febrile respiratory illness was reinforced and symptomatic patients were placed on droplet precautions. Traffic within the unit was restricted. Rapid testing for parainfluenza was initiated. Ongoing education was provided to the unit staff. Stricter measures including private room for all patients, use of mask and gloves for all patient contact, screening for asymptomatic carriage, and extending outbreak measures to outpatient areas were required to halt transmission.

Results: The first case dated June 22 could not be linked to the outbreak. For the initial cluster of cases, the viral culture results were reported positive from 4 to 10 days after collection of the nasopharyngeal specimen. Most of the remaining cases were exposed and infected before the diagnosis of parainfluenza was confirmed in this cluster. The outbreak was declared over on Sept 17th, after 2 incubation periods without occurrence of a new case and after testing all patients to rule out asymptomatic carriage. In total, 15 patients acquired parainfluenza infection; 4 developed pneumonia of which 2 required ICU admission.

Conclusions: As a result of this outbreak, we have enhanced our routine viral testing for BMT patients with any respiratory symptoms and have enforced more rigorous routine practices and visitor restrictions on the unit.

CONTROL OF A VRE OUTBREAK IN A LARGE TEACHING HOSPITAL: A JOINT EFFORT

Jan van Zeijl^{1,2}, Tiny Jilens¹, Christiaan Roggeveen^{2,3}

¹Medical Center Leeuwarden, Leeuwarden, Netherlands, ²Public Health Laboratory Friesland, Leeuwarden, Netherlands, ³Hospital Slotervaart, Amsterdam, Netherlands

Issue: Vancomycin Resistant *Enterococcus faecium* (VRE) can cause large and costly outbreaks in healthcare facilities, accompanied by serious morbidity and mortality. Our hospital faced a large outbreak encompassing 14 clinical wards.

Project: The at-risk period for contracting VRE was defined from November 1 2005 until January 16 2006. A multidisciplinary outbreak control team adopted colonization definitions for VRE-positive, VRE-suspected, and VRE-negative, respectively. Patient cohorts were formed. Positive and suspected patients were flagged in the hospital information system. Strict hygienic guidelines were implemented. Environmental cleaning procedures were intensified. Rooms of VRE-positive patients and contaminated areas could only be re-used after a nebulising process (hydrogen peroxide). Isolation of VRE by culture from individual stool samples, or by PCR from pooled specimens, was used

for case finding. Molecular typing (MLVA) was performed on all isolated strains.

Results: 8900 patients were determined to be at-risk. 113 VRE strains were detected in 112 patients. 108 strains belonged to the same MLVA type. Of the five non-epidemic VRE strains that were detected, four occurred in dialysis patients. Many environmental samples turned out to be positive demonstrating massive spread to the surrounding area. Within six weeks after implementing the control measures the outbreak was under control.

Lessons learned: The rapid containment of the outbreak was attributed to implementation of the abovementioned policies, including strict basic hygienic guidelines to prevent further spread. Our outbreak protocol was further adapted in order to increase physicians' involvement in decision making about closing wards and moving patients.

OUTBREAK PEP RALLY: A GOOD COMMUNICATION TOOL

Stefanie Ralph; *Norfolk General Hospital, Simcoe, Ontario, Canada*

Issue: February 29, 2008 to April 14, 2008 Norfolk General Hospital (121 bed acute facility) experienced an outbreak of Vancomycin Resistant Enterococcus on the combined obstetrics, surgical, and medical unit (3B). A total of 31 hospital associated cases were identified. The magnitude of the outbreak affected staff in all departments. As the outbreak continued staff morale decreased and a need for further staff communication was identified.

Project: A pep rally was held for staff in the hospital cafeteria March 20, 2008. The pep rally included handmade signs that read "Go NGH" or "No VRE", hand shaped noise makers, balloons, and streamers. Information was presented by the Vice President for Patient Care and Infection Control Practitioner. Messaging was brief with the focus on working together to bring the outbreak under control. The pep rally ended with a cheer "Help 3B, no VRE!" Breyers Unilever donated ice cream bars for all attending staff.

Results: This event had good local media coverage. McDonalds went on to deliver Egg McMuffins to all morning staff and cheeseburgers to all evening staff the next day. The community support of the hospital during this difficult time became a wonderful good news story. Staff morale was noticeably improved and on March 31 it was identified that transmission had been contained and the 3B unit was reopened.

Lessons learned: Outbreaks are very stressful for all staff involved. Upbeat messaging, fun and silliness went a long way to keep up staff morale. Our organization would use this technique again in the future.

ADAPTING ONTARIO'S JUST CLEAN YOUR HANDS PROGRAM FOR LONG-TERM CARE HOMES

Clare Barry, Liz McCreight, Helen Sawick; *Ministry of Health and Long-Term Care, Toronto, Canada*

Issue: Hand hygiene is the single most important way to prevent infections and outbreaks in long-term care homes (LTC). To learn what adaptations should be made to the Ontario's multi-faceted hospital hand hygiene program for LTC, stakeholder focus groups were used.

Project: Stakeholders indicated that LTC would require a training program that was accessible to individuals and groups without a dedicated trainer. Feedback demonstrated that implementing the "4 moments" for HH would require adaptation for shared activities. The materials adapted for LTC include; a DVD with different vignettes to show practical application of 4 moments in LTC with sections for the different staff groupings, volunteers and family; adapted 4 moments poster; mini pocket guide; abridged implementation guide and revised provider categories on audit tool. An expert reference group reviewed materials.

Results: LTC is different from hospitals because they are homes – places where people live – as well as care settings. Many of the activities in LTC are shared activities. In order to reduce the transmission of organisms beyond the resident room, HH for LTC has been adapted to incorporate these shared activities. "Your 4 moments" will be practiced in resident's rooms and whenever direct care is provided. In shared activities, HH will be practiced by the residents and providers before and after activities.

Lessons Learned: Due to limited resources in LTC the teaching process is on a DVD so that a dedicated trainer is not required; the 4 moments required adaptation for shared activities.

POSTER PRESENTATIONS

TUESDAY, MAY 12/WEDNESDAY, MAY 13, 2009 –
ST. JOHN'S CONVENTION CENTRE

TUESDAY, MAY 12, 2009

OUTBREAK BINDERS: A QUICK REFERENCE TOOL

Stefanie Ralph¹, Judy DeGrosbois²; ¹Norfolk General Hospital, Simcoe, Ontario, Canada, ²Perth District Health Unit, Stratford, Ontario, Canada

Issue: Effective outbreak management needs to be thorough and consistent. An enteric outbreak occurred in our hospital the day before the full time ICP left on holidays. A brand-new part-time ICP and the Vice President of Patient Care managed the outbreak. It was identified that for a small facility, where Infection Control back-up does not run deep, a quick reference tool for outbreak management could be valuable.

Project: Reference binders for enteric and respiratory outbreaks were completed. Contents include: outbreak and case definitions, contact numbers, "to do" checklists, assessment tools, control measure checklists, meeting templates, blank line listings, ready to post signs, scripts for switchboard, fact sheets, decision making framework, and references. Full versions of the Outbreak Binders are stored in the Infection Control and Vice President of Patient Care Offices, and the Administrator On Call Kit.

Results: The reference binders have been used for two confirmed and several potential outbreaks since their creation in February 2008. Having document templates makes the collection of data, communication, and meeting organization much simpler. The outbreak binders also help ensure small details are not overlooked. Contents of outbreak binders presented at CHICA-HANDIC during an education session. Central South Regional

Infection Control Network is currently adapting the idea, and investigating providing novice ICPs with a similar document in CD-ROM format.

Lessons Learned: Creating reference binders decreases time and stress spent on outbreak management. Reference binders are useful tools for designates of Infection Control programs in smaller facilities.

DISCHARGE/TRANSFER TERMINAL ENVIRONMENTAL CLEANING: A REFERENCE CHART FOR PATIENT CARE UNITS

Bronwen Edgar, Mary Vearncombe, Sandra Callery; *Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada*

Issue: The healthcare environment plays an important role in the spread of pathogens such as *Clostridium difficile* and antimicrobial resistant organisms such as methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant enterococcus (VRE). The importance of thorough cleaning to reduce the spread of microbial contamination in hospitals is being increasingly recognized.

While hospital cleaning staff are trained to clean patient rooms daily and upon discharge, there is often confusion around the additional cleaning measures that may be required for patients on Additional Precautions.

Project: An easy to follow reference chart for terminal cleaning of patient rooms upon patient discharge or transfer was developed in collaboration with Environmental Services, Nursing, and Infection Prevention & Control. The chart focuses on specific cleaning instructions for organisms of interest such as MRSA, VRE, *C. difficile*, Norovirus, and *Mycobacterium tuberculosis*. It provides specific instructions on type of disinfectant, method of cleaning and items to be cleaned or replaced.

Results: The chart was presented at patient unit staff meetings and/or posted throughout the units and is also available on the hospital intranet. Feedback from unit nursing and support staff has been positive. It is hoped that this reference chart will decrease the number of calls after hours to clarify room cleaning requirements for patients on Additional Precautions.

Lessons Learned: An audit tool is being developed, based on the cleaning tasks in this chart. The audit tool will help to identify gaps in our current cleaning process and training materials, including the reference chart.

ASSESSMENT OF THE KNOWLEDGE AND THE PREDICTORS OF BEHAVIOUR IN PATIENT SERVICE ASSISTANTS (PSAs) REGARDING ENVIRONMENTAL CLEANING IN A PEDIATRIC HOSPITAL

Anne Matlow, Richard Wray, Susan Richardson; *The Hospital for Sick Children, Toronto, Ontario, Canada*

Background: Studies have shown that education improves environmental cleaning but does not eliminate contamination in healthcare settings.

Objective: To assess the impact of PSAs' knowledge, attitudes and beliefs on cleaning intentions in hospital.

Methods: An anonymous questionnaire was distributed to 30 PSAs working in intensive care units. The theory of planned behaviour framed the analysis of factors contributing to behaviour to identify predictors of behavioural intentions. Predictors were analyzed using Student t test for significance, and variables with a P value of 0.05 or less on univariate analysis were examined by multiple regression. Additionally, themes were identified from focus groups.

Results: 53% (16/30) of surveys were returned. 37.5% of PSAs disagreed that the environment has germs associated with disease, and 25% thought that cleaning solutions were unsafe for patients. Factors predicting behavioral intent (BI) were grouped according to: 1. behavioural beliefs (BB), 2. normative beliefs (NB), and 3. control beliefs (CB). BB (P 0.01), NB (P 0.002) and CB (P 0.05) were independently associated with BI. NBs correlated most highly (R=.97) with BI compared to BB (R=.90) and CB (R=.77). The dominant themes revealed from focus groups were PSAs' commitment to the safety of patients and to meeting patient and family expectations.

Conclusions: Many PSAs are misinformed about microbial environmental contamination and about the safety of cleaning products. Pleasing patients and families in a pediatric setting is a key driver of PSAs' performance intentions. Addressing knowledge gaps and attitudes when educating PSAs may improve performance and reduce environmental contamination contributing to health care associated infections.

REPROCESSING OF CRITICAL AND SEMICRITICAL MEDICAL DEVICES AUDIT PROJECT

Linda Kingsbury; *Vancouver Coastal Health, Vancouver, BC, Canada*

Issue: The provincial health department mandated compliance with current standards for reprocessing of critical and semicritical medical devices.

Project: A comprehensive practice audit and gap analysis of reprocessing practices for medical devices, including the use of flash sterilization, was conducted. An audit tool that had been validated in two other provinces was revised and used.

Results: Standards of practice in reprocessing varied across the region and continuum of care. Audit results identified a lack of specialized training for reprocessing, competency checking and supervision. Some reuse of single use medical devices was identified and the practice stopped. Sterility assurance, flash sterilization and high level disinfection required improved practices. Chemicals were often inappropriate for the purpose, not handled in a safe manner, and not labeled with date opened and expiry date. Space constraints, outdated equipment, equipment maintenance, communication and standardized education were particular challenges. Increased inventory of medical devices was required to ensure adequate time for appropriate reprocessing. Some sites chose to centralize reprocessing, i.e., send medical devices to a central reprocessor rather than update sterilization equipment and training. The need for development and dissemination of regional policies and protocols was identified.

Lessons Learned: Quality assurance projects are valuable in elevating the level of practice and knowledge, and provide a means of measuring and recognizing improvement.

ASSESSMENT OF INFECTION CONTROL AND OCCUPATIONAL HEALTH NEEDS IN A LARGE AMBULATORY CARE CENTRE

Linda Kingsbury¹, Sydney Scharf¹, Ronaldo Fujii¹, Kun Zhao¹, Catherine Kidd¹, Annalee Yassi¹, Elizabeth Bryce¹

¹Vancouver Coastal Health, Vancouver, BC, Canada, ²Vancouver Coastal Health, Vancouver, BC, Canada, ³University of British Columbia, Vancouver, BC, Canada, ⁴University of British Columbia, Vancouver, BC, Canada, ⁵Vancouver Coastal Health, Vancouver, BC, Canada, ⁶University of British Columbia, Vancouver, BC, Canada, ⁷Vancouver Coastal Health, Vancouver, BC, Canada

Issue: Patient service delivery is increasingly shifting to ambulatory care. There are no models of how to implement an occupational health and infection control program in a multi-partnered healthcare ambulatory environment, particularly with both public and private sector partners. The aim was to develop a comprehensive collaborative occupational health and infection control program that meets the needs of all partners, patients and visitors in this ambulatory care building.

Project Methods: We used three means of gathering information: (1) key informant interviews, (2) workplace inspection; (3) staff survey.

Results: Results from key informant interviews identified needs related to organizational issues, physical environment, and education/training. Staff survey results showed deficits in knowledge of infection control practices, safe sharps handling, how to contact either OHS or Infection Control. Audits revealed lack of signage, hand hygiene stations and soiled utility rooms, as well as inconsistent practice in cleaning patient care equipment and use of personal protective equipment. Recommendations were developed and are being communicated to management and staff. Implementation of the recommendations began with staff education sessions and infection control consultation.

Lessons Learned: Infection control and occupational health needs exist in ambulatory care settings, and a collaborative approach is welcome in a private-public partnership.

MEASURING RESOURCES AND ACTIVITIES FOR INFECTION PREVENTION AND CONTROL IN ONTARIO, A PROVINCIAL SURVEY ACROSS FIVE HEALTHCARE SECTORS

Colleen Nisbet, Madeleine Ashcroft, Anne Bialachowski, Nora Boyd, Isabelle Langman, Grace Volkening

Regional Infection Control Networks, Ontario, Canada

Issue: As Regional Infection Control Networks became established in Ontario and began strategic planning a need was identified to learn more about current infection control resources and activities within each region.

Project: To address this issue the networks facilitated a province-wide survey that provided both provincial and regional data. This research was designed to assess a variety of issues including, but not limited to, Infection Prevention and Control (IPAC) personnel, formal instruction, professional development, medical support, IPAC Committee activities and access to information. The questionnaire was developed for five healthcare sectors - Acute Care, Non-Acute Care, Emergency Medical Services, Community Care, and Public Health. The questionnaires were tailored to address sector-specific issues, but designed to ensure most questions were common to all. The survey was mailed to 1064 organizations in Ontario. 641 organizations (60%) filled out and returned the questionnaire. All results were collected, analyzed and reported by Research Strategy Group Inc.

Results: The results of this survey demonstrated IPAC strengths and weaknesses. Gaps such as a lack of formally trained professionals, time and resources for staff training and ability to manage conflicting IPAC priorities were identified. Strengths noted included access to internet, use of IPAC networks and healthcare libraries.

Lessons Learned: An inventory of infection prevention and control resources now exists in Ontario. This inventory has become an essential tool in informing the strategic planning of regional infection control networks. In the long term, we hope to use this report to measure IPAC resource changes and improvements over time.

HAND HYGIENE – A CHANGE IN CULTURE

Mirza Ali; Scarborough Hospital, Toronto ON, Canada

An ambitious hospital-wide hand hygiene program rolled out in mid 2007 changed direction many times during its course, overcoming challenges, push back, limited funding, low compliance and an old mindset.

This presentation explains program launch, raising awareness, promoting the program throughout the facility, types of interventions, duration, what worked, how measurable indicators changed, how best to use corporate resources to meet program objectives. Our experience with this taught us how to get baseline data, draw timelines for interventions, bring about change in culture, set small goals, how to sustain the program and maintain momentum

Lessons learned in this carry a take-home message for those wishing to embark on a new or jumpstart an ongoing hand hygiene program in any healthcare facility.

From this project we also learned how to get physicians on board to support the program by being champions & nominate staff members to be the faces of hand hygiene. Diverse staff culture spread across two sites and the large mix of community we serve brought on many challenges. Despite all this, we achieved our objectives, on some units within a short time.

To summarize, this presentation offers a simple get-started kit, projected timelines, expected results, a checklist & measurable indicators.

QUALITY AUDIT OF NATIONAL METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) SURVEILLANCE DATA: KEY FINDINGS AND RECOMMENDATIONS FOR IMPROVEMENT

Leslie Forrester¹, Linda Plude², Marianna Ofner-Agostini³, John Koch², Saeed Ghahremani⁴, Katie Cassidy², Zahir Hirji⁵, Kathryn Bush⁴, Christine Weir², Joseph Vayalunkal⁶, Stephanie Leduc², Elizabeth Henderson⁴

¹Vancouver Coastal Health Authority, British Columbia, Canada, ²Public Health Agency

of Canada, Ottawa, Ontario, Canada, ³Public Health Agency of Canada, Toronto, Ontario, Canada, ⁴Alberta Health Services, Alberta, Canada, ⁵University Health Network, Toronto, Ontario, Canada, ⁶Alberta Children's Hospital, Alberta Health Services, Alberta, Canada

Introduction: The Canadian Nosocomial Infection Surveillance Program (CNISP) has conducted surveillance for incident cases of MRSA in sentinel hospitals since 1995. The utility of these data is dependent on its quality. Since 2004, a web-based system for data input has been used. In 2007, a data quality audit of the 2005 MRSA data was conducted.

Methodology: Note validation (replicate data collection) with stratified random sampling was used to obtain the comparison data for the audit. In 2005, 5536 cases were submitted to CNISP from 44 hospitals (range=1-538; median=83). A proportional sample (up to 25%) of submitted forms from each site was randomly selected. Audit data were manually entered into an electronic database containing the sample of original data. The original data were compared to the replicated data for congruence on seven key variables.

Results: Audit data were received from 32/44 hospitals (73%), providing 443/611 of the case forms requested. Of these, 397 (90%) had matching case identification numbers. Errors ranged from 3.5-5.3% for gender and date of birth and increased to 14.4-23.7% for less well-defined variables (i.e. culture reason, where MRSA was acquired, specimen site, severity, other infection).

Conclusions: Date variables can be improved by incorporating date formats that reduce error (e.g. 24-JAN-2009). Provision of standard definitions with practical examples and training of data collectors may improve data quality for variables that require clinical judgment. A data quality framework with quality assurance practices, including ongoing auditing will be integrated into CNISP's surveillance programs.

SUPERBUGS: A NIGHTMARE ON YOUR HANDS

Nora Boyd, Laura Fraser, Holly Teseelaar, Carol Annett; *Regional Infection Control Network, Windsor, Ontario, Canada*

Issue: There are few resources for front line staff in long term care for infection prevention and control particularly on hand hygiene and glove use.

Project: In Ontario, 75% of direct care in nursing homes is provided by personal support workers (PSWs). Focus groups were held with PSWs and managers in Erie St Clair to determine education needs for infection prevention and control. Needs expressed by PSWs were fear of acquiring MRSA and C.difficile. Managers were concerned about glove use. Using Nadine Jane's theory of how PSWs learn in the moment, an education session for PSWs was created and delivered: 32 sessions and 400 PSWs to evaluate content and delivery. A professional film company took the content and created a short DVD to provide standardized accessible education to PSWs in nursing homes on hand hygiene and glove use. The DVD, *Superbugs, A Nightmare On Your Hands*, has been distributed across Ontario.

Results: Using adult learning principles and Nadine Janes theory resulted in positive evaluations. Although only 58% indicated an increase in knowledge on the topic;

- 99% enjoyed the presentation;
- 98% reported it was a good use of their time;
- 99% felt the teaching methods were effective and
- 100% reported their questions on the topic were answered.

The DVD evaluation results showed 100% of nursing homes reported it to be a useful educational tool.

Lessons Learned: An IPAC resource was successfully created. Further evaluation of the resource in terms of changing practice is required.

VISITOR HAND HYGIENE CAMPAIGN

Nora Boyd, Laura Fraser, Sadie MacDonald, Line Lauzon, Holly Teseelaar, Carol Annett, Cathy Egan, Ellen Otterbein; *Regional Infection Control Network, Windsor, Ontario, Canada*

Issue: In Canada, it is estimated that infections acquired in healthcare kill 8,000-12,000 people each year. The primary measure to reduce healthcare associated infections is hand hygiene. Alcohol based hand rub (ABHR) is the most effective method for hand hygiene. Nursing homes have signage and alcohol based hand rub at the entrances. Visitors often do not use it.

Project: A visitor hand hygiene campaign was undertaken to highlight its importance during outbreak season in nursing homes. Using a campaign created by the Waterloo Wellington Infection Control Network, the Erie St. Clair Infection Control Network partnered with Public Health and the nursing homes on a visitor hand hygiene campaign. Using social marketing and a simple message, visitors and staff were asked to perform hand hygiene upon entering the home to keep our residents safe. A banner of signed hands was left in the home as a reminder of the importance of hand hygiene. The campaign used personal interaction, one clear message "Just Clean Your Hands," a signed commitment and visual prompts. Media releases enhanced communication with the community.

Results: The campaign and partnership was positive, beneficial, simple and fun. 35 nursing homes participated with 50-120 hands signed at each home. Media coverage amplified the message through the community.

Lessons Learned: Further evaluation is required to see if engagement is effective in changing behaviour over time. There are few ways of measuring hand hygiene compliance available in nursing homes.

CASE CLUSTER OF CELLULITIS ASSOCIATED WITH HYPODERMOCYCLIS IN A GERIATRIC COMPLEX CONTINUING CARE UNIT

Heather Candon, Jane Van Toen, Bryan Morales; *Baycrest, Toronto, ON, Canada*

Background: As of September 1, 2008 Ontario hospitals were mandated to replace hollow-bore needles with safety engineered devices. In following this directive, Baycrest Centre for Geriatric Care implemented the use of a needle-less safety equivalent facility wide. Upon switching to the needle-less system, a cluster of hypodermoclysis-related

cellulitis cases developed over a three month period on a complex continuing care (CCC) unit. A prospective, quasi-experimental before-after assessment design was used to evaluate the effects of a multi-faceted intervention in reducing the incidence of hypodermoclysis-related cellulitis in residents of a CCC unit.

Method: The multi-faceted intervention consisted of the following: educational in-services on the safety engineered devices for nurses to reinforce best practice techniques; implementation of checklist auditing tool to monitor procedure, frequency and duration of hypodermoclysis; updating nursing skills package; upgrading to 2% chlorhexidine gluconate skin preparation solution; switched from Y-adapter to a single-port system. The main outcome measure included the number of diagnosed cellulitis cases on the unit post-intervention.

Results: From September 1-November 31, 2008, 7 cases of cellulitis were documented due to hypodermoclysis. Post-intervention, one case of hypodermoclysis-related cellulitis occurred. The frequency of hypodermoclysis events pre-intervention was 18.4 per 1000 patient days versus post-intervention at 19.2. The hypodermoclysis-related cellulitis incidences on the unit decreased significantly from 2.3 pre-intervention to 0.3 post-intervention per 1000 patient days ($p < 0.05$, Fisher's exact test).

Conclusion: A multi-faceted intervention was successful in reducing the incidence of cellulitis associated with hypodermoclysis on a CCC unit in a geriatric facility.

HAND HYGIENE COMPLIANCE USING THE 'JUST CLEAN YOUR HANDS' CAMPAIGN'S AUDITING TOOL: ACTUAL RATES VERSUS PERCEIVED RATES OF COMPLIANCE ON TWO UNITS OF A LARGE COMMUNITY HOSPITAL.

Claudia Crusell-Balogh^{1,2}, Diane Wallace¹, Ruth Shertzberg¹, Chris Mitchell¹, Marie Singh¹, William Ciccotelli¹

¹Grand River Hospital, Kitchener, ON, Canada, ²University of Waterloo, Waterloo, ON, Canada

Issue: To investigate actual versus perceived compliance rates for Hand Hygiene amongst Health Care Workers (HCWs) on two units in our large community hospital. Actual rates of hand hygiene compliance vary greatly between HCWs on different units; perceptions have a large role in determining compliance rates.

Project: Hand Hygiene compliance rates were calculated using the Just Clean Your Hands auditing tool provided by the Ministry of Health and Long Term Care (MOHLTC). A survey tool, based in part on the MOHLTC's Assessment Tool for Health Care Provider Hands, was offered to all HCWs on each unit by an Infection Prevention and Control (IPAC) auditor.

Results: Surveys on Hand Hygiene were administered to a total of 37 HCWs from both programmes. A total of 633 opportunities were collected; the compliance rate in the NICU was 66.7% and the Surgical Programme was 27.2%. One hundred percent of respondents overestimated their hand hygiene compliance rates based on their unit's average rate of compliance. Interestingly, HCWs from the NICU had more realistic perceptions of both their unit's hand hygiene compliance as well as the hospital-wide compliance rates.

Lessons Learned: The perceived rates of compliance with hand hygiene varied greatly between units with a greater discrepancy on the unit with the lower rate of compliance; this may present barriers to motivational efforts to increase hand hygiene on some units.

PARTNERS IN PREVENTION: PARAMEDICS AND HEALTH UNITS PARTNER TO PROVIDE INFLUENZA IMMUNIZATION TO THE COMMUNITY

Greg Bruce¹, Laurie Stanford²; ¹County of Simcoe Paramedic Services, Midhurst, Ontario, Canada, ²Simcoe Muskoka District Health Unit, Barrie, Ontario, Canada

Issue: In October 2000 Ontario initiated a universal influenza immunization program (UIIP) providing free vaccine to all residents. Ontario Health Units were given the responsibility for offering influenza vaccine to residents and have been meeting this mandate by providing clinics in a variety of community settings since the programs inception. Marginalized and high risk members of the community may not be inclined to attend Health Unit clinics and as a result not receive immunization. Paramedics have regular contact with these residents as patients and through an established relationship of trust are uniquely positioned to provide immunization thereby increasing the coverage rates of a population at risk for influenza.

Project: Paramedic services in Toronto and the County of Simcoe partnered with local Health Units identifying organizations serving marginalized and high risk populations. Targeted organizations included those serving the homeless and under housed, senior's organizations and emergency service partners. Immunization clinics were scheduled and conducted by Paramedics at the venues frequented by the population these organizations serve.

Results: The number of clinics and the client numbers have increased since the programs inception. Toronto clinics increased from 73 clients in 2000 to 1703 in 2004 and County of Simcoe Clinics increased from 495 clients in 2006 to 982 in 2008.

Lesson Learned: Providing access to influenza vaccine at venues frequented by marginalized and high risk populations can improve influenza immunization rates for this population. Familiarity with Paramedics and convenience contributed to increased vaccine uptake, leading to the success of the Health Unit/Paramedic Service partnership.

POSITIVE IMPACT OF PROSPECTIVE SURVEILLANCE AND A MULTIFACETED SURGICAL SITE INFECTION (SSI) REDUCTION PROGRAM TO REDUCE SSIs IN GASTROINTESTINAL CANCER SURGERIES

Fatema Jinnah, Sandra Callery, Mary Vearncombe; Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada

Background: Surgical site infections (SSIs) are common nosocomial infections in surgical patients. SSIs in colorectal surgery have high morbidity, increasing of length of stay,

increasing hospital costs and impacting quality of life. SSI surveillance with feedback has been shown to reduce SSI rates.

Method: Prospective surveillance on all elective colorectal (CRC) and hepatobiliary and pancreatic (HB&P) cancer surgeries started in January 2007 when baseline SSI rates were collected. Interventions to reduce SSIs included: timing of prophylactic antibiotics, maintaining normothermia, pre-operative clipping, hand hygiene and the introduction of chlorhexidine in alcohol (CHG) skin-prep solution. Surveillance results on SSI rates and process indicators were provided to the SSI team during regular meetings and surgeon specific rates were given to individual surgeons.

Results: Baseline SSI rates were: CRC 15.8% and HB&P 28.2%. Post-intervention (October to December 2008) SSI rates were: CRC 12.0%, and HB&P 3.3%. The overall severity of infection was also reduced post-intervention. Compliance rates of prophylactic antibiotic timing and normothermia maintenance increased from 64.2% and 42.8%, respectively, in December 2006 to 92% and 71%, respectively, in October 2008.

Conclusion: The introduction of prospective surveillance, multifaceted interventions with prompt feedback of SSI rates and process indicators to the SSI team and surgeons was effective in reducing the rate of SSIs associated with gastrointestinal cancer surgeries.

AN INNOVATIVE CROSS-REGIONAL INFECTION PREVENTION AND CONTROL AND OCCUPATIONAL HEALTH AND SAFETY PARTNERSHIP TO ADDRESS STAFF INFLUENZA VACCINATION RATES

Madeleine Ashcroft¹, Risa Cashmore¹, Ruth Collins², Julie Fischer³, Doreen Foster⁴, Jennifer Gilland⁵, Anne Kubacki⁶, Edna Laming⁷, Dana Marelic⁸, James Prang⁹, Pam Siddall³, Alexis Silverman², Brenda Smith¹⁰, Debbie Valickis², Jo Zupnik¹¹

¹Mississauga Halton Infection Control Network, Mississauga, ON, Canada, ²Peel Public Health, Brampton, ON, Canada, ³Trillium Health Centre, Mississauga, ON, Canada, ⁴Wellington Dufferin Guelph Health Unit, Fergus, ON, Canada, ⁵Halton Healthcare Services, Oakville, ON, Canada, ⁶Halton Region Health Department, Oakville, ON, Canada, ⁷William Osler Health Centre, Brampton, ON, Canada, ⁸Toronto Public Health, Toronto, ON, Canada, ⁹Headwaters Health Care Centre, Orangeville, ON, Canada, ¹⁰Central West Infection Control Network, Brampton, ON, Canada, ¹¹The Credit Valley Hospital, Mississauga, ON, Canada

Issue: Since the introduction of universal free vaccine in Ontario, public and long-term care facility staff influenza vaccination rates have increased, while hospital staff rates have remained stagnant. Staff vaccination impacts patients and is a shared concern for occupational health and safety (OH&S) and infection prevention and control (IPAC) professionals in facilities, public health unit staff, and Regional Infection Control Networks (RICNs). IPAC and OH&S program partnership was critically emphasized in The SARS Commission Final Report (2006).

Project: The staff of two adjacent RICNs in Ontario joined the OH&S department leads and IPAC professionals from all five hospital corporations and four public health units in summer 2008 to brainstorm strategies, share policies and procedures, and reach consensus on shared immunization record cards, promotional messaging and materials such as banners, pins, and t-shirts.

Results: While the 2008-2009 season vaccination rates have not risen significantly above the previous years' in the hospitals, the trend is upwards. The group acknowledge the mutual support gained from this initiative, and that this is but the first step in a focused and collaborative effort to mitigate the ongoing challenge of influenza in our communities.

Lessons Learned: As health care workers in our regions tend to work across organizations, the group recognizes that consistent and standardized messaging is advantageous to demonstrate solidarity across regions. This initial networking provided evidence that long-standing organizational boundaries can be overcome in the interests of best practices for protecting the health of workers and patients, and OH&S and IPAC joint endeavours.

STREAMLINING FEBRILE RESPIRATORY ILLNESS SURVEILLANCE; NOTHING TO SNEEZE AT!

Angela Wigmore, Natalie Bruce, Virginia Roth, Kathryn Suh; The Ottawa Hospital, Ottawa, Ontario, Canada

Issue: Surveillance for febrile respiratory illness (FRI) is an essential part of nosocomial respiratory infection prevention. Despite this, FRI surveillance is labour intensive. At the Ottawa Hospital (TOH) FRI surveillance has included a screening process on patients admitted to hospital. In addition, Infection Prevention and Control (IPAC) has reviewed all admission diagnoses and reviewed charts on all patients who had 1 of the 13 diagnoses suggestive of FRI.

Project: TOH IPAC team developed an action plan to streamline FRI surveillance and increase healthcare professionals' (HCPs) awareness of FRI for 2008-09. This plan included surveillance, education and communication strategies. We reviewed the diagnoses of influenza cases from 2007-08. A FRI education curriculum was developed and piloted on 10 units. A FRI algorithm was developed to assist HCPs. FRI was highlighted at the annual nursing skills day. A communication strategy was developed including poster distribution, correspondence to management, and access to electronic teaching materials.

Results: On review of influenza cases from 2007-08 the 3 most common admission diagnoses were pneumonia, viral respiratory illness and COPD. Prospectively applying streamlined surveillance in 2008-09 we have eliminated 10 of the 13 (76%) admission diagnoses which prompted chart review and reduced workload. Through communication to management we were successful in having FRI highlighted on the annual corporate education plan. Over 1180 staff received FRI education during the 2008-09 season. **Lessons learned:** Critical review of existing FRI surveillance identified inefficiencies and significantly decreased workload. A multi-level strategy for FRI education and communication was successful in reaching many within the hospital setting.

THE STANDARDIZATION OF INFECTION CONTROL GUIDELINES AND PRACTICES FOR EMERGENCY DEPARTMENTS WITHIN CAPITAL HEALTH

*Murray RN ICP, Daphne; Darrow RN, Debbie; Clory MDCM: CCFP (EM),

Michael; Coshell RN, Lillian, MacDonald RN, ICP, MSM, Sheila

Daphne Murray, Debbie Darrow, Michael B. Clory, Sheila MacDonald, Lillian Coshell
Capital Health, Halifax, Nova Scotia, Canada

Issue: When patients present to the emergency department, the combination of severe illness, the busyness, and the application of special precautions can cause a great deal of angst for patients, their families and the emergency staff. We noticed staff had increased anxiety trying to figure out precautions, bed placement etc.

Project: We recognized the need to simplify strategies in this unpredictable environment. Recognizing that not all of Infection Control practices are easily implemented within the confines of a busy emergency department. The objective of this project was to support staff and patients by providing a standardized reference on infection control precautions for all of the Emergency Departments throughout Capital Health. The ultimate goal was to improve the quality of care, build capacity, and enhance staff knowledge, by creating a well-defined, standardized infection control, practice reference.

Result: This poster is an example how different professions have successfully collaborated, putting the care of patients and families first. We collectively created a poster that is large enough in print to see from the foot of a stretcher, provides current Infection Control practices and examples of illnesses in that category.

Lessons Learned: Staff display confidence in their decision-making; they understand the information is limited on this poster

IF YOU CAN'T CLEAN IT, YOU CAN'T STERILIZE IT: NEW EDITION OF A CANADIAN STANDARDS ASSOCIATION (CSA) STANDARD IS RELEASED TO ASSIST HEALTH CARE FACILITIES IN DECONTAMINATION OF REUSABLE MEDICAL DEVICES

Susan Lafferty¹, Grace Rylett² *1Regional Infection Prevention and Control Program, Alberta Health Services, Edmonton, AB, Canada, 2Canadian Standards Association, Mississauga, ON, Canada*

Issue: With numerous media reports of increased risk to patients and the public resulting from breaches in practices of reprocessing medical devices, revision of the 2000 version of CSA Decontamination of Reusable Medical Devices began in 2004 with a mandate to expand the content and detail in the standard that would provide Canadian medical device reprocessing (MDR) and Infection Prevention and Control (IPC) personnel with a useful tool upon which to base policies and procedures.

Project: Proposed enhancements to the standard that included information on endoscopic devices, mechanical cleaning and disinfection equipment, Routine Infection Control Practices, quality systems, medical device alerts, water quality and annexes to assist MDR staff with implementation of the requirements of the standard were considered. A working group consisting of thirty-three expert members from MDR, operating room, endoscopy, microbiology, infection control, industry and regulatory bodies began work on revision of the standard in 2004.

Results: The new version of the standard, containing the above detailed information regarding the decontamination phase of medical device reprocessing was published in March, 2008 following extensive review by the CSA Sterilization Technical Committee and the public.

Lessons Learned: Incorporating a substantive amount of additional information, in addition to resolving comments from multiple sources, delayed the publication of the standard past the target date of December, 2005. Revisions to the next edition of the standard will commence at least 2 years prior to the next targeted publication date of 2013.

INITIATIVES TO IMPROVE HEALTHCARE WORKER INFLUENZA VACCINATION YIELDS PROMISING RESULTS

Silvana Perna, Pearl Orenstein, Anne Desmarais, Barbara Amihod, Norma Consolacion, Sharon Gates, Mark Miller; *Jewish General Hospital, Montreal, Quebec, Canada*

Issues: The Jewish General Hospital (JGH) is a 637 bed tertiary care hospital in Montreal with approximately 5000 employees. At the JGH, an annual flu vaccine campaign is organized. In 2007 our vaccination rate of 1436 healthcare workers (HCW) was far from the desired 60 per cent vaccination rate set by Public Health. Our goal was to improve this year's vaccination rate among HCWs. During the 2008-09 influenza season, various outreach efforts were made to promote influenza vaccination.

Project: A timeline, including a detailed list of tasks to be accomplished, personnel responsible, and deadlines, was created at the end of the influenza season in 2007. The three main events included: public vaccination of "VIPs" who were photographed while receiving their flu shot, influenza presentation at medical Rounds by an Infectious Diseases physician with lunch and door prizes provided, followed by employee vaccinations, and finally, the names of all employees who gave proof of vaccination were entered into a draw for major prizes. Other promotional events included: advertisement in our newsletter, repeated pay slip messages, posters and pamphlets on units and in public areas, pharmacy updates and in collaboration with Health Services, vaccination cards circulated throughout the units during all three shifts.

Results: 1896 employees were vaccinated, including 456 nurses and 124 physicians (excluding residents and students) compared to 358 and 109 respectively in 2007.

Lessons learned: We believe that this campaign was successful because of the multiple strategies used, the major prizes given and the support received by upper management.

HAND HYGIENE EDUCATION

Barbara Catt, Olivia Yow, Sandra Callery, Mary Vearncombe; *Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada*

Background: Hand hygiene (HH) is essential to patient safety and is the single most important method to prevent the spread of infections. Effective April 2009, all hospitals

in Ontario must publicly report HH compliance rates. SHSC is a tertiary teaching facility. Education sessions were adapted from Your 4 Moments of Hand Hygiene in the Just Clean Your Hands campaign from the Ontario Ministry of Health and Long-Term Care (MOHLTC) and were piloted on 2 acute inpatient units, 1 medical and 1 surgical. **Methods:** Before the sessions, the following took place: baseline audits of HH compliance, placement of alcohol-based-hand-rub (ABHR) at point-of-care (POC), with visual prompts. The sessions consisted of senior leadership participation; perception survey; lecture; video; team game; case scenarios. Unit-specific HH compliance was provided and staff were asked for ways to improve compliance on their unit.

Results: The 4 sessions had 108 participants including all health care worker (HCW) disciplines. The medical and surgical unit rates before the sessions were 33% and 45% respectively. Three months after the sessions, compliance was 52% and 81% respectively. **Discussion:** Our results support the literature that a multifaceted-program-approach will help to improve HH compliance. This consists of actively involving influential decision-makers in and providing HH education to HCWs, supported by environmental changes such as ABHR at POC, visual prompts and ongoing HH audits with immediate feedback to the HCW.

HEALTH CARE WORKER PERCEPTIONS ON HAND HYGIENE COMPLIANCE

Barbara Catt, Olivia Yow, Sandra Callery, Mary Vearncombe; *Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada*

Background: Hand hygiene (HH) is essential to patient safety and is the single most important method to prevent the spread of infections. SHSC is a tertiary teaching facility. Education sessions were adapted from Your 4 Moments of Hand Hygiene in the Just Clean Your Hands campaign from the Ontario Ministry of Health and Long-Term Care (MOHLTC). Sessions were piloted on 2 acute-care units, 1 medical and 1 surgical. **Methods:** The pilot consisted of 4 four-hour sessions. Baseline audits for HH compliance were collected using a standardized, validated audit tool before the sessions. A perception survey was completed before the sessions. Attendees anonymously answered questions on previous HH education, health care worker (HCW) type, perceptions of personal and colleague HH compliance rate.

Results: 89/109 (82%) of the attendees participated in the survey. 65% of the participants perceived their personal HH compliance to be in the range of 75-100%. 50% of the participants perceived their colleagues to have HH compliance in the range of 51-75%. However, the observed HH compliance was 33% for the medical and 45% for the surgical unit.

Conclusions: HCWs often overestimate their personal HH compliance. Most perceive their own HH compliance to be higher than their colleagues' and their actual compliance. Integration of a perception survey into the education session demonstrates that what we perceive we are doing does not reflect actual practice.

PROVINCIAL SURVEILLANCE OF CLOSTRIDIUM DIFFICILE INFECTIONS: THE B.C. EXPERIENCE

Bruce Gamage¹, Joanne Archer¹, Sarah Pugh¹, Ellie Sheng¹, Leslie Forrester²
¹Provincial Infection Control Network of BC, Vancouver, BC, Canada, ²Vancouver Coastal Health Authority, Vancouver, BC, Canada

BC's Provincial Infection Control Network (PICNet) is implementing standardized provincial surveillance for Clostridium difficile infections (CDI) in all acute care facilities across all Health Authorities (HAs) in the province. The web-based system enables facilities to upload CDI data, devoid of personal identifiers, to the PICNet database. The surveillance will enable tracking of provincial rates and trends of CDI over time and determine risk factors and estimated morbidity and mortality. Standardized surveillance will allow for the establishment of benchmarks to assist facilities in improving infection control practice and, ultimately, patient care. In collaboration with the HAs and the BC Ministry of Health, aggregate provincial rates and trends will be made publicly available. BC's approach to establishing provincial CDI surveillance is unique. Case definitions and a minimal data set were determined using a collaborative approach, inclusive of all end users. The surveillance is voluntary and interfaces with existing databases where they exist avoiding the need for duplicate data entry. Where a facility did not have a database, one was provided. Participation Agreements outlining data ownership, privacy issues, and roles and responsibilities of all partners have been signed. Separate HA IMIT systems, and the navigation of provincial privacy legislation, have made sharing data across HA borders challenging, but still feasible.

We offer insights into the system development process, and an overview of the system. We highlight the agreed-upon case definitions and minimal data set, and include screen shots of the PICNet surveillance system and a template of the provincial aggregate reports.

INFECTION PREVENTION AND CONTROL (IPAC) INTERVENTIONS DURING A RESIDENTIAL SUMMER CAMP OUTBREAK

Amanda Knapp, Fairleigh Seaton, Joanne McGurn, Marg McReynolds
Kingston, Frontenac and Lennox & Addington Public Health, Kingston, ON, Canada

Issue: In the summer of 2008 a children's residential summer camp experienced an outbreak of gastroenteritis where 25 campers and 38 staff became ill. Staff and campers from multiple cabins and offsite canoe trips were affected. Compounding the problem was the facility's limited information regarding outbreak control and the inadequate response by camp management which included not informing parents. The outbreak continued over multiple camp sessions and some had multiple episodes of illness. Consequently, it was necessary for Public Health to take a more active role in preventing the spread of illness.

Project: In response to the outbreak a public health nurse, public health inspector and infection control practitioner visited the camp, identified areas for concern, and provided hand sanitizer and disinfecting wipes. Staff education and training on IPAC practices was conducted at a second visit. However, camp actions were ineffective following the initial interventions and the outbreak continued. Due to these issues a Section 22 Order

under the Health Protection and Promotion Act was issued by the Medical Officer of Health outlining required actions to stop the spread of illness.

Results: After the required actions were implemented no further cases occurred.

Lessons learned: From this outbreak investigation it was determined that camp staff and management have very limited knowledge of IPAC procedures. This led Public Health to realize the need for increased training of camp staff. In the spring of 2009 a resource binder and training session will be introduced for residential and day camp settings.

A TOOLKIT TO "STOP THE SPREAD"

Alison Chant², Marney Hunt¹, Robyn Hunter³, Kevin Noel⁴, Eva Thomas³, Marisa Nichini¹, Ghada Al-Rawahi¹

¹Children's and Women's Health Centre, BC, Canada, ²BC Cancer Agency, BC, Canada, ³Provincial Health Services Authority, BC, Canada, ⁴Kevin Noel Communications, BC, Canada

Background: Strict adherence to hand hygiene is the best way to prevent health-care-related infections.

British Columbia's Provincial Health Services Authority (PHSA) Infection Prevention and Control team developed it's hand hygiene campaign in 2008, with plans for a phased implementation at all PHSA agencies. Recognizing that the campaign implementation requirements might be different for each agency/location, an overall implementation toolkit was developed to assist the team with each launch.

Objectives: The toolkit was designed to provide a step-by-step approach to implementing the hand hygiene campaign.

Methods: The toolkit is designed for flexibility since the implementation requirements for the campaign may be different for each location. Agencies are encouraged to choose the tactics and materials that best suit their needs, while respecting the overall strategic priorities of the campaign. This entails promoting the campaign through display of its unique graphic identity materials and through internal communications to staff in support of the campaign. The toolkit includes a detailed action plan with time-lines to use before and during the launch as well as a list of supporting materials and resources.

Results: The toolkit has 3 major versions. The first version captured all the communications pieces and formed a timeline of sorts to document the flow of the campaign. Additional versions captured step by step details.

Conclusion: The five year life expectancy for the campaign means a living document such as the toolkit is a valuable resource, a record of what was done and what is planned to sustain a HH campaign over the long term.

INFLUENZA IMMUNIZATION AMONG STAFF AND VOLUNTEERS AT TWO LONG-TERM AND RESIDENTIAL CARE FACILITIES

Jackie Ratzlaff, Leslie Forrester, Gail Busto, Mitra Eshghpour; Vancouver Coastal Health, Vancouver, BC, Canada

BACKGROUND: Yearly influenza immunization is an expectation for those persons working in healthcare. Historically, immunization rates have been suboptimal.

OBJECTIVES: To 1) examine influenza immunization history 2) ascertain immunization intentions 3) identify reasons for not getting immunized.

METHODS: Hard copies of a brief survey were circulated to staff and volunteers over a three-week period. The initial survey was undertaken in Fall 2003 and replicated in Fall 2008.

RESULTS: In total, 398 survey responses were received, 221 (56%) in 2003 and 177 (44%) in 2008. A total of 51% of responses were from Nursing, 10% from both Dietary and Volunteers, 9% from Allied Health, 5% from Housekeeping and 13% from Other. In 2008, there was a statistically significant increase in the proportion of respondents who reported that: a) they had their influenza shot every year (44% in 2003 to 62% in 2008) b) they had been immunized in the previous year (71% in 2003 to 83% in 2008) and c) they did or they planned to get immunized (74% in 2003 to 81% in 2008). The main reasons for not getting immunized involved concerns about side effects and personal beliefs. By survey year, there were no differences in reasons for not getting immunized.

CONCLUSIONS: There was a statistically significant increase in the proportion of staff that reported getting immunized in 2008 compared to 2003. There were no differences in the reasons reported for not getting immunized. Future educational strategies will focus on interventions to allay fears about side effects.

BETWEEN A ROCK AND A HARD PLACE: CHALLENGES GETTING EVALUATION TOOLS TO EMERGENCY HEALTH SERVICES

Barb Goulet, Marg McKenzie
Emergency Medical Services, City of Edmonton, Canada

Issue: Inception of a CHICA Prehospital Care Interest Group in 2006 created the opportunity to promote evaluation of quality of care, practice, and education related to IP&C in prehospital care services. A survey to identify need and an audit tool to meet this need were developed. While trialing, major challenges related to distribution were identified.

Project: Survey tool consisted of practice checks to identify areas for improvement and future action. Circulated electronically to services through provincial, regional and municipal agencies in western provinces, managers responsible for IP&C were to return the tool with anonymity. Audit followed, designed to identify strengths, weaknesses and opportunities for improvement. Distributed after the Survey to test for ease of use and content relevance, contacts in major urban areas were used.

Results: Survey results were disappointing prompting closer look at distribution methods. Audit tool was reviewed by ICP's with interest in prehospital care. Awaiting CHICA approval.

Lessons Learned: Are IP&C documents perceived as important when distribution requested? Is a responsible person within a service identifiable? Medical Directors direct standard of practice. Is this an avenue for distribution? EMS Chiefs of Canada are supportive but do not reflect all services. Their website has challenges in access and maintenance. Lack of familiarity with interactive electronic documents proved frustrating. We continue to seek answers to these questions for the most effective distribution routes.

A COMPARISON OF TWO METHODS FOR AUDITING MRSA AND VRE ADMISSION SCREENING

Pikula Z., Kim D., Ng W.*, Currie A., White D. and Katz K. North York General Hospital, Toronto, Ontario

Zoran Pikula, David Kim, Ng Wil, Currie Andrea, White Diane, Katz Kevin; North York General Hospital, Toronto, Ontario, Canada

Background: Patients admitted to hospital may potentially be colonized with MRSA or VRE. In our hospital we aim to screen all medical patients for MRSA and VRE within 24 hours of admission to the floors. Compliance with this screening is audited. Historically we have performed a point estimate of screening compliance manually on a single randomly selected day of each month. This method had obvious limitations including labour intensiveness, attribution of errors to the wrong unit and lack of timeliness.

Project: To address these limitations a new computer-generated methodology was introduced. This methodology correlates the time of admission with the time when screenings were performed. We compared the screening compliance rates generated by these two methodologies for the patients admitted in 2007. The mean compliance rates for the two methods were compared using two sample t-test statistic assuming unequal variances.

Results: The new methodology provided more precise estimates and statistically higher compliance rates than the old one (mean difference=4.67%, SD=0.98).

Lessons Learned: An automated computer-generated audit report provides an easy and more precise way to assess compliance with MRSA/VRE admission screening and is recommended for institutions with a well established Information System. A manual audit on a randomly selected day of the month provides an adequate alternative in the event of difficulties building an Information System automated report.

SUCCESSFUL STRATEGIES IN THE FIGHT AGAINST HOSPITAL ASSOCIATED VANCOMYCIN RESISTANT ENTEROCOCCUS (VRE)

Inez Landry, Charlie Dickey, Diane Lewis, Donna Perron; Queensway Carleton Hospital, Ottawa, Ontario, Canada

ISSUE: The investigations of Vancomycin Resistant Enterococcus (VRE) outbreaks that occurred in 2004-05 and in early in 2005-06 alerted the infection prevention and control professionals to the fact that there was a problem with contact isolation procedure compliance, environmental cleaning of the non critical patient care equipment and antibiotic prescribing practices.

Outbreak Management: Outbreak control measures were put into place. Strategies were introduced to address the isolation compliance, the patient care equipment and antibiotic use concerns. There were multiple working groups that provided their expertise to address the different strategies.

RESULTS: Major Success: VRE Hospital Associated rate decreased from 2.2 per 1000 admitted patients in 2005/06 to 0 in 2006/07; 0 in 2007/08 and 0 in 2008/09 to date.

LESSONS LEARNED FOR CONTINUED VRE OUTBREAK PREVENTION:

- Multi strategies are important to decrease rates of VRE hospital associated infections.
- It is important to pilot some strategies before implementing hospital wide.
- Cleaning accountabilities are required for non critical patient care equipment.
- The ward aide position added to patient care areas has been valuable in reducing hospital acquired infections.
- Physician education on antibiotic prophylaxis made a difference in the right antibiotic being ordered for the correct amount of time.
- Education on the importance of compliance with isolation procedures and processes must be reinforced annually.
- Contact isolation personal protective equipment and enhanced cleaning protocols that were continued after the outbreaks assisted with the decrease in other AROs.

THE RELATIONSHIP OF INFECTION SURVEILLANCE AND CONTROL ACTIVITIES AND INFLUENZA RATES IN CANADIAN LONG-TERM CARE FACILITIES

Dick Zoutman^{1,2}, B. Douglas Ford¹, Jim Gauthier³; ¹Department of Pathology and Molecular Medicine, Queen's University, Kingston, ON, Canada, ²Infection Control Service, Kingston General Hospital, Kingston, ON, Canada, ³Infection Control Service, Providence Care, St. Mary's of the Lake and Mental Health Services, Kingston, ON, Canada

Background: The examination of the relationship of infection surveillance and control activities and influenza will identify strategies to reduce morbidity and mortality from influenza in LTCFs.

Methods: A survey was sent in 2005 to all Canadian LTCFs to assess infection surveillance and control resources and activities (In Press). Influenza rates were also assessed. Regression analysis was used to examine the association of infection surveillance and control activities and influenza rates.

Results: One third of LTCFs responded (34 %, 488 of 1,458). The mean influenza rate was 1.3 (SD 3.6) per 10,000 patient days. Influenza outbreaks or clusters occurred in 37 % of LTCFs in 2004. Influenza vaccinations were received by 93 % (SD 11.3) of residents. Almost all LTCFs (99 %, 424 of 429) have policies regarding the prevention and management of influenza in residents, there is a system to teach this policy to resident care staff in 93 % and a system to monitor adherence to this policy in 81% of LTCFs. Surveillance index scores ($r = -0.15$, $P = .02$) were negatively associated with influenza rates.

Conclusion: Higher levels of infection surveillance were associated with lower influenza rates. There is need for further investment in surveillance to reduce resident morbidity and mortality from influenza. The authors have reported elsewhere that infection surveillance in Canadian LTCFs does not meet recommended levels.

A VASCULAR SURGICAL UNIT'S EXPERIENCE IN THE IMPROVEMENT OF INFECTION PREVENTION AND CONTROL PRACTICES.

Lynnette McCarthy-Woodrow, Merlee Steele-Rodway, Maureen March, Joan Burse, Sharon O'Rielly

Eastern Health, St. John's NL, Canada

Issue: Infection prevention and control practices are often challenging in a surgical setting due to high number of vascular surgical procedures, high nurse patient ratios, design flaws, and a high risk patient population. This report will focus on process improvement initiatives on one vascular surgical unit in a St John's hospital focusing on increasing awareness of infection prevention practices.

Project: Quality assurance data identified a significant problem with MRSA: infection and transmission on this unit. Subsequently a multidisciplinary process improvement team focused on improving practices to prevent transmission. The improvement team identified the following deficiencies: education, isolation practice variances, screening and decolonizing inconsistencies, and environmental concerns including lack of dedicated patient equipment and adequate staff for equipment and environmental cleaning.

Results: Facilities management, environmental services, and unit staff addressed design flaws. Education sessions were held, formally and informally, with staff to review infection control practices for the vascular unit. Patient and family hand hygiene practices were improved. There has been better collaboration between physicians and other members of the health care team. Increased staff has been allotted to enhance equipment and environmental cleaning practices.

Lessons Learned: Acceptance and respect of teamwork with all health care members, including patients and families, is extremely important in order to implement and maintain changes in infection control practices. Ongoing process improvement meetings within the unit should be implemented at least quarterly. An audit of the practices could be performed to keep staff aware of the needs for continuous infection prevention and control practices.

POSTING AND DISCUSSING HAND HYGIENE COMPLIANCE AUDIT RESULTS WITH FRONT LINE CLINICAL STAFFS IMPROVED HAND HYGIENE COMPLIANCE IN A PAEDIATRIC INTENSIVE CARE UNIT

Maja Horgas^{1,2}, Jun Chen Collet^{1,2}, Marney Hunt², Rita Dekleer², Robyn Hunter¹, Eva Thomas^{1,2}

¹PHSA Infection Prevention and Control Service, Provincial Health Service Authority, Vancouver, British Columbia, Canada, ²Department of Pathology and Laboratory Medicine, Children's & Women's Health Centre of British Columbia, Vancouver, British Columbia, Canada

Background: Hand hygiene (HH) is one of the most effective methods for reducing health-care associated infections. Many studies have shown that HH compliance among health care workers may be as low as 30-40%. To achieve both short and long term behavioural HH changes, we implemented a system comprised of standardized HH audits, compliance report cards. Results were discussed first with division leaders, then front line staff.

Objectives: The study was aimed at exploring a sustainable HH behaviour change model and assessing the impact of our implemented HH interventions.

Method: The Paediatric Intensive Care Unit was chosen as a pilot site. A trained HH auditor performed data collection consistently for two study periods: Period I (Pre-Intervention: 10th-29th Oct.08) and Period II (Post-Intervention: 1-29 Dec.08). Microsoft Access database was employed for data entry and storage. Data management and analysis was performed with SPSS (version 15.0).

Results: Period I: 339 opportunities were identified over 840 minutes of observation. Overall HH compliance rate was 47.8%. Period II: 297 opportunities were recorded over 1095 minutes of observation. The overall HH compliance rate was 67.0%.

Discussion/Conclusion: The HH intervention system was well received by all stakeholders and the HH compliance increased from 47.8% to 67.0%, an improvement observed across all subcategories of health care workers. Although the results are encouraging, long term follow-up and repeated assessments are necessary to know whether the increased HH compliance will persist over time and represents a true cultural change in clinical staff behaviour.

IS IT TIME FOR A GLOVE CHANGE?

Luce Ouellet; *Ansell Canada, Cowansville, Qc, Cape Verde*

Issue: Recommendations for glove change have been provided by many associations. Glove wear time is dependant on many factors. The goal for this review is to find scientific data identifying the effect of occlusion of different types of material on skin in time.

Literature review: This review will describe available scientific evidences on the impact of glove occlusion on human skin. Trans-epidermal water loss, material type, and skin integrity are some of the many factors that affects wearing time. Evidence has shown the effect of prolonged glove use on barrier properties of glove.

Conclusion: This review will provide participants with scientific and medical evidence in regards to prevention and different approaches in qualifying and preventing glove misuse. It is intended to enhance understanding of healthcare personnel as it relates to glove wearing time. Finally, it is determined to provide material in a noncommercial format that satisfies the needs of CHICA.

INFLUENZA VACCINATION FOR HEALTHCARE PERSONNEL IN THE HOSPITAL; PROTECT THE PATIENT, BEGIN WITH YOURSELF.

Norma Bok¹, Loek Schoep¹, Frits Mostert¹, Jan van Zeijl^{1,2}

¹Medical Centre Leeuwarden, Leeuwarden, Netherlands, ²Public Health Laboratory Friesland, Leeuwarden, Netherlands

ISSUE: Influenza can cause serious morbidity and mortality in hospitalized patients. Vaccination of healthcare workers can reduce this risk up to 50%. For this reason the Health Council of the Netherlands advised boards of healthcare institutions in 2007 to

offer influenza vaccination to all healthcare personnel with close patient contact. In 2008 our hospital started a campaign to reach a 50% vaccination rate within three years.

PROJECT: A steering committee organized the campaign according to a conscientious action plan in which tasks, authorizations and responsibilities were carefully described. A publicity plan was part of the campaign. Vaccination points were situated nearby the personnel restaurant and the personnel exit. To increase compliance, entertaining activities were offered. Reported adverse effects were recorded.

RESULTS: The first campaign resulted in a disappointing 15.5% vaccination rate. On high care wards like oncology, haemodialysis, and intensive care, rates were 12.5%, 16.2%, and 9.2%, respectively. Surprisingly, the highest vaccination rate was found among physicians (22%). Adverse reactions were reported in 2% of vaccinated healthcare workers. A lack of adequate information was reported by several chief nurses.

LESSONS LEARNED: Vaccination campaigns need to be recommended to present personnel as well as to future employees. Ward visits and information sessions should be organized early in the campaign, and discussions should be started with target groups. Use of fixed vaccination sites as well as mobile teams is recommended, as well as an extension of the vaccination period. Adverse reactions should be recorded for every vaccinated employee.

WEDNESDAY, MAY 13, 2009

PROCESS AND FEEDBACK ENHANCES THE COMPLETION OF ADMISSION SCREENING SWABS

Sabrina Mastronardi, Karina Michelle Ramirez, Sheena Schuck, Allison McGeer
Mount Sinai Hospital, Toronto, Ontario, Canada

Background: Expert bodies recommend that patients at high-risk of colonization/infection with antibiotic resistant organisms (AROs) be screened. Early identification of ARO colonized patients leads to fewer patients exposed to AROs, and reduced requirements for additional precautions. Mount Sinai Hospital policy (since 1996) is to screen all medical and surgical admissions with ARO risk factors. Compliance for completing admission swabs has been inconsistent. A process to audit the number of swabs completed within 24hrs was developed.

Project: An audit process was developed to measure the proportion of at-risk patients admitted to each nursing unit who had admission swabs submitted within 24hrs. Process expectations are that patients admitted through the emergency department (ED) have admission swabs completed prior to transfer to an inpatient unit.

Results: Audits are performed for one week each month beginning February 2008. Monthly graphic feedback provided to nursing management and the information shared with front line staff; based on discussions with users, feedback was improved in September. An average of 114 sets of admission swabs were collected per week. The percent of swabs obtained in the ED was 29% (17/59) in February 2008 and increased steadily to 57% (37/65) in December 2008. The number of swabs completed within 24hrs of admission increased from 63% in September 2008 to 69% in December 2008.

Lessons Learned: Monthly feedback to staff regarding admission swab rates has helped to increase compliance. These results have also helped to decrease the number of patients exposed to patients colonized with AROs.

AN INNOVATIVE APPROACH TO MONITORING 30-DAY POST-OP SSI RATES

Beverly Pittman, Kerry Decker; *Labrador Grenfell Health, St. Anthony, Canada*

Hospital, located in St Anthony, NL, fully accredited providing acute-care services to the people of Northern Peninsula, southern Labrador, and the Quebec Lower North Shore. Performs a variety of surgeries. From May 2007 to March 2008, a total of 2756 surgical cases (1923 outpatient surgeries and 833 inpatient surgeries) were performed. In January 2008, a *Safer Healthcare Now!* team was developed. Core team members represent nursing unit coordinators, day surgery nurse, infection control/risk manager, and community homecare nurse. Ad-hoc members include nursing site manager, pharmacist, surgeon, and anaesthetist.

One of our main challenges was to obtain good 30-day post-op infection rate data. The infection control nurse and a community home care nurse partnered to develop a process and questionnaire for a 30-day follow-up.

After 30 days the community home care nurse contacts the patient and completes the screening questionnaire. Patients are very welcoming and appreciate that we take the time to follow-up on their surgery. If there is an indication of infection, the ICP pulls the chart and begins an in-depth review of the client's record and determines if there is a probable SSI infection.

We are progressing well at improving the care components of timely initiation and discontinuation of antibiotics and maintaining normothermia. Inservice staff, talking it up in the clinical areas, and posting our data on SSI prevention has gained the attention and commitment of staff to improve SSI care.

We are pleased with our work to date and open to learn from and share with our colleagues across the region and country.

NEED TO EMPHASIZE ON COMMUNITY REACHOUT TO THE RURAL PEOPLE IN DEVELOPING COUNTRIES ABOUT HIV/AIDS

Kehinde Adesoye; *ARFH, Ibadan, Nigeria*

Background/Objectives: HIV/AIDS, the number one deadly infectious disease known today, has drawn global attention on various issues concerning its cause, how it is contacted, symptoms, prevention etc. Actually, there has been a lot of advocacy, education, enlightenment on the disease but the target is mostly on the urban dwellers and minimal rural dwellers have access to this information. A project to enlighten rural people on HIV/AIDS was carried out in two rural settlements called Eleshin Funfun and Agbeyeye in Osun State.

Methods: Questionnaire method of research was used and numbers of volunteers were interviewed on their awareness on HIV/AIDS. 500 volunteers were interviewed from each settlement including their prominent leaders in the society.

Results: A total of 1000 volunteers were interviewed. Only 27% of them are aware of HIV/AIDS while 11% know few prevention methods and these are communities where having multiple sexual partners is rampant and even extra marital affairs is allowed.

Conclusions: It is observed that rural people don't have enough awareness on HIV/AIDS in developing countries. This is because electronic media like radio and television are mostly used in disseminating information about HIV/AIDS in Africa and rural dwellers don't have access to these media due to lack of electricity. Meanwhile indiscriminate sexual intercourse is common among both youth and old ones. Even little ones who know about infection cannot differentiate between HIV and AIDS; they believe once you are infected with HIV, you have already been infected with AIDS. There should be more awareness on the disease in the rural areas.

AN INNOVATIVE LEARNING OPPORTUNITY

Karen Clinker, Pat Piaskowski, Lorinda Christie-Jacobson; *Northwestern Ontario Infection Control Network (NWOICN), Sioux Lookout First Nations Health Authority (SLFNHA), First Nations and Inuit Health (FNHIH)*

Issue: In 2006, SLFNHA was contracted by the NWOICN to complete an environment scan which identified an immediate need for education on reprocessing (cleaning, disinfection and sterilization) in nursing stations in isolated First Nations communities. After exploring a number of delivery options, a unique face-to-face conference was designed.

Project: The objectives for this reprocessing conference included 16777216. Address identified knowledge gaps related to reprocessing. 16777217. Work collaboratively with participants to meet current best practices in Ontario.

16777218. Provide information in a manner that considered the unique learning needs of a specific target audience.

16777219. Provide learning activities in an atmosphere conducive to learning as well as in a culturally sensitive manner.

16777220. Provide an opportunity to evaluate newly developed reprocessing procedures with the key participants who would be using these procedures.

Results: A face-to-face, hands-on conference was held on October 8 and 9, 2008 in Thunder Bay. Participants were able to return to their communities with newly gained knowledge and practice skills and to immediately apply this new knowledge and practical skills in their day-to-day activities.

Lessons Learned: Very specific learning needs and educational challenges were addressed through innovative thinking and team effort. The development of a reprocessing manual and videotaped procedures will help to ensure ongoing quality assurance and education.

NOSOCOMIAL TRANSMISSION OF EXTENDED SPECTRUM-LACTAMASE (ESBL)-PRODUCING KLEBSIELLA PNEUMONIAE

Sam MacFarlane, Natalie Bruce, Virginia Roth, Kathryn Suh, Baldwin Toy, Karam Ramotar

The Ottawa Hospital, Ottawa, Ontario, Canada

Issue: Transmission of ESBL-producing *Klebsiella pneumoniae* was identified in 2 patients who successively occupied the same private room in an acute-care facility.

Project: To investigate and describe the nosocomial transmission of this ESBL-producing *K. pneumoniae*.

Results: On June 13 2008, Patient 1 (Mr. L) was admitted with a diagnosis of venous ulcers. Admission screening identified that he was MRSA colonized. He was placed in a private room, and contact precautions were initiated. On July 25 he was transferred to a private room (room 546) on the vascular surgery unit, with contact precautions maintained, where he remained until his discharge on September 25. On September 13, ESBL-producing *K. pneumoniae* was isolated from a clinical specimen; he was felt to be colonized and treatment was not given. Housekeeping performed a disinfection immediately after his discharge. Patient 2 (Mrs. H) was admitted to room 546 immediately after the room had been cleaned. On Mrs. H's 25th day in this room, an ESBL-producing *K. pneumoniae* was isolated from her percutaneous endoscopic gastrostomy site. The two isolates were identical by pulsed-field gel electrophoresis. Environmental specimens were not obtained for culture.

Lessons Learned: Despite documented environmental cleaning between occupancy of rooms, transmission of an ESBL-producing organism between patients still occurred. Transmission may have resulted from persistence of the organism in the patient environment, inadequate cleaning and disinfection of shared medical equipment, or possibly by the hands of healthcare workers. Additional focus is needed on preventing the transmission of ESBL-producing organisms in the healthcare setting.

INFANT BOTULISM: FIRST CASE CONFIRMED IN NEWFOUNDLAND AND LABRADOR

Merlee Steele-Rodway, Caroline Zuijdwijk, Melissa Langevin; *Janeway Child Health Centre, St. John's/NL, Canada*

Background: Botulism is a severe neuroparalytic disorder caused by toxins A through F produced by *Clostridium botulinum*. Ingestion of honey is a known risk factor for infant botulism as well as ingestion of contaminated soil in an environment where soil has been disturbed. Infant Botulism can cause significant pediatric morbidity. Early recognition and supportive care can greatly improve clinical outcomes. The importance of prompt initiation of therapy has been emphasized with clinical suspicion being the basis for diagnosis. The diagnosis can be made on clinical grounds and confirmed by detection of the toxin in the stool. Management includes meticulous supportive care. The United States Food and Drug Administration (FDA) approved the human botulism immune globulin (BabyBIG) for the treatment of infant botulism in 2003. In this presentation,

the first case of Infant Botulism in Newfoundland and Labrador is described as well as the many steps in obtaining Baby BIG.

Issues identified: Baby BIG is not available in Canada and is only distributed by the Department of Public Health in the State of California, thus causing potential delays in the coordination of the shipment and receiving the product. Cross border issues as well as transportation delivery across a continent must be acted upon in an efficient manner. The investigation as to how this is contracted may not be readily found.

COME AND TAKE A WALK WITH ME

Teri Murduff¹, Joanne Habib¹, Debbie Rivett²

¹Central East Infection Control Network, Whitby, Ontario, Canada, ²Leisureworld Caregiving Centre, Scarborough, Ontario, Canada

Issue: Infection Prevention and Control Professionals (ICPs) in Long Term Care (LTC) wear many hats and have competing professional responsibilities. Due to time constraints, regular Infection Prevention and Control (IPAC) unit rounds are often looked upon as more of a social activity and are thus rarely performed.

Project: Using adult learning principles a PowerPoint presentation was created to address common infection control risks that could go unnoticed or may be considered unimportant. The presentation serves two purposes: 1. facilitates reaching a larger audience of ICPs; 2. provides the LTC ICP a tool to engage other Healthcare Workers in IPAC risk identification in their homes.

The presentation was piloted to a large forum of LTC ICPs as well as a smaller audience of Nursing Home Directors of Care in Ontario.

Results: LTC ICPs reported: increased awareness of IPAC risk; increased understanding of their IC role; excellent opportunities to foster positive relationships with staff; increased engagement of healthcare staff in IPAC risk identification and prevention; raised profile for resident and healthcare worker safety; increased opportunity to engage staff, residents and visitors in informal and formal education.

Lessons Learned: Providing the content along with the tool facilitates implementation and engagement of an IPAC risk identification program for staff; increases the opportunity for consistent messaging and knowledge transfer of IPAC best practice; reinforces that regular IPAC unit rounds are an integral part of an effective and efficient IPAC program in LTC.

PROOF ON A PLATE: A NOVEL APPROACH TO HAND HYGIENE EDUCATION

Cindy Plante-Jenkins, Florentina Belu; *Trillium Health Centre, Mississauga, Ontario, Canada*

Hand hygiene is one of the most important measures to prevent the transmission of infections. The infection prevention and control (IPAC) team at Trillium Health Centre has developed an interactive visual portrayal of alcohol-based hand rub (ABHR) efficacy. Staff participate by having fingertip bacterial colony counts determined prior to, and after, hand sanitizing. During the process, the infection control practitioner (ICP) is able to provide one-on-one coaching on proper hand sanitizing. Decreases in the fingertip bacterial colony counts after using ABHR help convey effectiveness. The proof is on the plate. Staff find this cost-effective educational exercise fun, engaging, and convincing

ALCOHOL-BASED HAND SANITIZERS IN SCHOOLS: HELLO, IS ANYBODY LISTENING?

Mary Lu Sample¹, Colette Ouellet²

¹Perth & Smiths Falls District Hospital, Smiths Falls Ontario, Canada, ²Champlain Infection Control Network, Ottawa Ontario, Canada

Issue: Alcohol-based hand sanitizers (ABHS) are recommended for hand hygiene in healthcare settings but they have not had a major role in other settings. Roadblocks to use of alcohol-based hand hygiene products in schools have been encountered in many systems.

Project: During the 2003-04 school year, ABHS was provided in every classroom at a small, over-crowded Kindergarten to Grade 5 rural school where no sinks were available outside the washrooms. Dispensers of ABHS were placed at the entrance to the classroom and students were required to use gel on the way in to and out of the classroom. Promotional material and education was provided to every classroom. ABHS was NOT a replacement for appropriate hand washing. Kindergarten students were supervised.

Results: Absenteeism rates in 2001/02 and 2002/03 were 8.7 days/pupil and 8.9 days/pupil respectively. In 2003/04, the year of the trial of ABHS, the absenteeism rate was 6.7 days/pupil. Throughout this period the number of respiratory and enteric outbreaks identified by the local Public Health Unit did not decrease (27, 15 and 34 outbreaks respectively).

Lessons Learned: Childhood illness and absenteeism contributes to loss of funding, increased administrative costs and parental lost time at work as well as disrupting learning. Hospitals have demonstrated success in hand hygiene campaigns when ABHS is provided at the point-of-care. Public Health and School Board support for usage of ABHS will promote healthier environments for both students and teachers may impact absenteeism. Further study is needed to support this interesting experiment.

BUG CORNER: A FUN AND INNOVATIVE EDUCATION TOOL

Susan Gilbride¹, Joan Durand¹, Sarah Forgie²

¹University of Alberta Hospital/Stollery Children's Hospital, Edmonton, Alberta, Canada, ²Department of Pediatrics, University of Alberta, Edmonton, Alberta, Canada

Issue: Today's healthcare workers (HCW) are constantly busy, and trying to attend in-services and other educational sessions is often difficult, if not impossible. The challenge to Infection Control Practitioners was to come up with an innovative educational project that could be delivered in an informal, time sensitive manner to HCW in a tertiary children's hospital in Edmonton, Alberta.

Project: A monthly one-page newsletter named *Bug Corner* was designed by Infection

Control and then posted prominently in areas frequented by HCW. The aim of the newsletter was to provide frequent, relevant infection control information in a fun and colourful manner at minimum cost. To ensure it met the needs of the paediatric staff a one page survey was sent out 21 months after the initial newsletter was published.

Results: A total of 96 people responded to the survey. 69% of the respondents had read the newsletter and of those 65% read it monthly. 95% of the HCW who read *Bug Corner* stated they found it informative.

Lessons learned: The survey provided infection control with an overall view of HCW opinion of *Bug Corner*. From the responses HCW generally found *Bug Corner* colourful and informative. The majority of the topics covered do not age and to encourage distribution we then went on to provide a folder for each unit with all of the publications so that HCW can browse through it when time permits.

A HAIRY TALE: PRE-HOSPITAL PRACTICES OF PATIENTS WITH PLANNED CAESAREAN SECTIONS

Wil Ng, Doreen Alexander, Andrea Currie, Bonnie Kerr, Man Fan Ho, Michelle Kuda, Kevin Carl Katz, *North York General Hospital, Toronto, ON, Canada*

Background: NYGH is a large community hospital undertaking approximately 6,000 deliveries annually (approx 30% by c-section). Post c-section (C/S) surgical site infections can be associated with substantial morbidity, increased costs, and extended length of stay. One important aspect of preventing SSIs is appropriate hair removal before surgery (i.e. clipping, depilatory agents or ideally no hair removal). Since 2007, all razors were removed from our Labour and Delivery unit and all OR areas. Despite these in-house measures, the extent of inappropriate hair removal prior to hospital presentation was not known.

Methods: An audit was conducted to determine the proportion of patients who self-removed hair, methods used, and timing prior to C/S delivery. Nursing staff in the Birthing Centre attempted to interview all patients with elective C/S who delivered in May 2008 using a standardized questionnaire.

Results: 33% (159/489) of all deliveries were by C/S. 47% (74/159) of the C/S deliveries were elective. Seventy-three patients were interviewed, resulting in a 99% participation rate. 30 (41%) of the 73 patients self-removed hair prior to arrival at NYGH. Of these 30 patients, the majority (26, 87%) self-removed hair within a week of their delivery (5 on same day, 10 on 1 day prior, 3 on 2 days prior, 8 on 3-7 days prior) and 83% removed hair by shaving.

Conclusion: There is a high prevalence of patients who inappropriately self-remove hair prior to their C/S, indicating a need for enhanced patient education. Prevention strategies focusing on prenatal educational materials and obstetrician awareness are required.

27-MINUTE INITIAL OUTBREAK MANAGEMENT PROCESS

Aurora Wilson, Bonnie-Jean Wilson, Sheril Green; *Providence Healthcare, Toronto*, Providence Healthcare is a non-acute health care facility in Toronto that provides rehabilitation/complex continuing care (Providence Hospital), long-term care (Cardinal Ambrozic Houses of Providence), and community outreach (Providence Community Centre), with a total of 635 beds for patients and residents.

Issue: Managing outbreaks (respiratory and/or enteric) without a systematic management process leads to high stress, role confusion, poor communication and safety risks. Providence conducted an analysis of its process then developed a quality improvement initiative on outbreak management process that is organized, systematic, timely and provides a high level of safety for all.

A perception survey demonstrated the perceived comparison between the management of previous and current outbreaks. There were 19 participants from the hospital and long-term care home.

Results: There results were reported by the participants on the **new process:**

- Initial outbreak management meeting improved from > 2 hours to 27 minutes
- 63% reported significant decreases in stress level
- 53% reported improvement of patient and staff safety
- 42% reported improvement in awareness of staff and volunteers' roles and responsibilities
- 42% reported that resources and supplies were delivered to affected units in a more organized and timely manner
- 37% reported improvement in awareness of the outbreak management team members' roles and responsibilities
- 26.3% reported that visitors/families were notified of the outbreak in a more timely manner

Lesson Learned: Efficient, timely and organized outbreak management provides improved quality of care and a safe environment for staff and patients/residents.

VANCOMYCIN-RESISTANT ENTEROCOCCUS (VRE) IN CANADA: RESULTS FROM THE CANADIAN NOSOCOMIAL INFECTION SURVEILLANCE PROGRAM (CNISP), 1999-2007

John Embil², Stephanie Leduc¹, Denise Gravel¹, Lynn Johnston³, Andrew Simor⁴, Anne Matlow⁵, Michael Mulvey⁶, Debbie Ormiston², Geoffrey Taylor⁷

¹Public Health Agency of Canada, Ottawa, ON, Canada, ²Health Sciences Centre, Winnipeg, MB, Canada, ³Queen Elizabeth II Health Sciences Centre, Halifax, NS, Canada, ⁴Sunnybrook Health Sciences Centre, Toronto, ON, Canada, ⁵Hospital for Sick Children, Toronto, ON, Canada, ⁶Public Health Agency of Canada, Winnipeg, MB, Canada, ⁷University of Alberta Hospital, Edmonton, AB, Canada

Objective: Surveillance for VRE is one component of a strategy to identify and limit its spread in hospitals. The objective of our surveillance is to provide national benchmark rates for VRE.

Methods: CNISP has been conducting ongoing VRE surveillance since 1999. The detailed methodology for this project has been previously described. To be defined as health-care associated, there had to be no evidence that the organism was likely present at the time

of admission, or up to 48 hrs after admission.

Results: From 1999 to 2007, the rate of VRE increased from 0.37 to 2.48 cases per 1,000 patients admitted. The increase was largely the result of an increase in VRE colonization, from 0.34 to 2.40 cases per 1,000 patients admitted ($p < 0.0001$). The rate of VRE infection increased from 0.02 to 0.08 cases per 1,000 patients admitted. The overall incidence of VRE rose from 1.20 per 1,000 patients admitted in 2006 to 2.48 per 1000 patients admitted in 2007 ($p < 0.0001$), with increases seen in all regions of Canada. Most cases (82%) were health care-associated and were acquired in the reporting CNISP hospital. Overall, only 2% were community-acquired.

Conclusions: Although the incidence rate of VRE carriage in Canada is increasing, it remains low. The number of VRE cases reported to CNISP more than doubled in 2007. The number of cases of VRE acquired in the reporting CNISP hospitals increased in 2007 by 6%; whereas there was a decrease in the number of community-associated VRE of 2%.

OUTBREAK OF GASTROENTERITIS: WHAT DID WE LEARN?

Chantal Perpète¹, Denise LeBlanc¹, Shirley Tremblay¹, Céline Crowe^{1,2}

¹Institut Universitaire de Gériatrie de Montréal, Montréal, Québec, Canada, ²Université de Montréal, Montréal, Québec, Canada

Issue: The management of an outbreak of viral gastroenteritis in a Geriatric Institute facility is a challenge. In November 2008, outbreaks of Norwalk virus were identified in the community of greater Montreal. Our facility, which has 2 buildings (A and B), had to face 2 episodes over an 8 week period.

Project: To describe the outbreak and present the intervention plan.

Results: During the first episode, 43 out of 306 patients (14%) and 8 out of 125 patients (6%) in building A and B respectively, were affected. Among staff members, the rate of illness was 6% in building A and 1.8% in building B. During the second episode, only building B was affected. Forty-one (41) out of 91 patients (45%) were affected. In this case, the rate of illness among staff members was 33%. During the management of the outbreaks, several problems were identified: wandering patients, accessibility of isolation equipment, cohorting of staff members (healthcare workers and environmental services), adjusting for the needs of disinfection and cleaning and communicating with staff, family and visitors.

Lessons learned: All problematic issues identified during the outbreaks were addressed during a postmortem analysis. Results translated into the formulation of new communication policies with the staff, families and visitors. Ordering and resupplying of equipment, management of staff, adjustment for disinfection and cleaning all were implemented into our plan of action.

GET THE SHOT, NOT THE FLU: THE EXPERIENCES OF RESTRUCTURING AN INFLUENZA VACCINATION PROGRAM

Krista Maxwell; *Seven Oaks General Hospital, Winnipeg, Manitoba, Canada*

Issue: As a new ICP with recent experience as a front line nurse, it was recognized that the existing influenza vaccination program at SOGH had many limitations. These limitations, which included an unequal division of labour, duplication of documentation, a minimal tracking ability and an overall lack of leadership, had resulted in a much lower number of vaccinations than would be expected for a 280 bed facility.

Project: In an effort to improve the number of patients receiving the influenza vaccination, a new program was developed and presented to key stakeholders for approval. Upon endorsement, the program was introduced for the 2007 influenza season. This encompassed the implementation of new systems including the development of a patient vaccination information form, the introduction of standing orders and designated vaccination nurses, as well as the creation of a tracking system, all of which required education for staff and patients.

Results: SOGH has seen an increase in the number of patients receiving vaccination information. Additionally, SOGH has seen a 15% increase in the patient vaccination rate since the introduction of the program. Finally, SOGH has not had an outbreak of influenza in its facility since the new program has been introduced.

Lessons Learned: Ongoing stakeholder involvement is significant; Annual staff education is required but is time-consuming; A comprehensive tracking system is mandatory; Staffs' personal beliefs regarding vaccinations is to be considered; Staffing complements and union contracts must be addressed with respect to hiring vaccination nurses.

THE DEVELOPMENT OF A KIT FOR THE RETURN OF PROBLEM SAFETY SYRINGES

Jo-Anne Burt, Linda Fletcher; *Whitby Mental Health Centre, Whitby, Ont, Canada*

Safety syringes were introduced at Whitby Mental Health Centre in March 2007. November 2, 2007 staff first raised concern of ongoing problems with the syringes. Because there had been no safe way to transport, busy staff tossed problem syringes in the sharps container, leading to the under reporting of defective syringes. Safety syringes are a more complex design with moving parts inside the syringe so documentation of any problem is needed with the item returned to the manufacturer to improve design making their product safer.

As there were no commercial prepackaged kits available, we needed to develop a kit that would allow staff to safely transport suspect syringes for investigation of the failure causation. With basic safety testing, IPAC staff put together a kit, using a clear VHS tape container that allowed for safer transportation of used syringes.

The kits were handed out to users January 18, 2008 with a short education session. A PowerPoint presentation on use of the kit was available on the intranet for all staff.

Prior to the Problem Syringe Safety Kit only 1 problem syringe had been returned to management. Within 6 months of introduction we had 15 problem syringes returned in the kits.

It is hoped that this presentation may stimulate commercial vendors to produce a safe tested product for the transportation of problem syringes.

GREET, TREAT & MEET: AN ALTERNATIVE APPROACH TO INCREASE MENTAL HEALTH PATIENT PARTICIPATION IN INFECTION CONTROL/SAFETY EDUCATION

Jo-Anne Burt, Rebecca Yu, Linda Fletcher; *Whitby Mental Health Centre, Whitby, Ontario, Canada*

Whitby Mental Health Centre (Centre) Infection Prevention and Control Practitioners (IPCs) have been including patients as well as health care workers in Infection Prevention and Control education programs like hand hygiene. As our inpatients improve, they are given privileges to attend activities throughout the Centre. With this increased movement it was recognized that patients need to be more active participants in infection control education to minimize transmission of organisms. The challenge was having patients attend and participate in Infection Control Education. To engage and maintain patient participation the "greet, treat & meet" approach was taken. During Infection Control Week, the fall Influenza campaign and the spring West Nile Virus campaign, the ICP arranged to attend patient care unit community meetings. The ICP greeted all the patients and provided each with a small treat. When all patients were greeted and treated, the meeting (education) began promising that all who remained would be eligible for a prize. There was more active participation when a treat was given and with the potential of a prize at the end. During Infection Control Week, 147 of the 315 in-patients participated in patient education. In the weeks post education, many smiling patients greeted ICP's waving their hands say "I washed my hands." Following the "greet, treat & meet" session the 2007-08 influenza vaccine rates for hospital inpatients were 51% with high risk areas reaching 81.3%. With the success of "greet, treat & meet" educational approach, it was decided to continue with this approach.

EXPLORING THE KEY CHALLENGES IN HAND HYGIENE IN AN AMBULATORY CARE OPERATING ROOM SETTING: DOES STAGED EDUCATION IMPROVE COMPLIANCE

Sonja Cobham, Sonia Pagura, Jackie Schleifer-Taylor; *Women's College Hospital, Toronto, Ontario, Canada*

Ambulatory Care is an emergent area of focus in infection control. Hand Hygiene (HH) is a well established principle in the reduction of infection rates within healthcare settings. There has been a strong push from key external stakeholders such as the Ministry of Health (MOH) and public health groups (including practitioners) to tackle this pervasive issue as it has significant financial and societal repercussions. In 2007, the Ministry conducted a review in hospital settings, excluding operating room environments, to establish HH rates amongst care-providers. The results led to the MOH mandating public hospital reporting of HH compliance to inform the public, and LHINs of indicators that could reduce transmission rates in healthcare. Every hospital-based institution is committed to capturing compliance baseline rates as the platform for developing infection control strategies. Yet, one cannot apply infection standards in a generalized fashion across programs within hospital settings as the environment, interaction and level of sterility are quite different. An additional layer of complexity is the framework which Ambulatory Care Settings operate; physicians operating in Ambulatory Care Setting come from multiple sites and may have vastly different practices within each organization. The goal of the HH initiative at Women's College Hospital (WCH) was to implement a staged education model across disciplines to increase awareness and change practice. This multi-pronged approach includes several staged audits to evaluate which education strategy resulted in the greatest increase in compliance, as well as sustainability of HH levels. The modular approach included web-based learning, didactic education sessions, self-learning and visual education prompts. Preliminary results have demonstrated a 40% increase in overall HH compliance within the operating room at WCH.

ZAP VAP: PREVENTION OF ADULT VENTILATOR-ASSOCIATED PNEUMONIA IN A 12-BED ICU COMMUNITY HOSPITAL

Kristine Desjardine, Denis Binette; *Queensway Carleton Hospital, OTTAWA, ON, Canada*

Poster Abstract: The abstract will focus on the successful launch and implementation of the Safer Healthcare Now VAP Bundle initiatives.

Background: We have a 12-bed closed ICU with six Intensivists who rotate and cover the ICU on a weekly basis. We operate 8 PB 840 Mechanical Ventilators, with 24-hour Respiratory Therapist coverage. Infection Control has tracked VAP rates since 2005 and data showed through benchmarking our VAP rate was above the 90th percentile.

Methods: We started in March 2008 with gathering baseline data on 15 patients, after which we fully implemented the 4 components of the VAP Bundle including the use of the EVAC endotracheal tube. This was done as part of an educational review and focus which included challenges and changes in practice. During the initial launch of the Bundle, the EVAC tube was trialled and evaluated in the ICU. A VAP Bundle checklist was created and put into daily use by the RTs and RNs. These stats were compiled and scored on a monthly basis by Infection Control in collaboration with Decision Support. The results of which were then reported to SHN.

Results: Surveillance showed that we were VAP free for 6 months from March 2008-August 2008. We continue to provide support, communication, education and feedback to the ICU team. In addition the trial of the EVAC tube resulted in hospital wide implementation (except for the OR).

Conclusion: We have successfully demonstrated that implementation of the VAP Bundle can result in an overall decrease in VAP Infection Rates.

DEVELOPMENT OF A RICN NON-ACUTE CARE INFECTION CONTROL PROFESSIONAL (ICP) TRAINING PROGRAM (NACICP) IN ONTARIO

Pat Piskowski, Janet Allen, Anne Bialachowski, Nora Boyd, Karen Clinker, Colette Ouellet, Ponka Brandy, Volkening Grace, Walker Marianne; *Regional Infection Control Networks, Ontario, Canada*

Background: RICNs identified a need for a training program for ICPs in non acute care settings through a needs assessment.

A working group was established in 2006 to review the needs assessment data and explore the feasibility of a NACICP training program. After exploring several options, the group designed a unique course offering specifically for ICPs in non-acute care settings. Administrative processes for the program were established with one network leading the program, one providing administrative support for the technological advancement of the program and one network guiding the associated mentorship program.

The project: The program consists of 11 modules covering all aspects of IPAC practice in non-acute care settings. For each module content experts prepare a DVD of their presentation, compose pre and post test questions and develop two case studies. Each of the 14 RICNs enrolls up to 2 students, provides direct mentorship and access to resource materials for the students. All course materials and supporting documentation are mailed to the participants monthly. There is a monthly teleconference to discuss the module assignments and respond to student queries. The marks from the case studies, midterm and final exam comprise the students' marks. A passing grade of 60% is needed to successfully complete the program. CHICA endorsement is currently being considered.

ANTIMICROBIAL RESISTANCE AMONG NOSOCOMIAL ISOLATES IN A PUBLIC HOSPITAL IN PERU

Yuri Garcia-Cortez^{1,2}, Jaime Alvarezcano Berroa^{1,2}, Raul Montalvo Otivo^{1,2}, Ruben Dario Vasquez Becerra¹

¹San Marcos University, Lima, Peru, ²Dos de Mayo Hospital, Lima, Peru, ³Care Center "Raul Patrucco Puig", Lima, Peru

Issue: Emergence of multiresistant strains of hospital pathogens has presented a challenge. Bacteriological surveillance of the cases of nosocomial infections is crucial for developing antibiotic stewardship programs.

Methods: A prospective study was undertaken during January through December 2007 among 802 patients from medicine, surgery, pediatric and gynecologic wards at Dos de Mayo Hospital in Lima, Peru. Patients were tracked for the occurrence of nosocomial infections (NI) through clinical bacteriologically. Antibiotic susceptibility testing was undertaken using Kirby-Bauer disc diffusion method.

Results: The overall infection rate was 26.18 per 100 patients. Nosocomial pneumonia was the most common NI (23.47%), followed by intravascular catheter-related infections (22.8%), wound infection (19.8%) and urinary tract infection (18.15%). Ninety nine percent of the isolates were bacterial. More than 70% of the NIs were caused by Gram-negative bacteria predominantly *Pseudomonas aeruginosa* and *Escherichia coli*. Almost 5% of the isolates were resistant to all the antibiotics for which susceptibility was tested, the rest were sensitive to amikacin, cefoperazone sulbactam, cotrimoxazole, methicillin, teicoplanin, vancomycin, rifampicin, imipenem, aztreonam and linezolid, either independently or in combination. The proportion of MRSA was 43%. Resistance to a particular antibiotic was found to be directly proportional to the antibiotic usage in the study setting.

Conclusion: Surveillance of nosocomial infections by using microbiologic surveillance and reinforcement of hand washing are critical to avoid polyantimicrobial resistant nosocomial infections in a hospital.

COMMUNITY HEALTH CENTRE: INFECTION CONTROL PARTNERSHIP

Rebecca Hamlin, Lori Jessome-Croteau; *Capital District Health Authority, Nova Scotia, Canada*

Issue: The community health center (CHC) setting provides ample opportunity for the transmission of microorganisms from person-to-person and through contaminated fomites, environmental surfaces, and reusable medical equipment. Many independent CHCs do not have dedicated infection control resources or easy access to infection prevention and control expertise.

Project: At the request of the CHCs management, an infection control audit was undertaken and several key recommendations made. An ongoing action plan was developed by the CHC based on these recommendations. Continued support was provided by the infection control practitioners and key contacts within the health district were identified. A follow up interview was completed ten months after the initial review.

Results: Key areas for improvements were prioritized based on patient safety and available resources. Some of the improvements undertaken included: initiation of a respiratory hygiene program in the reception area; moving all sterilization to the local hospital; cleaning and disinfection of non-critical medical devices between patient visits; initiation of an infection control policy binder; and improvements in the handling and storage of sterile supplies.

Lessons Learned: Infection control professionals can provide a valuable service to their community through outreach consultation and collaborative efforts. In future, the development of a standardized audit tool and report template would facilitate the process.

ADDITIONAL PRECAUTIONS POCKET CARDS: DEVELOPMENT OF A NEW RESOURCE FOR ACUTE AND LONG TERM CARE

Tim Cronsberry, Christine Moussa; *South Western Ontario Infection Control Network, St. Marys, Ontario, Canada*

Issue: In many acute care and long-term care organizations there can be infrequent indications for the use of Droplet, Contact, and Airborne precautions. In such lower-incidence settings, health care workers may benefit from reminders. The use of precaution signs and pocket cards are examples of such reminders. Pocket cards have been used for other care issues such as CPR steps and acute care "codes", yet evaluations of the effectiveness of this tool in the practice area of infection prevention and control are not apparent.

Project: The South Western Ontario Infection Control Network created pocket cards addressing proper Personal Protective Equipment (PPE) use for Additional Precautions. Both Acute Care and Long Term Care versions were created based on the Provincial Infectious Diseases Advisory Committee's (PIDAC) Best Practice Guidelines in Ontario.

The cards were distributed to 923 staff in Long Term Care, and 1096 staff in Acute Care in December 2008. The pilot concluded in February 2009.

Results: Anecdotal results prior to the extensive survey of participants showed an enthusiastic response and observed use of the resource. Feedback received from the pilot will be applied to the final version of the resource.

Lessons Learned: The pocket-card format used in this project offers healthcare workers a convenient resource that will assist them in protecting themselves and others through the effective use of PPE. An implementation barrier to the use of the cards is the adoption of a standardized colour scheme for Additional Precautions across participating organizations.

RESPIRATORY ALGORITHMS: BREATHING EASIER ABOUT PATIENT MANAGEMENT

Gail Busto, Sydney Scharf, Elizabeth Bryce, Serena Siow
Vancouver Coastal Health, Vancouver, British Columbia, Canada

Issue: Vancouver Coastal Health region sees 308,000 Emergency Department (ED) patients annually; approximately 125 new cases of tuberculosis are diagnosed. Many ED patients have an undiagnosed respiratory illness and could pose an infectious risk to staff and other patients. A standard approach to patient management to reduce the risk of secondary exposures to potentially communicable respiratory infections was devised and evaluated.

Project: The algorithm was introduced in 2003 at Vancouver General Hospital (VGH), and refined during introduction at Lions Gate (2006) and Richmond General Hospitals (2008). Directions for triage, isolation, barrier precautions, housekeeping and patient designation when admitted are outlined. An electronic flag identifies the patient as they progress through the hospital; an automated electronic census identifies flagged cases daily to the ICP.

Results: During the past four years, 1719 patients have been flagged at VGH with an average of 3.4 days isolation for non-TB patients and 10.2 days for TB cases (n=111). The number of post-exposure TB follow-ups declined from up to 10/year pre algorithm to zero. Staff scored the algorithm as 4.6/5 for ability to protect with slightly lower scores for accessibility to isolation rooms, flagging instructions, and use of protective eyewear.

Lessons learned: Implementation highlighted the need to a) include all stakeholders, b) provide adequate resources (barriers, isolation rooms, adequate ICP staffing for follow-up), c) clearly delineate roles and responsibilities, d) ensure consistent use by all professions, and e) embed in practice to ensure sustainability.

BAD BUG IN BPTU (BURNS PLASTICS AND TRAUMA): LESSONS LEARNED FROM AN ACINETOBACTER BAUMANNII OUTBREAK

Mary Cameron-Lane, Gail Busto, Elizabeth Bryce, Sydney Scharf; *Vancouver General Hospital, Vancouver, British Columbia, Canada*

Issue: Multidrug Resistant *Acinetobacter baumannii* (MDR ACBA) is recognized worldwide as a nosocomial pathogen. The index case in an outbreak of MDR ACBA on a 24-bed Burns, Plastics and Trauma unit (BPTU) was an internationally transferred patient.

Background: The outbreak involved a total of eight patients, the index case, five BPTU patients and two ICU patients. Six patients developed infections (bone, sputum, blood, wounds, urine) with some requiring colistin therapy.

Investigation: One of eighteen environmental cultures was found to be positive for the same biotype of MDR ACBA. This culture was taken from a drain grate structure in a common burn shower room that, when dismantled, was found to contain pieces of debrided skin, confirmed to have the MDR ACBA. The proper cleaning of this drain was overlooked prior to our investigation.

The epidemiology link of the first identified patient in the ICU strongly suggested hands (health care workers) as the means of transmission. Environmental contamination was not found in the ICU.

Lessons Learned: Initially our guidelines focused on those patients arriving from the Middle East. Our experience however, has demonstrated the need to broaden our screening protocol to include all international transfers. To date, we have identified

MDR ACBA in patients from the following countries; Afghanistan, USA (Las Vegas), Egypt, Hong Kong and Vietnam. This outbreak underlines the importance of examining the environment as well as focusing on contaminated hands as sources of transmission

QUALITY CONTROL FOR CHEMICAL DILUTION SYSTEMS USED IN HEALTHCARE IS INDISPENSABLE

Cindy O'Neill, Lee Ramage, Loretta Wyatt, Lisa Ballantyne; *Hamilton Health Sciences, Hamilton, Ontario, Canada*

Background: Chemical dilution control systems are used in healthcare to dilute concentrated disinfectants to an ideal strength for effective environmental decontamination. These systems, compared to manual dilution methods, are economical, efficient and promote a safer workplace. However, quality control (QC) and preventative maintenance standards to assure performance are lacking in the cleaning and healthcare industry. The automated systems used to dilute concentrated accelerated hydrogen peroxide (AHP) products for disinfection cleaning were assessed for reliability at Hamilton Health Sciences-Henderson Hospital site.

Method: Three control systems used to dilute AHP concentrates: 7% (Percept™) at 1:16 dilution (0.5%) and 3% (PerDiem™) at 1:256 dilution (0.01%), were evaluated for reliability over 30 days. Virox AHP indicator test strips were used to check use-dilution of Percept (5000 ppm AHP) and PerDiem (100 ppm AHP). QC was repeated if the initial test was outside the acceptable range. Service was arranged when repeat QC failed. Ready to use AHP product was employed until problem resolved.

Results: Overall, nine QC failures were detected on all systems during the 30 day testing; five failures on one system, three on the second and one on the third. Seven failures involved Percept below (< 500 ppm) acceptable concentration and two involved PerDiem above (500 ppm) required concentration.

Conclusion: Disinfectants must be used in the dilution specified by the manufacturer for optimal decontamination. Although there is a benefit to using automated dilution systems in healthcare, findings show that attention must be given to quality control and preventative maintenance to assure optimum results.

WHERE IS YOUR HOSPITAL'S PANDEMIC ZONE?

Jen Tomlinson^{1,2}

¹Concordia Hospital, Winnipeg, MB, Canada, ²Winnipeg Regional Health Authority, Winnipeg, MB, Canada

Issue: A pandemic influenza is a global threat that is overdue for a repeat emergence. The impact of the pandemic regarding severity, age distribution and extent of spread will be unknown until the virus spreads among the human population. Hospital leaders must prepare now for pandemic influenza in order to reduce morbidity and mortality outcomes.

Project Description: Preliminary strategies to create a designated pandemic influenza area were developed by a community hospital pandemic planning committee using current information. A literature review was completed and an environmental scan of the hospital performed. Key areas included isolation considerations, hospital structure, supplies, executive support and potential challenges.

Results: Findings suggested renovation considerations may be challenging, protocols and education are required without delay, and the availability of supplies imply an ambiguous outcome. Cost implications were factored into areas of concern. Limited information from existing articles is available to create pandemic areas, although national guidelines regarding pandemic influenza management of symptomatic patients remain forthcoming. The Winnipeg region has preliminary pandemic planning recommendations for designated cohort areas and was a significant resource.

Lessons Learned/Implications: Pandemic planning is time consuming and requires the commitment of key stakeholders. Although the development of a pandemic area will be complex, preparedness plans will facilitate an accelerated response for hospital settings. Intensifying pandemic awareness among the leadership population and infection control professional groups is necessary as a heightened alertness may lower the clinical attack and slow pandemic development.

Watch for on-line

ABSTRACT SUBMISSIONS

for the
**2010 National
Education Conference**

www.chica.org



Watch for your personal copy of **CHICA E-News**



**CHICA-Canada's monthly
electronic newsletter keeping you
informed of current news and events.**

AMD™ Infection Control Products

Close the Loop of Infection Control



In Canada, an estimated 220,000 infections acquired in healthcare facilities and 8,000 deaths attributable to these infections occur annually.⁽¹⁾

AMD infection control products help to reduce infections by between 52%⁽³⁾ and 91%⁽²⁾

A highly effective, low cost solution

- Broad spectrum effectiveness and proven effective at preventing dressing colonisation against MRSA, VRE & Acinetobacter Baumannii and many more
- No known resistance
- Works within and through the dressing
- Gentle to healthy cells

COVIDIEN, COVIDIEN with logo and ™ marked brands are trademarks of Covidien AG or its affiliates.
© 2008 Covidien AG or its affiliates. All rights reserved.

Currently licensed under Tyco Healthcare with Health Canada.

(1) Zoutman, DE, Ford DB, Bryce E et al; The state of infection surveillance and control in Canadian Acute Care Hospitals; Am J Infect Control, 2003; 31:266-73.
(2) The Reduction of Vascular Surgical Site Infections with the Use of Antimicrobial Gauze Dressing; Robert G.Penn, MD, Sandra K Vyhldal, RN, MSN, CIC, Sylvia Roberts, RN, Susan Miller, RN, BSN, CIC, Dept. of Epidemiology, Nebraska Methodist Hospital, Omaha, NE, USA. Observation of Nosocomial Surgical-Site Infection rates with Utilization of Antimicrobial Gauze Dressing in an Acute Care Setting; Mary Jo Beneke, RN BS, CWOCN; Josephine Doner, RN BSN MA CIC, Yuma Regional Medical Center, Yuma AZ. (3) Observation of Nosocomial Surgical-Site Infection Rates with Utilization of Antimicrobial Gauze Dressing in an Acute Care Setting Mary Jo Beneke, RN, BS, CWOCN; Josephine Doner, RN, BSN, MA, CIC Yuma Regional Medical Center, Yuma, AZ



7300 TRANS-CANADA
POINTE-CLAIRE, QC
H9R 1C7
877-664-8926 [T]
800-567-1939 [F]
WWW.COVIDIEN.COM

 **COVIDIEN**
positive results for life™



Interactive edition

of *The Canadian Journal of Infection Control* available online

With print and electronic communication operating hand-in-hand more than ever before, we are pleased to advise you that *The Canadian Journal of Infection Control* is available online in a highly interactive format.

A user-friendly, interactive Media Rich PDF format that includes:

- Active hyper-links to all websites and emails contained in the publication
- Active links to the specific stories from the front cover and contents page
- Active links to advertiser websites from their ads

See the interactive *Canadian Journal of Infection Control* at www.chica.org



*Quality Infection Prevention
Education from the Leading Experts
at the*

APIC 2009 Annual Conference

June 7 -11 in Ft. Lauderdale, Florida

CHICA Members receive reduced
APIC member rates.
Register Today.

Visit www.apic.org for details and travel tips

C. DIFFICILE OUTBREAK MANAGEMENT



RESCUE™ BREAKS THE CHAIN OF INFECTION

RESCUE™ is the only DIN registered ready-to-use surface Sporicide. Visit the *C. difficile* OUTBREAK section at www.virox.com for information on products, protocols, references, support documents and endorsements, or call 1-800-387-7578.



Engineering Revolutionary Disinfectants for the War Against Microbes.



Today I learned...

it's time to go passive.



Universal Bevel for enhanced comfort and flexibility.



Passive Safety to help ensure activation.

Introducing the Introcan Safety® IV Catheter now with Universal Bevel. Combining Enhanced Performance with Passive Safety.

Universal Bevel, a cut above the rest.

- Make insertion more comfortable for you and your patients.
- New needle geometry creates a flexible pathway designed for easier catheter insertion, less tearing and faster healing.

Approach with confidence.

- Universal Bevel allows a wider choice of insertion angles.
- Choose the approach that helps achieve the best results for you and your patient.

Passive is preferred.

You need the best when it comes to safety, so get the high activation rate of our passive system¹ and its proven performance in reducing needlestick injuries.^{2,3}

Take action. Go passive.

Contact your B. Braun representative today to schedule a demonstration. Call 1-877-949-9529 or visit us at www.bpassive.bbraunusa.com.

B. Protected.

B | BRAUN
SHARING EXPERTISE

www.bbraunusa.com

Rx Only. ©2009 B. Braun Medical Inc. Bethlehem, PA. All Rights Reserved.

1007 CJIC 4/09 KFD

¹ Perry, Jane. International Healthcare Worker Safety Center. "Preventing Sharps Injuries: Where Do We Stand in 2007?" Presented at B. Braun Medical, Orlando, FL, Feb. 23, 2007. 2003 EPINet data: Of injuries from safety devices, 44% occurred after use and before disposal (potentially preventable if passive or if safety feature activated).

² Mendelson MH, Lin Chen BY, Finkelstein-Blond et al. Study of Introcan safety IV catheter (B. Braun Medical Inc.) for the prevention of percutaneous injuries in healthcare workers [abstract]. Presented at: 13th Annual Meeting of the Society for Healthcare Epidemiology of America (Arlington, VA), 2003.

³ Iinuma Y, Igawa J, Takeshita M, et al. Passive safety devices are more effective at reducing needlestick injuries [letter]. J Hosp Infect 2005 (Dec): 61 (4): 360-1.



Exhibit Hall Floor Plan

Exhibit Hall Hours

Official Opening:
Monday, May 11, 7:00 - 9:00 pm (Opening Reception)

Tuesday, May 12
12:00 - 2:00 pm – Lunch in Exhibit Hall
3:00 - 3:30 pm – Refreshment Break

Wednesday, May 13
12:00 - 2:00 pm – Lunch in Exhibit Hall
3:00 - 3:30 pm – Refreshment Break

Crush Lobby Floor Plan



Putting Protection within Easy Reach



**Protection Organizer
LD-035**

Safeguard health-care providers with Protection Organizers that provide easy access to (PPE) personal protective equipment

BOWMAN



800 962-4660
www.BowmanDispensers.com

CHICA-Canada 2009 Trade Show Exhibitors

EXHIBITORS (ALPHABETICAL LISTING) (as of March 5, 2009)

COMPANY	BOOTH NUMBER
3M Canada	EH 49-52
Abatement Technologies Limited	EH 46
Accreditation Canada	CB2
AMG Medical	EH 2-3
Angus Medical Inc.	EH 6
Ansell	EH 28
Arjo/Huntleigh Healthcare	EH 25-26
Baxter Corporation	EH 35,43
BD Canada	EH 53/54
BioNuclear Diagnostics Inc.	CL 65
BioScience Laboratories Inc.	CL 61
Bowman Medical	EH 39,40
Butcher's	CL 59
Canadian Agency for Drugs and Technologies in Health	T4
Canadian Journal of Infection Control	EH A
Canadian Patient Safety Institute	T15
Canadian Standards Association	CB 3
Canadian Vascular Access Association	T 9
Cardinal Health Canada	EH 36,37
CardioMed Supplies Inc.	EH 30
CCD Health Systems	EH 23,24
Certification Board of Infection Control (CBIC)	T 7
CHICA Newfoundland Labrador/Run for IFIC Registration	T 1-3
CKM Healthcare	CL 62
Community and Hospital Infection Control (CHICA-Canada)	T 13,14
Convatec Canada Ltd.	EH 14
Covidien (formerly Tyco Healthcare)	EH 32-34
Daniels SharpSmart Canada Ltd.	EH 19
Deb Canada	EH 29
Ecolab Healthcare	EH 17,18
Ekotek Global Inc.	EH 48
Falconfire Inc.	CL 55
Getinge Canada Limited	EH 13
Gojo Industries Inc.	EH 8,9
Hollister Limited	EH 41
Hygie Canada Inc.	EH 42
Infection Prevention Society	T 8
International Federation of Infection Control (IFIC)	T 5
Intersteam Technologies	EH 22
Johnson and Johnson Medical Products	EH 44,45
JohnsonDiversey	CL 59
LauraLine Skincare	EH 47
Les entreprises Solumed – A 3M Canada Company	EH 49
Medline Canada	EH 20,21
Metrex	CL 63
Micro-Scientific Industries	CB 1
Pharmax Limited	EH 1
Pinchin LeBlanc Environmental	CL 66
Provincial Infection Control Network of BC (PICNet)	T 12
Professional Disposables International Inc.	EH 38
Public Health Agency of Canada	CL 70
Regional Infection Control Networks of Ontario (RICNs)	T 10,11
Remington Medical Equipment	EH 12
rl Solutions	CL 69
Sage Products Inc.	CL 68
SciCan	EH 10,11
Smith & Nephew	EH 7
Southmedic	CL 67
Steris Canada Inc.	EH 4,5
The Stevens Company	EH 31
Stryker Canada	CB 4
T. B. Clift Ltd.	CL 56
Trimline Medical Products Corp.	CL 64
Überloo	CL 57
Vernacare	EH 15
Virox Technologies Inc.	EH 16,27
Watts Industries (Canada) Inc.	CL 58
Webber Training Inc.	T6
Wood Wyant	CL 60

EH = Salon A/B

CL = Crush Lobby

CB = Conception Bay

T = Table near Registration Area

3M Canada**Booth EH 49-52**

300 Tartan Drive, London, ON N5V 4M9
800-563-2921
www.3m.ca

3M Infection Prevention Solutions help minimize the risk of hospital-acquired infections, which aids in reducing the incidence of surgical site infections, saves costs associated with infection and improves patient outcomes.

Abatement Technologies Limited Booth EH46

7 High Street, Fort Erie, ON L2A 3P6
1-800-827-6443
www.abatement.com

Hepa-Care portable filtration systems for patient isolation and Hea-Aire portable air scrubbers for infection control during construction and renovation projects.

Accreditation Canada**Booth CB2**

1730 St. Laurent Blvd., Suite 100
Ottawa, ON K1G 5L1
613-738-3800
www.accreditation-Canada.ca

AMG Medical**Booth EH 2-3**

8505 Dalton, Montreal, QC H4T 1Y5
800-361-2210
www.AMGMedical.com

We supply infection control and medical products to hospitals and long-term care facilities nationally. Our mission: improve the health and quality of life of Canadians.

Angus Medical Inc.**Booth EH6**

3567 – 52nd Street SE, Calgary, AB T2B 3R3
866-418-1689
www.angusmedical.com

Canadian-owned medical distribution company that specializes in IV systems, infection control, and safety devices. Bringing industry-leading products to the Canadian healthcare system with cost-effective solutions.

Ansell**Booth EH 28**

105 Lauder Street, Cowansville, QC J2K 2K8
800-363-8340
www.ansellcanada.ca

You emphasize preventive care to patients? Ansell does the same for you. By proposing a variety of superior quality gloves, Ansell Healthcare has your best interests well in hand.

Arjo Canada Inc./**Huntleigh Healthcare****Booth EH 25-26**

C-1575 South Gateway Road
Mississauga, ON L4W 5J1
800-665-4831
www.ArjoHuntleigh.com

We cover: hygiene systems, patient lifters, disinfection, therapeutic surfaces, medical beds, DVT prevention, wound healing and bariatric solutions. Our broad product offering as well as sales and service structure mean we are positioned to be a stronger partner in the pursuit of cost-effective, high quality healthcare.

Baxter Corporation**Booth EH 35, 43**

4 Robert Speck Parkway, Suite 700
Mississauga, ON L4Z 3Y4
905-281-6505
www.baxter.com

BD**Booth EH 53-54**

2771 Bristol Circle, Oakville, ON L6H 6R5
905-855-4650
www.bd.com/ca/safety

Global medical technology company focused on improving drug therapy, enhancing the diagnosis of infectious diseases and advancing drug discovery. Healthcare-associated infections are a major cause of morbidity and mortality and one of the highest incidences of adverse events. Preventing and managing HAIs is a patient safety issue and BD has products and capabilities to help reduce HAIs in hospitals.

BioNuclear Diagnostics Inc. Booth CL 65
1791 Albion Road, Toronto, ON M9W 5S7
416-674-1545
www.bndinc.com

BioScience Laboratories Inc. Booth CL 61
300 N. Willson Avenue, Suite 1
Bozeman, Montana USA 59715
406-587-5735
www.biosciencelabs.com
Clinical study and laboratory services and guidance regarding federal regulatory agency requirements for the healthcare, pharmaceutical, personal care and consumer products markets.

Bowman Booth EH 39-40
17301 – 51st Avenue NE
Arlington, WA 98223
800-692-4660
www.BowmanDispensers.com
BOWMAN Protection Organizers and Respiratory Hygiene Stations deliver added efficiency to your infection prevention efforts by providing PPE when and where you need it.

Butcher's/JohnsonDiversey Booth CL 59
2401 Bristol Circle
Oakville, ON L6H 6P1
800-668-3131
www.butchers.com
Supplier of AHP disinfectants and other high performance cleaning solutions.

Canadian Agency for Drugs and Technologies in Health Booth T 4
Beothuck Building, 4th Floor, 20 Crosbie Rd.
St. John's, NL A1B 3Y8
709-722-8883
www.cadth.ca
National body that provides Canada's federal, provincial, and territorial healthcare decision makers with credible, impartial advice and evidence-based information about the effectiveness and efficiency of drugs, healthcare devices, equipment, and procedures.

Canadian Journal of Infection Control Booth EH A
3rd Floor, 2020 Portage Ave.
Winnipeg, MB R3J 0K4
866-985-9789
aran@kelman.ca
The official publication of the Community & Hospital Infection Control Association-Canada.

Canadian Patient Safety Institute Booth T 15
10-1730 St. Laurent Blvd.
Ottawa, ON K1G 5L1
613-730-7322
www.handhygiene.ca
Come visit us at our booth to learn about our national hand hygiene campaign, tool kit, and training for our hand hygiene audit tool.

Canadian Standards Association Booth CB 3
5060 Spectrum Way, Suite 100
Mississauga, ON L4W 5N6
416-747-4040
www.csa.ca

Canadian Vascular Access Association Booth T 9
685 McCowan Road, P.O. Box 66572
Toronto, Ontario M1J 3N8
416-696-7761
www.cvaa.info

Cardinal Health Canada Booth EH 36-37
1000 Tesma Way, Vaughan, ON L4K 5S
888-871-5945
www.cardinalhealth.ca
Manufacturer and distributor of medical products from over 400 manufacturers to hospitals, surgery centers, laboratories, long-term care facilities, and physician offices throughout Canada.

CardioMed Supplies Inc. Booth EH 30
199 Saint David Street, Lindsay, ON K9V 5K7
705-328-2518
www.cardiomed.com

CCD Health Systems Booth EH 23-24
254, 150 Chippewa Road
Sherwood Park, AB T8A 6A2
780-416-4414
www.ccdsystems.com
The Canadian reseller of ICNet, the leading provider of infection control software. ICNet is a web-based HAI case management and surveillance tool, providing real-time monitoring to minimize risk.

Certification Board of Infection Control and Epidemiology Inc. (CBIC) Booth T 7
PO Box 19554, Lenexa, KS 66285-9554
913-895-4607
www.cbic.org
Voluntary autonomous multidisciplinary board that provides direction for an administers the certification process for professionals in infection control and applied epidemiology.

CHICA Newfoundland Labrador/Run for IFIC Booth T 1-3
709-292-2294

CKM Healthcare Booth CL 62
6975 Creditview Road, Unit 4
Mississauga, ON L5N 8E9
800-279-8926
www.ckmhealthcare.com
Infection prevention & control software designed specifically for acute and non-acute care settings. Affordable, comprehensive, and easy to use.

Community and Hospital Infection Control Association (CHICA-Canada) Booth T 13-14
PO Box 46125 RPO Westdale
Winnipeg, MB R3R 3S3
866-999-7111
www.chica.org

ConvaTec Canada Ltd. Booth EH 14
1425, route Transcanadienne, Suite 250
Dorval, QC H9P 2W9
800-465-6302
www.convatec.ca
Flexi-Seal® FMS is a safe, effective fecal diversion and containment device, featuring a closed-end collection bag to help prevent the spread of infection.

Covidien (formerly Tyco Healthcare) Booth EH 32-34
7300 Trans-Canada Hwy.
Pointe-Claire, QC H9R 1C7
877-664-8926
www.covidien.com

Daniels Sharpsmart Canada Ltd. Booth EH 19
52 Bramsteele Road, Unit 8
Brampton, ON L6W 3M5
905-793-2966
www.danielsinternational.com
Providing reusable sharps container system that is safer to use. It reduces plastic waste generated which is better for the environment.

Deb Canada Booth EH 29
PO Box 730, 42 Thompson Road West
Waterford, ON N0E 1Y0
519-443-8697
www.debcanada.com
Our research into point of care and infection control programs are designed to increase optimum hand hygiene compliance; the results being reduced infections to patients and caregivers alike.

Ecolab Booth EH 17-18
5105 Tomken Road
Mississauga, ON L4W 2X5
905-238-0170
www.ecolab.com
Offering healthcare professionals the broadest selection of skin care, surface disinfection and instrument cleaning products available. The broad and innovative product line and high quality service and support make Ecolab the "total solutions" brand; providing people, support, research, and selection for infection prevention.

Ekotek Global Inc. Booth EH 48
129 Fielding Road
Lively, ON P3Y 1L7
800-480-4131
www.ekotek.ca
The DEKO 190 Ward Disinfectant is a cost-effective, large capacity bedpan and utensil washer. It provides a versatile and economical ward level infection control solution.



Laura

The Laura Line family of skin care products include Creams, Lotion and Antibacterial Soaps, Sanitizing Gel and Laura Line Moisturizing Creams. All of these Products have been specifically formulated for frequent hand washers using the finest skin conditioners and moisturizers available.

For more information:

Telephone: 1-800-257-5592 Facsimile: (519) 895-2374
www.lauralineskincare.com
Kitchener, Ontario

Falconfire Inc. Booth CL 55
14 Duval Drive
Barrie, ON L4M 6V2
705-797-1758
www.falconfireinc.com

Getinge Canada Limited Booth EH 13
1575 south Gateway Road, Unit C
Mississauga, ON L4W 5J1
800-465-3442
www.getinge.com
Manufacturer, distributor, and service provider of steam sterilization and washing and disinfection equipment and related consumable products such as sterility assurance monitors and cleaning agents.

GOJO Industries Inc. Booth EH 8-9
One Gojo Plaza, Suite 500
Akron, OH 44311
800-321-9647
http://healthcare.GOJO.com
The inventors of PURELL® now offer a complete line of 70% ethyl alcohol formulation instant hand sanitizer products. For over 60 years, GOJO has been dedicated to improving the wellbeing of patients and healthcare professionals. PURELL is a trademark of Johnson & Johnson and used under licence.

Hollister Limited Booth EH 41
95 Mary Street
Aurora, ON L4G 1G3
800-263-7400
www.hollister.com
We offer a solution in the practice of bowel management. Reliable protection starts with the ActiFlo Indwelling Bowel Catheter. It provides an effective means of diverting and containing stool to help reduce patient and clinician exposure, prevent skin breakdown and control costs.

Hygie Canada Inc. Booth EH 42
2760 chemin du Lac
Longueuil, QC J4N 1B8
450-640-1444
www.hygiecanada.com

Infection Prevention Society Booth T 8
United Kingdom
011 44 1506 811077
www.ips.uk.net

International Federation of Infection Control Booth T 5
c/o 1508-5229 Dundas Street W
Toronto, ON M9B 6L9
416-237-0462
www.theifc.org

Interstream Technologies Booth EH 22
170 Princess Street
Hamilton, ON L8L 3L3
905-526-1453
www.interstream.com
The proven power of heat combined with Thermal Accelerated Nano Crystal Sanitation Technology kills C.diff spores, MRSA, VRE, and more with a 5-second contact.

Johnson and Johnson Medical Products Booth EH 44-45
200 Whitehall Drive
Markham, ON L3R 0T5
800-268-5577
www.sterrad.com

JohnsonDiversey Booth CL 59
2401 Bristol Circle
Oakville, ON L6H 6P1
800-668-3131
www.johnsondiversev.com
Supplier of AHP disinfectant and other high performance cleaning solutions.

LauraLine Skin Care Booth EH 47
30 McLean Court
Kitchener, ON N2R 1B1
800-257-5592
www.lauralineskincare.com

Les entreprises Solumed – A 3M Canada Company Booth EH 49
32891 rue Jean-Bérard
Laval, QC H7T 2L2
450-682-6669

Medline Canada Booth EH 20-21
2305 Wyecroft Road
Oakville, ON L6L 6R2
800-396-6996
www.medline.ca

Largest privately held manufacturer and distributor of healthcare supplies in North America, bringing over 100,000 products to market. Our mission is to provide quality medical products with superior value to healthcare providers and end users, improving patient care and the quality of people's lives.

Metrex Booth CL 63
1717 West Collins Avenue
Orange, CA 92867
714-516-7788
www.metrex.com
Trusted partner for infection prevention needs. Our mission is in protecting people by providing high-quality products that help reduce healthcare-acquired infections.

Micro-Scientific Industries Booth CB 1
1225 Carnegie Street, Suite 101
Rolling Meadows, IL 6008
847-454-0835

Pharmax Limited Booth EH 1
80 Galaxy Boulevard, Unit 4
Toronto, ON M9W 4Y8
416-675-3333
www.pharmax.ca
From eradication of biofilms to destruction of prions, our chemistry continues to chart new frontiers. Now a series of all-natural antimicrobials that are broad-spectrum is the next breakthrough.

Pinchin LeBlanc Environmental Booth CL 66
27 Austin Street, 2nd Floor
St. John's, NL A1B 4L3
709-754-4490

Professional Disposables International, Inc. Booth EH 38
Two Nice Pak Park
Orangeburg, NY 10962
800-444-6725
www.pdipi.com
For over 30 years, PDI has served the healthcare market with trusted brands including Chlorascrub™, Sani-Cloth®, Sani-Hands® for Kids, and Hygea®.

Provincial Infection Control Network of BC Booth T 12
Room 2083, 655 W. 12th Avenue
Vancouver, BC V5Z 4R4
604-660-0296
www.picnetbc.ca
Focusing on surveillance, education, and best practice, PICNet is a multidisciplinary, collaborative network providing guidance and advice on healthcare-associated infection prevention and control in BC.

Public Health Agency of Canada Booth CL 70
100 Eglantine Drive, AL#0601E2
Ottawa, ON K1A 0K9
613-952-5221
www.phac-aspc.gc.ca

Regional Infection Control Networks of Ontario Booth T 10-11
c/o 10 Elm Street, Unit 302
Sudbury, ON P3P 1J3
705-523-7124

Remington Medical Equipment Booth EH 12
401 Bentley Street, Unit 9
Markham, ON L3R 9T2
905-470-7790
www.remingtonmedical.com
Manorapid and Monorapid Synergy exceed the new proposed guidelines for testing antiseptics in Canada. Effective in 30 seconds against all viruses, bacteria and fungi, why use anything less.

rL Solutions Booth CL 69
77 Peter Street, Suite 300
Toronto, ON M5V 2G4
416-410-8456
www.rL-solutions.com
Leading provider of risk management, infection control, claims, and feedback software for the healthcare market.

CAUTION

Legionella & Aspergillus
Are you fully informed about the occupant impact of Legionella and Aspergillus that may be present in health care facilities in the air and water systems?

Pinchin Environmental provides consulting and laboratory services related to:

- Construction/Maintenance Infection Control
- Mold and Legionella Consulting & Laboratory Services
- Occupational Health & Safety
- Related Training and Awareness Sessions

888.757.3330 ■ pinchin.com

PINCHIN ENVIRONMENTAL
Engineering Environmental and Health & Safety Solutions

Sage Products Inc.

3909 Three Oaks Road
Cary, IL 60013
800-323-2220
www.sageproducts.com

Providing simple interventions that help improve clinical outcomes. Products include Comfort Bath® Cleansing Washcloths, Prevalon® Heel Protector, Toothette® Oral Care, Comfort Shield® Barrier Cloths and Sage® 2% Chlorhexidin Gluconate Cloths.

SciCan

1440 Don Mills Road
Toronto, ON M3B 3P9
800-667-7733
www.scican.com

AT-OS bedpan washer-disinfectors, available in a range of models. Innova E series endoscope washer-disinfectors, in single door and pass-through designs. HMTS Plasma Sterilizers, including the new 142 litre model.

Booth CL 68

Smith & Nephew

2250 Boul. Alfred Nobel, 3rd Floor
St-Laurent, QC H4S 2C9
514-956-1010
www.smith-nephew.com

Southmedic

50 Alliance Boulevard
Barrie, ON L4M 5K3
800-463-7146
www.southmedic.com

Steris Canada, Inc.

6280 Northwest Drive
Mississauga, ON L4V 1J7
800-661-3937
www.steris.com

Featured products include SixCess™ Class 6 Chemical Indicators and Challenge Packs, Resert™ Accelerated Hydrogen Peroxide High Level Disinfectant, and Polys-tica™ Ultra Concentrate Enzymatic Detergents.

Booth EH 7

Booth CL 67

Booth EH 4-5

The Stevens Company

425 Rainside Drive
Brampton, ON L7A 0N8
905-791-8600
www.stevens.ca
Canada's oldest and largest physician supply company since 1874.

Stryker Canada

45 Innovation Drive
Hamilton, ON L9H 7L8
905-690-5700
www.stryker.com

T. B. Clift Ltd.

34 O'Leary Avenue
St. John's, NL A1B 2C7
709-753-6850

Trimline Medical Products Corp.

34 Columbia Road
Branchburg, NJ 08876
800-526-3538
www.trimline.us

Manufacturers of blood pressure cuffs, stethoscopes and aneroids for all applications, including isolation and quarantine. TRIMLINE Medical pioneered the industry's first cuff standardization program.

Uberloo

140 Water Street
Charlottetown, PE C1A 1A7
902-628-8566
www.uberloo.com

Introducing handsfree locking restroom door; health-care doorway hand sanitizer reminder system; world's first global symbol for superior hygienic restrooms.

Vernacare

150 Norfinch Drive, Unit 1
Toronto, ON M3N 1X6
800-268-2422
www.vernacare.com

Vernacare is an established world leader providing environmentally responsible solutions for human waste disposal that improves infection control and workplace practices.

Virox Technologies Inc.

2770 Coventry Road
Oakville, ON L6H 6R1
800-387-7578
www.virox.com

The Accelerated Hydrogen Peroxide® (AHP®) technology offers a broad array of products ranging from surface cleaners and disinfectants, instrument cleaners, high level disinfectants, chemical sterilizers and hand sanitizers.

Watts Industries (Canada) Inc.

5435 North Service Road
Burlington, ON L7L 5H7
905-332-4090
www.wattscanada.ca

Webber Training Inc.

58 Lambert Drive
Belleville, ON K8N 4K6
800-363-5376
www.webbertraining.com

Teleclass education lecture series by the world's top experts on infection control topics. Educational tools for infection control professionals; trainer's resource for infection control (www.trainers-resource.com).

Wood Wyant

3025 rue Joseph-Armand-Bombardier
Laval, QC H7P 6C5
450-680-9700
www.woodwyant.com

Booth EH 31

Booth CB 4

Booth CL 56

Booth CL 64

Booth CL 57

Booth EH 15

Booth EH 16, 27

Booth CL 58

Booth T 6

Booth CL 60

Finger Guard™

Clear Protective Finger Cover
Powder Free • Latex Free



MMSI Protection at your Finger Tips

Eliminate Cross Contamination between Pulse Oximeter Probe and Patient:

In most cases, the patient's hands and/or probes are not disinfected prior to probe oximeter measurements.

- Protection for patient and pulse oximeter probe.
- Provides accurate pulse oximeter measurements.
- A necessary and vital tool in the fight against nosocomial infection.

MMSI

McARTHUR
MEDICAL SALES INC.

McArthur Medical Sales Inc.
1846 5th Concession West
Rockton, ON L0R 1X0
T+ 800.996.6674 519.622.4030
F+ 519.622.1142
mmsi@mcarthurmedical.com
www.mcarthurmedical.com



Features and Benefits of Finger Guard™

- Eliminates need for costly, single use disposable probes.
- Offers a cost-effective solution to nosocomial infection.
- Clear protective finger cover.
- Powder free, latex free.
- Easy Application, easy to dispense.
- Convenient, non-absorbent dispenser box – Simply wipe off to clean.
- Universal application – ICU to EMS.



TITAN² Touchless Electronic Roll Towel Dispenser



Wave Good-Bye to Germs!

TITAN² represents the next generation in touchless roll towel dispensing. Electronic motion activated TITAN² helps prevent the spread of germs by eliminating cross contamination and improving hand hygiene. Loaded with enhanced features, the TITAN² Electronic Dispenser features four length portion controls, two operational settings (*Wave & Dry* or *Tear & Dry*), and is designed for use with Embassy[®] Supreme TAD or White Swan[®] towels. It's easy to use! Get the TITAN² Electronic towel dispenser system so you can wave good-bye to germs and say hello to cost savings!



TITAN²

To order call toll-free 1-800-665-5610.
For more information visit www.krugerproducts.com/afh

© 2007, ® Registered and ™ Trademark of Kruger Products.

hygieneChoice[✓]





Pearl Orenstein

*Infection Control Coordinator, SMBD
Jewish General Hospital, Montreal*

Like many infection preventionists who started out in the early days of infection prevention and control, Pearl Orenstein got into the profession by chance.

She was back in university after working as a nurse for a while, and she met an ICP from Sir Mortimer B. Davis Jewish General Hospital who asked Orenstein if she would be interested in replacing the ICP, since she was moving into quality assurance. "I thought infection prevention and control would be interesting," Orenstein says. She took the job for four days per week, and once her kids were in school full-time, she worked in Infection Control four days per week, and quality assurance one day per week.

After her previous work in emergency, ICU, and public health, she found working in infection prevention and control was just as fast, but combined the knowledge and skills she used in her previous positions. "You need a good knowledge base, but the best part is you learn something new every day. There's always someone with a question that stymies you, and you have to find the answers. It's fun."

Orenstein stresses that infection prevention is a team effort all the way. "I certainly don't do this on my own; we do this as a team, and work very

hard." In fact, the addition of staff to enter data and analyze statistics is one of the most important developments in the profession. "Clerical help is of the

equation. "Certification is important. There's no guarantee everyone is qualified, but at least it is a good start to make sure everyone has a baseline."

"You need a good knowledge base, but the best part is you learn something new every day. There's always someone with a question that stymies you, and you have to find the answers. It's fun."

utmost importance. There's a much more formal way of looking at things. We also have to be careful so we don't become bean counters. If we don't use our data in some way – only collect it – then I don't think we've come very far."

There have been many changes in the profession over the years, one of them being the recognition that hospital-acquired infections are a major problem which should not be tolerated, says Orenstein.

Involvement with groups such as CHICA play an important role in an IP's life, says Orenstein. "It's a wonderful opportunity because you get to see how people are doing things across the country. You get to understand the evolution of the profession."

Certification is also part of the

Above all, infection preventionists need to be humble. "You carry many hats, and sometimes have to be a go-between to represent the issues to everyone. It's OK to say 'I don't know, but I'll find out.'"

Last May, Orenstein was awarded the Alice-Girard Prize by the Order of Nurses of Quebec. The award recognizes the outstanding work of a nurse who has demonstrated remarkable professional commitment, leadership, and creativity, and has contributed significantly to the improvement of public health and the development of the profession. When asked about the award, she takes her own advice to heart: "It was a total surprise. I think it was my team's way of having me recognized because I had a milestone birthday." 🎂



Smarter Cleaning.

RUBBERMAID PULSE™

FLOOR CLEANING SYSTEM

- High-capacity reservoir holds enough solution to clean up to 850 sq ft of floor space
- Refill and clean up to 10,000 sq ft with the optional Rubbermaid Pulse™ Caddy
- Pulse™ Caddy utilizes Clean-Connect technology to reduce exposure to chemicals



Press the ergonomic trigger handle to deliver three streams of cleaning solution (non-atomizing for greener cleaning).



Clean floors faster and more easily. Rubbermaid Pulse™ combines industry-best microfibre and the time-saving portability of an on-board cleaning reservoir.

Learn more about Rubbermaid Pulse™ at
www.rcpworksmarter.com
or call 1-800-998-7004

Work Smarter.





WOOD WYANT INC.

Control Cross-Contamination and Nosocomial Infections Effectively, Efficiently and Economically

*Microfibre Technology
Including the Ergonomic
benefits of the Microfibre
Wet and Dry Mopping
Systems and the
Microfibre Wiping System*

*Green Cleaning Program
Including the new Vert-2-Go
line of Green Seal Certified
cleaning products*

*Ultra Wipes
RTU Disinfectant Wipers for
"non critical" hard surfaces*

*Purell® Hand Sanitizing
System including the Portal
Program*

*TASKI Equipment
State-of-the-Art Cleaning*

For more information
visit us at www.woodwyant.com
or call 1-800-361-7691



North Bay MRSA Roadshow

CHICA–CANADA and BD (Becton Dickinson) have hosted a successful series of MRSA Roadshow Seminars. In 2008, Roadshows were held in Vancouver, Calgary, and Toronto. In 2009, a successful MRSA Roadshow was held in Halifax. The Roadshow Seminars are designed to educate healthcare professionals and healthcare administrators on decreasing the rate of healthcare-associated infections with the focus on Methicillin Resistant Staphylococcus Aureus (MRSA) and *Clostridium difficile* (*C. difficile*).

The fifth in the Roadshow series will be held:

THURSDAY, JUNE 4, 2009

Clarion Resort Pinewood Park, North Bay
201 Pinewood Park Drive, North Bay, Ontario

REGISTRATION IS FREE! BRUNCH IS INCLUDED! To register, go to www.chica.org

SCHEDULE:

9:00-10:15 a.m. CHICA Northeastern Ontario Chapter Meeting (Founders A)
10:15-10:55 a.m. Brunch for all attendees (Founders A)
11:00 a.m.-3:00 p.m. MRSA/*C. difficile* Education Sessions (Ballroom A/B)

EDUCATION SESSIONS

MRSA Best Practices – Jim Gauthier, MLT, CIC

Key practices to control the spread of MRSA as per PIDAC best practices; screening, challenges

MRSA in Special Populations – Jim Gauthier, MLT, CIC

Screening for ARO in special populations (long-term care, mental health, correctional services, remote communities)

Community-Acquired MRSA – Kevin Katz, MD, CM, FRCPC

Identification and testing for CA-MRSA; differences between CA-MRSA and HA-MRSA; Clinical significance of CA-MRSA; Emergence of CA-MRSAS in the North

Culture Change for the Management of MRSA – Leah Gitterman

Control and eradication of MRSA through culture change; human factors; positive deviance

Questions and Answers – Panel

GUEST ROOMS


Clarion Resort Pinewood Park – North Bay – \$99.00 single/double Plus 10% taxes
Reservations: 1-705-472-0810 (Quote NEOICN Conference)

THIS EVENT FOLLOWS THE ANNUAL CONFERENCE OF THE NORTHEASTERN ONTARIO REGIONAL INFECTION CONTROL NETWORK AND CHICA NORTHEASTERN ONTARIO

The Registered Nurses' Foundation of Ontario Molson Canada SARS Memorial Fund providing grants to ICPs

The SARS Memorial Fund for Infection Control Practitioners is a tuition/certification/professional development reimbursement program funded by Molson Canada SARS Concert (2003) and supported by the Ontario Ministry of Health and Long Term Care.

RNFOO manages the SARS Memorial Fund, initiated in January 2005. The fund provides grants to Infection Control Practitioners **from any discipline** to support them in advancing their knowledge to lead infection control practices within their healthcare settings. Grants can be applied to continuing education, certification/re-certification and professional development.

The fund of \$175,000 is to be administered over three years, allowing for the allocation of approximately \$58,000 per year in support of individual pursuing formal education and certification in the area of infection control. 

See www.rnfoo.org for details.

Virox Technologies Partnership Scholarship Winners

Through the financial support of the Virox Technologies Partnership, 14 CHICA-Canada members were awarded scholarships to attend the 2009 National Education Conference in St. John's, NL. CHICA-Canada and its members thank Virox Technologies and their partners Deb Canada, JohnsonDiversey, Steris Corporation, and Webber Training for their initiative to make the education conference accessible to those whose accomplishments should be recognized and who may not have otherwise been able to attend.

Nancy Brown, Wingham, ON
Gail Busto, Vancouver, BC
Melody Cordoviz, Edmonton, AB
Brenda Dyck, Winnipeg, MB
Zahir Hirji, Toronto, ON
Mary LeBlanc, Tyne Valley, PE
Gail Lohr, Victoria, BC

Nila MacFarlane, Winnipeg, MB
Beverly Pittman, St. Antony, NL
Suzanne Rhodenizer-Rose, Bridgewater, NS
Helen Shaw, Sarnia, ON
Sheila Sheppard, Kentville, NS
Betty Taylor, Winnipeg, MB
Elizabeth Watson, Bridgewater, NS



Webber Training
THE CANADIAN COLLEGE OF PROFESSIONAL TRAINING

JohnsonDiversey
Clean is just the beginning



STERIS®



CHICA-Canada Research Grant Awarded



At the 2008 Annual General Meeting held in Montreal, members ratified a resolution to establish a CHICA-Canada Research Grant dedicated to increasing our knowledge of the prevention, control and eradication of *Clostridium difficile*. The resolution then calls on federal, provincial and territorial governments of Canada to allocate \$1 per Canadian toward a research fund aimed at the prevention, control and eradication of *Clostridium difficile*.

A grant in the amount of \$42,500 has been awarded to Vivian Loo, MD, MSc, FRCP(C), McGill University Health Centre, Montreal for her research into "Household Transmission of *Clostridium difficile*." The proposed research addresses household transmission of *C. difficile* and is anticipated to generate interesting data and help define and provide insights into the emerging problem of community-associated *C. difficile* infection.



Today, Cardinal Health Canada is

CHASING ZERO HOSPITAL-ACQUIRED INFECTIONS.

We offer a wide range of market leading infection prevention products to help reduce the potential for infection throughout your surgical and patient care areas.

Cardinal Health Canada infection prevention solutions include:

- ChloraPrep® patient preoperative skin preparation
- Converters®
- Protective apparel
- Medical gloves
- Surgical clippers
- Fluid management
- Hand and skin care products
- Hard surface disinfectants
- Patient hygiene products

Help in the chase for zero hospital-acquired infections.
What is the zero you want to chase?

Join the chase at cardinalhealth.ca and visit us at the
2009 CHICA Education Conference.



CardinalHealthCanada

*The premier provider of products, services, and solutions
for safer, more efficient healthcare in Canada.*

Solumed a 3M Canada Company
The Chlorhexidine Gluconate Specialists



Infection Prevention
Solutions,

The CHG Specialists

The Source for:

Preoperative **CHG**
Shower Products



CHG Surgical
Skin Prep
Products



CHG Vascular Access
Skin Prep Products



Call your Infection Prevention
Specialist at 1 800-364-3577

Solumed, a 3M Canada Company
3281 Jean-Béraud St.
Laval, QC H7L 2L2
CANADA
info@solumed.biz | www.solumed.biz

SoluNet and Solu- I.V. are registered trademarks
of Solumed a 3M Canada Company.
Please recycle. Printed in Canada
© 2009, 3M. All rights reserved.
0902-4689E



Call for applications

2011 SCIENTIFIC PROGRAM COMMITTEE

Background

The CHICA-Canada 2011 Scientific Program Committee is a national committee whose mandate is to plan, develop and ensure completion of the scientific program committee for the 2011 National Education Conference. The 2011 National Education Conference will take place in Toronto (venue and date to be announced).

The 2011 committee is comprised of the following representatives of various practice settings:

2011 Conference Chair – Cathy Munford, RN, CIC
2011 Scientific Program Chair – Zahir Hirji, RN, BScN, MHSc, CIC
2011 Scientific Program Co-Chair – Vacant
2011/2012 Acute Care Representative – Vacant
2011/2012 Long Term Care Representative – Vacant
2010/2011 Community/Public Health Representative – Amanda Knapp, BAsC, CPHI(C), CIC
2010/2011 Medical Microbiology/Infectious Disease Physician – Pamela Kibsey, MD, FRCPC

Call for applications

CHICA-Canada is seeking three candidates to fill the positions of:

- Scientific Program Co-Chair (will become Scientific Program Chair for 2012 conference)
- Acute Care Representative (for 2011 and 2012 conferences)
- Long Term Care Representative (for 2011 and 2012 conferences)

Meeting schedule and expenses

The Scientific Program Committee meets twice in-person (for each conference) and then communicates through email or conference calls. The first meeting of the 2011 Scientific Program Committee is scheduled for the autumn of 2009 (Toronto location to be announced). The first meeting of the 2012 Scientific Program Committee will be scheduled for the fall of 2010 (location TBA).

CHICA-Canada pays the expenses of committee members to attend in-person meetings. CHICA-Canada pays the expenses of committee members to attend the conferences they have planned.

Qualifications

Applicants must possess the following qualifications and agree to the following terms:

- A current (2009) member of CHICA-Canada, having held membership for at least five years.
- Must have a Certification in Infection Control & Epidemiology (CIC) or specialty training in epidemiology, infectious diseases or community medicine.
- A minimum of five years' experience in Infection Prevention and Control and/or Infectious Diseases with specific expertise in the setting for which a representative is sought
- Good interpersonal and communication skills
- Professional involvement with CHICA-Canada in a Board or Chapter Executive role, as Chair of an Interest Group or on a CHICA-Canada Committee.
- Experience in the planning of scientific programs for professional conferences (local, regional or national) would be an asset but is not mandatory.
- Has the time, personal commitment and support of their institution to serve CHICA-Canada through this position.

Application must include:

- A letter from applicant indicating the position of interest, and demonstrating suitability for the position.
- A curriculum vitae that includes details as to the candidate's background in Infection Prevention and Control/Infectious Diseases.
- a CHICA-Canada Board Member, as a Chapter Executive, or on a CHICA-Canada Standing Committee, Interest Group or Conference Planning Committee.

Applications must be received no later than June 1, 2009

Applications should be forwarded to:
Executive Administrator/Conference Planner
CHICA-Canada
PO Box 46125 RPO Westdale
Winnipeg, MB R3R 3S3

By courier to:
67 Bergman Crescent
Winnipeg, MB R3R 1Y9

By fax: 204-895-9595
By email: chicacanada@mts.net

The Grand Prix of PPE in Long Term Care

A new DVD resource created by Regional Infection Control Networks in Ontario, this teaching tool focuses on the essentials of personal protective equipment. Although targeted to the long-term care setting, the messages are equally engaging for acute care as well. The DVD employs a humorous approach that makes it a great teaching tool for new and existing staff alike. English and French versions included.

See the **CHICA-Canada Product Order Form** (page 88) and www.chica.org for pricing information



Some reviews:

- "Incredibly entertaining, and just happens to be informative as well... you'll never consider donning and doffing again without a smile on your face."
- "I did an in-service this week using the new PPE LTC video – staff thought it was great – there was laughter during the videos and a good Q and A session afterwards."
- "After [the video] was previewed, there was an audible buzz of excitement in the room (with about 185 people present). They laughed at the funny parts and nodded heads at the messaging and were mesmerized for the duration of the show."

2010 Board positions available for nomination

The Board of Directors of CHICA-Canada is seeking nominations for board positions that will be open in 2009. Being on the board of CHICA-Canada is an excellent way to participate at the national level. Personally and professionally, it offers the opportunity to meet a wide range of CHICA-Canada members, network with allied professional groups, and work with other motivated and experienced board members.

Nominations are invited for the following positions:

- President Elect (1-year term)
- Director, Programs & Projects (3-year term)
- Director, Standards & Guidelines (3-year term)

These terms commence January 1, 2010. Position descriptions and nomination forms are found in the CHICA-Canada Policy and Procedure Manual, or may be obtained from the Membership Service Office or downloaded from www.chica.org (Members Login).

Signatures of two active members are required for each nomination. If you know someone who would be qualified and interested in one of the above positions, send a completed nomination form to:

Bern Hankinson, RN, BN, CIC
CHICA-Canada Secretary/Membership Director
c/o Membership Service office
PO Box 46125 RPO Westdale
Winnipeg MB R3R 3S3

Or by courier to:
Bern Hankinson, RN, BN, CIC
CHICA-Canada Secretary/Membership Director
c/o Membership Service office
67 Bergman Crescent
Winnipeg MB R3R 1Y9

Deadline for nominations: August 15, 2009.

NEW!

The **Improved**

Flexi-Seal[®] FMS

Dramatically Advancing
Fecal Incontinence Management

Concerned about
C. difficile?

Use Flexi-Seal[®] FMS to **manage** and **contain** infectious diarrhea



- A simple closed system
- All disposable, single patient use
- Designed to minimize the exposure of infectious waste materials



For more information, call our Customer Relations Center (Registered Nurses on staff) at 1 800 465-6302, Monday through Friday, 8:00 AM to 7:00 PM (EST), or visit our Web site at www.convatec.ca



the **VANISHPOINT**[®] **ADVANTAGE** Designed for Clinician and Patient Safety

Clear, unobstructed
calibrations allow for
accurate dosing



Triple beveled,
lubricated needle
provides patient comfort

**EASY, ONE-HANDED
ACTIVATION**



**NO CONTAMINATED
SHARP EXPOSED**

Attached needle
prevents leakage
and contamination

Pre-removal activation
prevents exposure to
contaminated sharp



*Studies show that most needlestick injuries
occur within seconds after needles are
removed from patients.*

**REDUCED
SYRINGE
DEADSPACE**



Activated VanishPoint[®] Syringes require
less disposal space than other syringes
and prevent disposal-related injuries.

VanishPoint[®] syringes
are available in a variety
of needle sizes and gauges.



VanishPoint[®] tube holders
are used with standard
blood collection needles
and vacuum tubes for
safe blood collection.



VanishPoint[®] Allergy Syringe Tray



VanishPoint[®] IV Catheter

 **RETRACTABLE
TECHNOLOGIES, INC.**
www.vanishpoint.com

511 Lobo Lane • Little Elm, Texas 75068-0009 • USA
Tel: (972) 221-6644 • Fax: (972) 294-4400
Toll Free: 1-888-703-1010
rtisales@vanishpoint.com • rtiintl@vanishpoint.com

 **VANISHpoint**[™]
The New Standard for Safety[™]

CHICA-CANADA POSITION STATEMENT

Healthcare Facility Design Position Statement

PARTICIPANTS

CHICA-Canada
Healthcare Facility Design and
Construction Interest Group

Co-Chairs:

Karen Stockton (TPIC)
Barbara Shea (TPIC)

Principal Author:

Judy McCarten (TPIC)

Participants:

Clare Barry (TPIC)
Jim Gauthier
(CHICA-EO)
Anna Hung
(CHICA-SWO)
Maja McGuire (TPIC)
Joan Osbourne (TPIC)
Bernard Siedlecki (TPIC)
Merlee Steele-Rodway
(CHICA-NL)
Ado Strentse (TPIC)
Vicky Willet
(CHICA-NWO)
Victoria Williams (TPIC)
Simone Wortman (TPIC)

All acute healthcare facilities (e.g. hospitals) should be able to promote and support an environment that is safe for patients, visitors and healthcare workers. Planning of healthcare facilities, room designs, surfaces and processes should take into account the chain of transmission of infectious agents, so users can easily take steps to avoid spreading potentially harmful microorganisms. There are Canadian Standards to address Infection Control for Construction and Renovation, Routine Practices and Additional Precautions, Sterilization and specific disease entities. Currently, there are no Canadian Infection Control Standards to address the overall design of healthcare facilities. Infection Prevention and Control concepts need to be incorporated into design, to facilitate desired practices by the healthcare worker and to provide a safe environment.

1. Infection Prevention and Control Professionals should be involved in all phases of healthcare facility design, construction and renovation. This includes but is not limited to:
 - participation in proposal for funding
 - design planning
 - review of tender documents and mockups
 - final commissioning.
2. Infection Prevention and Control Professionals should be involved to ensure that design and construction of specific structures facilitates desired Infection Prevention and Control practices, and meets or exceeds current guidelines including American Institute of Architects (AIA), Canadian Standards

Association (CSA), Public Health Agency of Canada, and ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers).

3. Infection Prevention and Control Professionals should review preventive measures and construction specification sections to ensure that adequate language and requirements are included in the tender documents prior to document issuance.
4. In-Patient Bedrooms:

Single patient rooms have been shown to help decrease the risk of infection by reducing cross contamination.^{1,2,3,4} Having a single room also provides access to a dedicated toilet for each patient. This will improve the management of human waste and decrease the risk of transmission of organisms such as *Clostridium difficile*. In addition, evidence shows single patient rooms are cost effective and safer; (see appendix attached).

 - In new construction, the maximum number of beds per in-patient room should be one unless the functional program can demonstrate the necessity of a two-bed arrangement.
 - 5 Approval of anything other than single rooms should be obtained from the licensing authority.
 - Where renovation work is undertaken, the current bed capacity should not be exceeded and, an assessment should be done to determine whether there is an opportunity to decrease multi-bedrooms to the lowest achievable number of beds per room. e.g. decrease a 4-bed room to 2-bed room whenever feasible.

5. Designs should include:

- A washroom that includes a toilet and hand washing sink in each in-patient single-bed room.^{4,5}
- Dedicated HCW hand wash sinks in each patient room exclusive of the patient washroom sink.^{4,5}
- Minimum of one Airborne Infection Isolation room in each in-patient care unit and additional Airborne Infection Isolation rooms as per Institutional Infection Control Risk Assessment.⁵
- Management of patient bodily waste in such a manner as not to pose a risk to staff or patients. The use of rim-flushing sinks or hoppers should be eliminated. Spray wands should not be used.
- Separation of clean and dirty utility rooms and provisions for storage of equipment and supplies in a clean and dry area.⁵
- Triage areas and new clinical spaces that are designed and ventilated to reduce potential exposure of staff, patients, and visitors/families to infectious diseases.⁵

Space allocation and distances between patients in all areas of the Healthcare Facility should meet AIA and CSA standards as a minimum.

6. Before installing hand washing sinks and hand hygiene product (e.g. ABHR) dispensers, prepare a workflow pattern and risk assessment to facilitate the decision about where to place sinks and products.⁶

7.1. Sink Standards: Placement

For example of indications for placement of handwashing sinks see:

http://www.health.gov.on.ca/english/providers/program/infectious/diseases/ic_hh.html

- There should be sufficient hand washing sinks such that staff do not need to walk more than 6.1 metres/20 feet to reach the sink.⁶
- Sinks should be located at least one metre (three feet) from patients, clean supplies and adjacent counters.⁶
- Handwash sinks should be free standing and not inserted into or immedi-

ately adjacent to a counter.⁶

- Sinks should be installed at least 34 inches (863.6 mm) above the floor.⁶

7.2 Sink Standards: Design

- All materials used to construct handwash sinks should be capable of sustaining regular cleaning/disinfection with hospital-approved cleaners and disinfectants.⁷
- Sinks should be porcelain, enamel, vitreous china or 18 gauge, 304 stainless steel 8, or Corian or other non-porous materials. Granite or marble is not appropriate for healthcare settings.
- Sink size should be sufficient to prevent recontamination (from splashing) during use for hand hygiene. Suggested minimum inside diameter of 14" x 10" and a minimum depth of 9". Cup or bar sinks are not of sufficient size for hand washing.
- Sink and spout should be designed to minimize splashing and aerosolization.
- Sink spouts should be free of aerators/modulators/rose sprays.
- Finishings around plumbing fixtures



- should be smooth and water resistant.
- Plug or overflows capable of taking a sink plug should not be used.^{4,9}
 - Strainers and anti-splash fittings at outlets should not be used as they easily become contaminated with bacteria.⁴
 - Taps and controllers:
 - Controls (water taps) should be hands free. Either electric eye or foot pedal operation is acceptable (these should be triggered by hand, not body placement).⁶
 - Taps such as gooseneck taps should not swivel.⁶
 - Ultrasonic controls or automatic temperature controls should not be used.⁶
 - Electric eye technology should have a backup that allows for operation during power interruptions, and have a means for users to adjust water temperature adjacent to the sink.⁶
 - Towel dispenser design should be such that only the towel is touched during removal of towel for use. 6
 - Hot air dryers should not be used in clinical areas as warm air currents dry hands slowly and can be used by only one individual at a time. This results in queues and the temptation to dry hands on clothing.⁶

References

1. Ulrich R., Quan X., Zimring, C. Joseph, A. et al. (2004). The role of the physical environment in the hospital of the 21st Century: a once-in-a-lifetime opportunity. Report to the Center for Health Systems and Design. http://www.healthdesign.org/research/reports/physical_envIRON.php. Accessed Dec 14, 2007
2. Van Enk, R., Modern Hospital Design for Infection Control. Healthcare Design Magazine. September 2006
3. Bracco, D., Dubois, MJ., Boulai, R., Eggimann, P. Single rooms may help to prevent nosocomial bloodstream infection and cross-transmission of methicillin-resistant Staphylococcus aureus in intensive care units. *Intensive Care Med.* 2007 May;33(5):836-40. Epub 2007 Mar 9.
4. NHS Estates. Infection control in the built environment: design and briefing. 2002 March 24, 2008 [cited March 22, 2008]; <http://www.md.ucl.ac.be/didac/hosp/architec/UK.Built.pdf>
5. American Institute of Architects. 2006 Guidelines for Design and Construction of Health Care Facilities: The American Institute of Architects; 2006.
6. Provincial infectious Diseases Advisory Committee Best Practices for Hand Hygiene in all Health Care Settings PIDAC May 2008. http://www.health.gov.on.ca/english/providers/program/infectious/diseases/ic_hh.html
7. Noskin, G., Peterson, L. Engineering infection control through facility design. *Emerg Infect Dis* 2001;7(2), March-April Canadian Standards Association. Infection Control During Construction, Renovation, and Maintenance of Health Care Facilities. 2007. CSA Z317.13 (2nd edition).
8. Whole Building Design Guide USACE/NAVFAC/AFCEA/NASA UFGS-22 04 00.00 20 (April 2006). Unified Facilities Guide Specifications <http://www.wbdg.org/ccb/DOD/UFGS/UFGS%2022%2004%2000.00%2020.pdf> Section 2.4.11. Accessed December 14, 2007.
9. Colville A., Weaving P., and Cooper T. How infection prevention professionals can make it easier for designers and planners. *British Journal of Infection Control* 2007 September;8(4):22-24.
10. Chaudbury, H., Mahmood A., and Valente M., (2003) The Use of Single Patient Rooms vs. Multiple Occupancy Rooms in Acute Care Environments, Simon Fraser University. Pilot Study on Comparative Assessment of Patient Care issues in Single and Multiple Occupancy Patient Rooms. Nov 2003. http://www.aia.org/SiteObjects/files/05_Pilot_Study_on_Assessment.pdf
11. Plumbing Design for Healthcare Facilities by Linda Seigler. http://www.plumbingengineer.com/feb_07/health-care.php. Accessed Dec 14, 2007
12. APIC Text of Infection Control and Epidemiology 2005: Association for Professionals in Infection Control and Epidemiology, Inc.; 2005.
13. Boyce, J.M., Potter-Bynoe, G., Chen-evert, C., & King, T. (1997). Environmental contamination due to Methicillin-resistant Staphylococcus aureus: Possible infection control implications. *Infection Control and Epidemiology*, 18 (9). 622-627
14. Planning, Design, and Construction of Health Care facilities, (2006) By the Joint Commission on Accreditation of Healthcare Organizations.
15. Committee to Establish Recommended Standards for Newborn ICU Design: Report of the Sixth Consensus Conference on Newborn ICU Design, January 25-27, 2006. Recommended Standards for Newborn ICU Design.

Appendix: Rationale for single patient rooms in healthcare facilities:

Facilities are continually challenged in having to close rooms and/or units due to patient exposure to infections. Many outbreaks start from roommate exposures or exposures in shared bathroom facilities. Patient placement and waiting times in emergency rooms are significantly hampered as a result of lack of appropriate rooms to place patients.

If all patient rooms were single, there would be improved patient flow, improved occupancy rates, decreased risk of exposure to infections, and improved safety for patients and health care providers. The improved flexibility would also increase the life span of the building.

A 2004 review by Ulrich and Xiaoho found rigorous studies that link the physical environment to patient and staff outcomes. 1 This review found 120 studies linking infection to the built environment of the hospital. They identified at least 16 studies relevant to the question of whether nosocomial infection rates differ between single-bed and multi-bed rooms. They concluded that infection rates are lower when patients are in single-bed rather than multi-bed rooms. Placing patients in single-bed rooms decreases the risk of exposure to infections from other patients. In part, this occurs because environmental surfaces near the patient become contaminated with organisms which can then be transmitted to other

patients. Boyce (1997) et al. found that in the rooms of patients infected with MRSA, 27% of all environmental surfaces sampled were contaminated with MRSA. 13 Multi-bed rooms are more difficult to decontaminate thoroughly after a patient is discharged than a single-bed room.

Ulrich et al. 1 indicate that based on a large and varied body of research, there can be no question that single-bed rooms have several major advantages over multi-bed rooms. These advantages include reductions in nosocomial infection rates. The review recommends that single-bed rooms should be provided in almost all situations. It suggests that adaptable-acuity single-bed rooms with decentralized nursing stations should be adopted as they reduce nosocomial infection rates, reduce room transfers and associated medical errors, greatly lessen noise, improve patient confidentiality and privacy, facilitate social support by families, improve staff communication to patients, and increase patients' overall satisfaction with healthcare.

Further support for single rooms can

be found in the report from a study commissioned by the American Institute of Architects¹⁰ to answer three questions regarding single rooms:

1. What are the differences in costs and efficiency of management and care delivery in single and double occupancy patient rooms in acute care settings?
2. What are the advantages and disadvantages in disease control and falls prevention in single versus double occupancy rooms in acute care settings?
3. What are the therapeutic impacts of socio-behavioural issues on patient privacy, social interaction and daily functioning of single versus double occupancy hospital rooms?


Their findings included:

- 1 Operating costs are reduced in single patient rooms compared with multi-occupancy rooms due to reduction in transfer cost, higher bed occupancy rates and reduction in labour costs. This cost reduction can be better

achieved when conversion to single room is paired with other healing environment design principles.

2. Cost-savings because of reduction in transfers is particularly applicable with acuity-adaptable rooms. 1,10
- 3 Patient length of stay is associated with hospital costs. Patient length of stay in a single room is shorter (in part due to reductions in nosocomial infections), which reduces the cost per patient.
4. In comparison to multi-occupancy rooms, medication errors are reduced in single rooms, resulting in reduced costs.

It was also noted that there is research on the negative impacts resulting from additional precautions/isolation which is often a result of acquiring a hospital infection. Isolated patients were twice as likely as non-isolated patients to experience an adverse event during hospital stay.

Based on these data, the American Institute of Architects, and the United Kingdom National Health Service have recommended that new hospital construction should be comprised exclusively of single rooms (14,15). 

Clean up with Accreditation Canada

We have new service excellence standards for **Reprocessing and Sterilization of Reusable Medical Devices** developed in partnership with the Canadian Standards Association.

Drop by our booth at the CHICA Conference to find out about

- Our **Qmentum accreditation program** and how it contributes to
 - High performance sterilization and reprocessing services and practices
 - Safer reprocessing equipment
 - Quality improvement and achieving positive results
- **Updates** to Emergency Department, Operating Room, and Infection Prevention and Control standards
- The **Distinction Award**, coming soon for organizations seeking highly specific standards for quality sterilization and reprocessing services



ACCREDITATION CANADA
AGRÉMENT CANADA

www.accreditation.ca

1-800-814-7769

**Because
you're
committed
to providing
quality care**



Contains
Vitamin E and
Glycerin

**Choose PURELL® 70
Instant Hand Sanitizer
for effective germ kill.**

**New 70% Ethyl Alcohol,
fragrance free formulation**

**From a brand
you can trust.**



Antiseptic Cleanser. Kills harmful bacteria or germs. Use as part of the daily cleansing routine. Place enough product in your palm to thoroughly cover your hands. Rub hands together briskly until dry.

CAUTIONS: Flammable. Keep away from fire or other heat sources. This product is intended for external use only. When using this product do not use in or near the eyes. In case of contact, rinse eyes thoroughly with water. Discontinue use and consult a doctor if irritation or redness develops. Keep out of reach of children. If swallowed, get medical help or contact a Poison Control Center right away.

GOJO, inventors of PURELL® Instant Hand Sanitizer, is committed to providing well being solutions for hygiene and healthy skin.



GOJO Industries, Inc.
Akron, OH 44309
Made in U.S.A.

GOJO
2844 Bristol Circle
Oakville
Ontario L6H 6G4

For more information,
call GOJO at 800-321-9647
or visit www.GOJO.com.



When Absolutely Clean is Absolutely Necessary

AT-OS washer-disinfectors automatically empty, clean, and disinfect bedpans and urinals.



AT-OS Bedpan Washer

- ❑ 11 jets direct water to all surfaces to be cleaned
- ❑ Pressure booster pump provides high power cleaning and minimizes water consumption
- ❑ Thermal disinfection with steam generated by the integrated boiler
- ❑ Self-disinfection cycle to prevent microbiological growth in pipeworks, pumps, valves, etc.
- ❑ Variety of models suitable for installation in soiled utility room or patient bathrooms

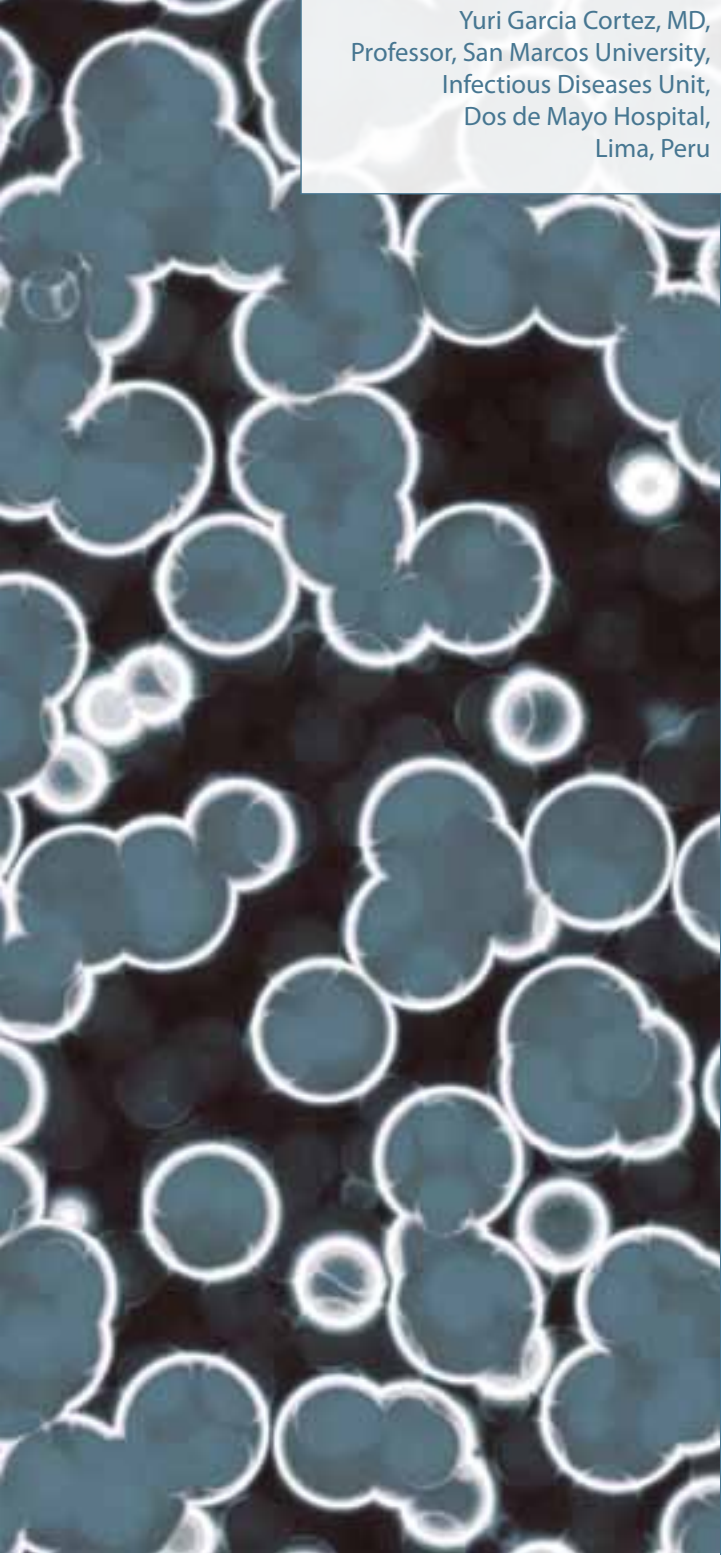


www.scican.com

For further information, call **1.800.667.7733** or send an email to **medicalsales@scican.com**.

SciCan
A HIGHER STANDARD

Hospital infection control at Dos de Mayo Hospital, Lima, Peru

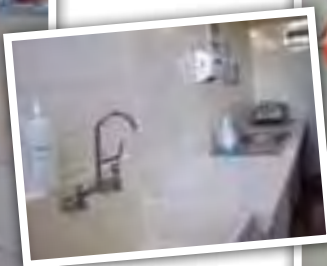


Yuri Garcia Cortez, MD,
Professor, San Marcos University,
Infectious Diseases Unit,
Dos de Mayo Hospital,
Lima, Peru

Later this year, it will be my privilege to travel to Newfoundland for the annual conference of the Community and Hospital Infection Control Association of Canada, as the guest of a very generous Canadian company. I am struck, having read about the situation in Canada, by how many of our challenges are similar, and yet how the small differences have such a large impact.

I work in Lima, Peru, at the Dos de Mayo Hospital, a 600-bed acute care facility. In my hospital there are three healthcare workers in charge of infection control – two nurses and one midwife. They are considered the infection control team, although all three are called for duties elsewhere in the hospital. This is a critical limitation to our infection control program – inadequacy of human resources (we need one medical specialist in infectious diseases for every 300 beds, however, my hospital does not have a single doctor dedicated exclusively to infection control).





Those healthcare workers in charge of infection control work only in surveillance. They do not have the opportunity to undertake prevention, intervention, or much control. Surveillance of nosocomial infections includes:

1. Selective surveillance in critical areas such as intensive care, neonatal, and maternity wards.

This type of surveillance is intended to detect ventilator-associated pneumonia, urinary tract infection, and intravascular device-related sepsis.

2. General surveillance in medicine, surgery, pediatric and gynecologic obstetric wards. This type of surveillance detects pneumonia, wound infection, urinary tract infection, diarrhea, intravascular device-related sepsis, cellulitis, pyodermitis, and conjunctivitis.

Infection control workers at Dos de Mayo Hospital do not receive an extra salary for their work. They are trained in infection control by the Peruvian Ministry of Health, and every year take two "updating" courses. Base qualifications for those working in infection control at Dos de Mayo Hospital are: knowledge of and experience with surveillance mechanisms for hospital infection control, experience with the management of outbreaks in hospitals, experience with the development of epidemiological surveys, and knowledge of statistical programs for data management.

Another important limitation to our infection control effort is that we chronically lack sufficient material for preventing nosocomial infections: alcohol hand rub, liquid soap, gloves, masks, N95 particulate respirators, paper towel, gowns, safety glasses, and other such basic items.

There is undoubtedly much that we can learn from Canadians and I am thankful to Gojo Industries Inc. for giving me the opportunity to do just that. Perhaps there will be an opportunity to one day to welcome Canadian infection control workers to Peru. ☺



AIR TECHNOLOGY SOLUTIONS INC.




Providing flexible portable and semi portable air purification systems for infectious disease control, medical, municipal and indoor quality issues.

FDA Approved.
Installed in over 3,000 hospitals.

1-866-735-1480

www.airmation.ca
info@airmation.ca



HOW TO SUBMIT AN ARTICLE TO THE *JOURNAL*

The Canadian Journal of Infection Control publishes member-supplied articles as feature technical article or as “News from the Field”. All material submitted is reviewed by an editorial board consisting of CHICA-Canada members. If you are not sure about your writing skills, get your ideas down and ask a colleague or member of the editorial board for help. Full requirements for technical articles can be found at http://www.chica.org/inside_cjic_journal.html, but here are some tips for getting started:

- 1) The author of the content must be clearly identified by name, title and organization and both a telephone number and email address must be supplied for contact purposes.
- 2) The subject of the material must be relevant to the interests of infection control practitioners.
- 3) The material should be submitted electronically via email as a Word document.
- 4) Length of submitted material is to be limited to a maximum of 1,500 words.
- 5) No part of the submitted material is to include what can be construed as sales-oriented promotion of specific individuals, companies, products or services.
- 6) Any photographic images to be included with the material must be free and clear of any copyright and must be submitted electronically as JPGs or TIFFs that are high resolution (at least 300 dpi) and a minimum of 6" x 9" in size. Image files should be sent separately, not embedded in the Word document.
- 7) In the event that the material is accepted for publication in *CJIC*, the author agrees that the first publication rights for the material belong to *CJIC* magazine and that any subsequent publishing of the material can only be done after the author or publisher is granted reprint approval in writing from CHICA-Canada and *CJIC* magazine.

BE AN AUTHOR FOR THE *JOURNAL*

If you wish to contribute articles on research or general interest please contact the **Clinical Editor**:

PAT PIASKOWSKI
807-683-1747
piaskowp@tbh.net



From Chief Resident

to Chief of Surgery

Plus SUTURES—All that you've come to trust.

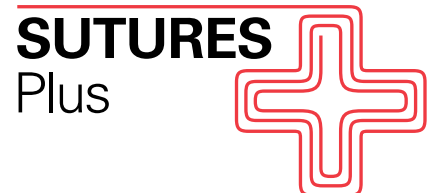
Today, more than ever, there's emphasis on reducing the risk of bacterial contamination during every surgical procedure. Now, offer your patients Plus SUTURES with antibacterial technology from ETHICON.

The next generation is now. Protect it with Plus SUTURES.

Surgical sutures since 1887

ETHICON

ETHICON is a unit of Johnson & Johnson Medical Products,
a Division of Johnson & Johnson, Inc.



CHICA-CANADA PRODUCTS

CHICA-Canada Infection Control Audit Toolkit

Available from CHICA-Canada through the CHICA-Canada Programs and Projects Committee, this series of infection control audit templates will assist you in your practice of infection prevention and control in a variety of health care settings. Topics include:

- Dental Audit
- Endoscopy Audit
- Haemodialysis Unit Audit
- High Level Disinfection - Outside SPD Audit
- Infection Prevention and Control Risk Assessment Guide
- Hospital-wide Infection Control and Prevention Audit and Template
- Ophthalmology O.R. Cluster Investigation and Procedure Assessment
- O.R. Audit
- Patient/Resident Service Units Audit
- Renal Unit Infection Control Audit
- Respiratory Outbreaks in Long Term Care Facilities Audit

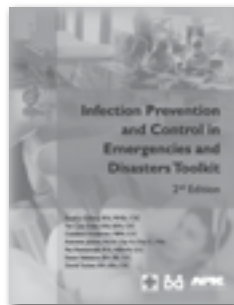
Enhanced Teleclass Recordings on CD

Available exclusively from CHICA-Canada in partnership with Webber Training Inc. Topics include:

Disinfecting Patient Care Equipment; Exploring CDC Hand Hygiene Guidelines; Airborne Spread of Human Pathogens; Disinfectants in Infection Control; Hands and the Spread of Human Pathogens; Current Best Practices in Hand Hygiene; Hand Sanitizers and their Effect on Viruses; Innovations in Hand Hygiene; Influenza Pandemic on the Doorstep; Controlling MRSA and VRE; Scientific Solutions to the Norovirus Problem; Strategies for Norovirus Infection Control on Cruise Ships; Relative Impact of Hand Hygiene on Healthcare-Associated Infections; Evidence Behind Control Measures for MRSA and VRE; Environmental Infection Control in Healthcare Facilities; Hand Hygiene – Different Approaches; Antiseptic Practice and Procedure; Glutaraldehyde Toxicology and Management of Risk; New WHO Hand Hygiene Guidelines; Respiratory and GI Outbreaks in LTC; Biofilms in our Environment; Infection Control in Day Care Facilities; Disease Transmission in the Home; Hands and Viral Infections; Infection Control in Long Term Care; Innovations in Hand Hygiene; Preventing MRSA and VRE; Advances in Global Infection Control; Bedside Hand Hygiene Products; C.difficile and Environmental Cleaning; Preventing Ventilator Associated Pneumonia – Applying the Science; C.difficile: Environmental Survival; The Toilet Bowl-Blues; Surface Disinfectants and Environmental Impact; The Spectre of a Flu Pandemic: Is it Inevitable?



ESBL TOOLKIT



Best Infection Control Practices for Patients with Extended Spectrum Beta Lactamase Enterobacteriaceae – An infection control toolkit developed by the International Infection Control Council (APIC, CHICA-Canada, ICNA (UK, Ireland)).

“Just Wash ‘Em “Lavez les”

A 7 minute video directed to Elementary School aged children.



Reaching today's kids with our all-important handwashing message is a major step in preventing the spread of infection. CHICA-Canada's very own Sudsy makes his debut in a creative, fun-to-watch handwashing video aimed at school-aged children. Great for school projects, seminars and demonstrations.

The Infection Control Toolkit: Infection Control in Emergencies and Disasters

revised 2007 (formerly: Infection Control Toolkit: Strategies for Pandemics and Disasters)

The only disaster planning document that presents information specific to the key issues of infection control. Includes all the tools and materials necessary for surveillance, education, communication, laboratory, and management of personnel and patients are included. Handy forms, references, fact sheets, flowcharts, checklists, and samples provide the framework to interface with healthcare facilities and local public health preparedness plans. No other disaster planning document presents information specific to the key issues of infection control.

ARO VIDEO

A 15 minute educational video covering topics related to AROs (epidemiology, surveillance and control). Produced in cooperation with Wyeth, with assistance from CHICA-Canada members.

The Grand Prix of PPE in Long Term Care



A new DVD resource created by Regional Infection Control Networks in Ontario, this teaching tool focuses on the essentials of personal protective equipment. Although targeted to the long-term care setting, the messages are equally engaging for acute care as well. The DVD employs a humorous approach that makes it a great teaching tool for new and existing staff alike. English and French versions included.

CHICA-CANADA Product Order Form

•N/C: Some products are available for CHICA-Canada members to download from the members area of www.chica.org at no charge. There is a nominal charge for members who wish to purchase these products from CHICA-Canada. No returns except in the case of defective products when defective product will be exchanged for corrected product.

PRODUCT	QUANTITY	MEMBER RATE	NON-MEMBER RATE	TOTAL
Just Wash 'Em VHS Video© – no workbook		N/C - \$10.00	\$25.00	
Just Wash 'Em VHS Video© with workbook		N/C - \$12.00	\$30.00	
Just Wash 'Em DVD© – no workbook		N/C - \$15.00	\$30.00	
Just Wash 'Em DVD© With workbook		N/C - \$17.00	\$35.00	
10% Discount on 3 or more!				
Lavez les! VHS Video© – no workbook		N/C - \$10.00	\$25.00	
Lavez les! VHS Video© with workbook		N/C - \$12.00	\$30.00	
Lavez les! DVD© – no workbook		N/C - \$15.00	\$30.00	
Lavez les! DVD© with workbook		N/C - \$17.00	\$35.00	
10% Discount on 3 or more!				
ARO Video© – Across the Spectrum of Care		N/C - \$10.00	\$15.00	
Le MRA© – Dans tout le spectre des soins		N/C - \$10.00	\$15.00	
Infection Control Audit Toolkit		N/C - \$50.00	\$100.00	
Infection Control in Emergencies and Disasters Toolkit		\$100.00	\$120.00	
ESBL Toolkit		\$100.00	\$120.00	
Grand Prix PPE DVD		\$24.00	\$24.00	
Webber Training Teleclass CD (attach list of recordings to be ordered)		55.00 – no shipping & handling fee	55.00 – no shipping & handling fee	
+ Shipping and Handling Orders less than \$50 - \$8.00 Orders \$51-\$100 - \$10.00 Orders \$101-\$150 - \$12.00 Orders over \$151 – 15% No shipping and handling on Webber Teleclass CDs For courier shipments, add \$25.00			SUB-TOTAL	
			Shipping & handling +	
			GST/HST*	
			TOTAL	

*GST/HST – GST 5% of total amount, including shipping & handling; HST 13% of total amount including shipping & handling (payable by residents of New Brunswick, Newfoundland, Nova Scotia). No GST/HST applicable on orders from outside Canada. BN 11883 3201 RT0001.

Send order to: CHICA Canada, PO Box 46125 RPO Westdale, Winnipeg, MB R3R 3S3 • Email: chicacanada@mts.net • Fax: 1-204-895-9595

<input type="checkbox"/> I am paying by cheque, payable to CHICA-Canada – enclosed <input type="checkbox"/> I am paying by credit card – VISA/MasterCard/AMEX	
Credit Card Number _____	Expiry Date _____
Name of Cardholder (print) _____	
Signature of Cardholder _____	
SHIP TO:	
Name _____	
Address _____	

Telephone _____	

A New Star is Born.



MICROSAN[®] *Encore*

The next generation of foaming Alcohol handrub

Deb Canada has developed and dermatologist tested a superior non-aerosol Foaming Alcohol Hand Rub. The new Microsan[®] Encore has a much better skin compatibility and excellent moisturizing properties with added conditioners and emollients, and specially formulated foaming agent for superior foam quality that is also latex and nitrile safe.

The new Microsan Encore is gentler to skin, more effectively kills bacteria and makes hands feel fresh and clean. The higher alcohol volume in the new Microsan Encore provides greater efficacy (84% of all research respondents preferred using Microsan Encore foam vs. alcohol gel products).

The new user friendly Microsan Encore Foaming Alcohol Hand Rub is available in a personal size 50 ml, and 400 ml bottles with foaming pumps, and in a one litre foaming cartridge.

Microsan Encore Foaming Alcohol Hand Rub gives you an exceptional after-feel, which promotes greater usage frequency, better hygiene, and improved compliance. Now that is something worth applauding.



Deb Canada For more information call 1-888-DEB-SOAP or visit www.debcanada.com





Clean your hands, for your patients for yourself

3M Brand Promise.

For healthcare providers who want a superior total hand hygiene solution, the 3M hand hygiene portfolio helps to improve and sustain hand hygiene compliance with versatile and comprehensive hand hygiene products and accessories.

The comprehensive portfolio of solutions is designed to help improve skin health, hand hygiene expertise, and compliance by combining hand hygiene product options with delivery methods, accessories, education, and services.

It is often recognized that the hand hygiene product selection can greatly impact health care worker hand hygiene compliance. 3M is committed to offering its customers a comprehensive range of effective and preferred formulations.

- Alcohol Formulations
- Alcohol and Chlorhexidine Gluconate (CHG) Formulations
- Moisturizing Lotion
- Hypoallergenic soap

It is well known that the acceptance of the importance of hand hygiene does not always translate to high compliance rates. Recently, several Canadian initiatives have been designed to improve hand hygiene compliance in health care facilities.

- Point of Care Solutions
- 3M Hand Hygiene Compliance Program



3M™ Avagard™ D Instant Hand Antiseptic with Moisturizers (NPN 02242852)

Waterless hand antiseptic with moisturizers that is CHG compatible, fragrance-free and latex glove compatible.

Contains ethyl alcohol 61% w/w (68.5% v/v)



3M™ Hand Antiseptic Gel Instant Hand Antiseptic with Emollients (NPN 80007158)

a non-irritating, moisturizing antimicrobial handwash.

Contains 70% v/v ethyl alcohol



NEW! 3M™ Quick Foam

Non-Aerosol Foaming Hand Antiseptic with Moisturizers (NPN 80008794)

A non-aerosol, foam hand antiseptic (70% v/v ethyl alcohol) that kills harmful bacteria without soap or water and is moisturizing but not sticky.



3M

COMPANY	PAGE	PHONE	E-MAIL ADDRESS	WEB SITE
3M Canada Health Care	72,90	800-265-1840	Kgraham2@mmm.com	www.3M.ca
Accreditation Canada	80	613-738-3800	Gilles.lanteigne@accreditation-Canada.ca	www.accreditation-Canada.ca
Air Technology Solutions, Inc.	84	866-735-1480	R.Weber@airmation.ca	www.airmation.ca
AMG Medical Inc.	93	866-518-6099	medprodefense@amgmedical.com	www.amgmedical.com
Angus Medical, Inc.	1	866-418-1689	Elliot@angusmedical.com	www.angusmedical.com
Ansell Canada	35	800-363-8340	MPelletier@ansell.com	www.ansellhealthcare.com/canada
ArjoHuntleigh	33	800-665-4831	info@arjo.ca	www.ArjoHuntleigh.com
Association for Professionals in Infection Control & Epidemiology, Inc.	56	202-789-1890	apicinfo@apic.org	www.apic.org
B. Braun Medical Inc.	58	877-949-9529	Jonathan.Braido@bbraun.com	www.bpassive.bbrounusa.com
Baxter Corporation	11	905-281-6505	Alanna_harrison@baxter.com	www.baxter.com
BD - Canada	17	800-268-5430	AnneMarie_Carli@bd.com	www.bd.com
BioScience Laboratories Inc.	21	406-587-5735	JVerzuh@biosciencelabs.com	www.biosciencelabs.com
Bowman Manufacturing Company Inc.	60	360-435-5005	stephaniel@bowmandispensers.com	www.bowmanmfg.com
Canadian Standards Association	16	416-747-4040	Dionne.downer@csa.ca	www.csa.ca
Capital Health Authority	10	780-735-3435	Jennifer.Osinchuk@capitalhealth.ca	www.capitalhealth.ca
Cardinal Health Canada Inc.	71	905-502-3365	Carol.Bentley@cardinal.com	www.sourcemedical.com
CAREstream Medical Ltd.	23	604-552-5486	dlee@carestream.com	www.carestream.com
Coloplast Canada Corporation	2	877-820-7008	canb@coloplast.com	www.coloplast.ca
Convatec Canada	75	800-465-6302	Mary.Dimitratos@convatec.com	www.convatec.ca
Covidien Ltd.	55	877-664-8926	loriann.campbell@covidien.com	www.covidien.com
DEB Canada	89	888-332-7627	debcanada@debcanada.com	www.debcanada.com
ECOLAB Healthcare	94	800-352-5326	Angie.Jeske@ecolab.com	www.ecolab.com/healthcare
Ethicon	86	905-946-2065	jlogan2@medca.jnj.com	www.jjmp.ca
Glo Germ Company	8,9	800-842-6622	moabking@gmail.com	www.glogerm.com
GOJO Industries, Inc.	81	800-321-9647	customerservice@GOJO.com	www.healthcare.GOJO.com
Hollister Limited	37	800-263-7400	Shelly.Lendt@Hollister.com	www.hollister.com
Johnson & Johnson Medical Products	38	800-268-5577	mdolman@its.jnj.com	www.sterrad.com
Kruger Products Ltd.	65	800-665-5610	Jay.Candido@krugerproducts.ca	www.krugerproducts.ca/afh
Laura Line Skin Care Products	62	800-257-5592	maureen@lauralineskincares.com	www.lauralineskincares.com
McArthur Medical Sales Inc.	64	800-996-6674	rhefford@mcarthurmedical.com	www.mcarthurmedical.com
Medco Equipment, Inc.	41	800-717-3626	medcoequipment@msn.com	www.medcoequipment.com
Medic Acces Inc.	25	450-602-1556	info@medicacces.com	www.medicacces.com
Medline Canada Corporation	7	800-396-6996	canada@medline.com	www.medline.ca
PDI - Professional Disposables International	30	800-999-6423	Bnewman@pdipdi.com	www.pdipdi.com
Pinchin Environmental Ltd.	63	905-363-1295	jbarinque@Pinchin.com	www.pinchin.com
Retractable Technologies, Inc.	76	888-703-1010	Rtisaes@vanishpoint.com	www.vanishpoint.com
Rubbermaid Canada	67	800-998-7004	tim.spence@rubbermaid.com	www.rubbermaid.com
Sage Products Inc.	5	800-323-2220	customerservice@sageproducts.com	www.sageproducts.com/canada
SciCan Ltd.	82	724-820-1600	lnorris@scican.com	www.scican.com
Steris Canada Inc.	27	800-661-3937	ian_pequegnat@steris.com	www.steris.com
The Stevens Company Limited	34	800-268-0184	stevens@stevens.ca	www.stevens.ca
Uberloo International Inc.	92	902-628-8566	Ray.brow@uberloo.com	www.uberloo.com
Vernacare Canada Inc.	92	800-268-2422	glenn_duncan@vernacare.com	www.vernacare.com
Virox Technologies Inc.	IFC,57	800-387-7578	mrempel@virox.com	www.virox.com
Wood Wyant Inc.	68	450-680-9700	Rhumphrey@woodwyant.com	www.woodwyant.com



To reach infection control professionals across Canada through the **Canadian Journal of Infection Control** and its targeted readership, please contact me directly at

1-866-985-9789
aran@kelman.ca



Aran Lindsay
 Sales Manager

Vernacare.

Infection Control
Solutions for
Healthcare

Enhancing Patient Safety through Hygienic Disposal

Vernacare is an established world leader providing environmentally responsible solutions for Human Waste Disposal.

Benefits of the Vernacare System:

- An extensive line of single use utensils prevent cross-contamination.
- Closed disposable system guarantees the patient a clean item each and every time
- Contributes to the reduction of microbial debris and protects Nurses from aerosolization
- Reduces Nursing time spent on manual cleaning
- Cost-effective, reliable and simple to use
- Endorsed throughout Canada and the world
- Biodegradable products made from 100% recycled newspaper
- Reduces landfill waste and conserves energy

The Vernacare System is environmentally friendly, cost-effective and improves infection control.



FOR MORE INFORMATION

Call 1-800-268-2422 • www.vernacare.com



Look for
"THE SMILING U™"

See  at 2009 CHICA St. John's Booth #57

www.uberloo.com

Überloo™

"The" global symbol
for superior hygiene
solutions:

•
100% touch free
restrooms

•
Healthcare doorway
hand sanitizer sentry

•
World's 1st & only door
system compelling users
to wash hands prior to
exiting toilet

COMING SPRING 2009



This spring MedPro Defense[®]
unveils their most innovative
line of gowns yet

To find out more about these innovative, user-friendly **SMART Gowns**
contact your AMG representative or call customer service at 1-800-363-2381.

www.amgmedical.com

MedPro
Defense[®]

problem | SOLVED

COMPREHENSIVE SOLUTIONS

AT EVERY POINT OF CONTACT

In a healthcare environment, where cleanliness is critical to providing quality care, a comprehensive solution is required to reduce healthcare associated infections. Ecolab's Infection Prevention programs help ensure cleanliness is never compromised by providing the products, education and service you need to help reduce infections, improve patient satisfaction and protect your brand.

It's protection where you need it.
Call 1.800.352.5326 or visit
www.ecolab.com/healthcare.

Hand & Skin Care

> INSTRUMENTS > HARD SURFACES > PEST ELIMINATION > WATER



For hand and skin care, Quik-Care™ Antimicrobial Foaming Hand Rub is formulated to provide effective kill at every application.

Antimicrobial Foaming Hand Rub

- ▲ Mild emollients promote skin health
- ▲ Fragrance free, dye-free formula absorbs quickly into skin
- ▲ No-rinse formula promotes use frequency