

Vol. 22 No. 1  
Spring 2007



## INSIDE:

Using a network model  
in respiratory outbreak  
prevention

Is skin irritancy of hand  
wash products solely  
related to their pH?

Calgary Health Region  
recommendations for  
rehabilitation services

# The Canadian Journal of Infection Control

Revue canadienne de  
prévention des infections

**CHICA-Canada Annual Conference**

**June 9-14**

**Shaw Conference Centre, Edmonton**

Publications Mail Agreement # 40065075  
Return undeliverable Canadian addresses to:  
CHICA Canada  
P.O. Box 46125, RPO Westdale, Winnipeg, MB R3R 3S3  
chicacanada@mts.net

*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*

# Congratulations!

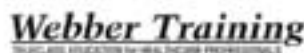
## to the 2007 Award Winners



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, 10 CHICA-Canada members have been awarded scholarships to attend the 2007 National Education Conference in Edmonton, Alberta.

### *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.

# 60%



## Fewer Bloodstream Infections with MaxPlus® featuring TruSwab™ technology

53 Canadian Hospitals and homecare systems have made the switch to MaxPlus IV Access port for all central and peripheral lines  
CLEANER SAFER & EASIER than other needleless access devices

### MaxPlus® featuring Tru-Swab™

- Maximum barrier to microbial ingress
- Positive displacement
- Standardization and ease of use
- Saline flush. Heparin not required
- Chemotherapy & MRI compatibility
- Simple fluid path
- Flow rate of 183 ml/min
- Free of Latex & DEHP

# Angus

## MEDICAL



1 (866) 418-1689 [angusmedical.com](http://angusmedical.com)



930 Wanamaker Ave., Ontario, CA 91761-8151 [www.maximusmedical.com](http://www.maximusmedical.com)  
Phone (909) 390-9080 Toll-Free (800) 780-0012 Fax (909) 650-5894

U.S. Patent: 5,730,418 & 5,782,816

# Hand Hygiene Saves Lives

It's in your hands to break the chain of infection.

## Isagel 70% Alcohol Ethyl

Each year, nosocomial infections affect thousands of patients across Canada. The cost of treating this hidden epidemic is staggering.



### *Evidence proves Isagel kills*

Organism	Percent Reduction in 15 seconds	Log <sub>10</sub> Reduction in 15 seconds	Percent Reduction in 30 seconds	Log <sub>10</sub> Reduction in 30 seconds
<b>Gram Positive Bacteria</b>				
<i>E. faecalis</i>	>99.99	>6.18	>99.99	>4.83
<i>E. faecium</i> (VRE)	>99.99	>4.59	>99.99	>5.45
<i>Listeria monocytogenes</i>	>99.99	>4.11	>99.99	>6.04
<i>Micrococcus luteus</i>	>99.99	>4.40	>99.99	>4.38
<i>Staph aureus</i>	99.96	3.46	>99.99	>3.96
<i>Staph aureus</i> (MRSA)	99.96	3.36	>99.94	>3.19
<i>Staph epidermidis</i>	99.97	3.46	99.96	3.46
<i>Staph haemolyticus</i>	99.93	3.16	>99.96	>3.40
<i>Strep pneumoniae</i>	>99.99	4.36	>99.99	>6.11
<i>Strep pyogenes</i>	>99.95	>3.34	>99.99	>4.37
<b>Gram Negative Bacteria</b>				
<i>Bacteroides fragilis</i>	99.90	2.99	99.97	3.46
<i>Escherichia coli</i>	>99.99	>6.04	>99.99	>6.18
<i>Haemophilus influenzae</i>	>99.99	>5.70	>99.99	>5.78
<i>Klebsiella pneumoniae</i>	99.85	2.62	>99.97	>3.51
<i>Proteus mirabilis</i>	>99.99	>5.25	>99.99	>6.15
<i>Pseudomonas aeruginosa</i>	>99.99	>6.53	>99.99	>6.58
<i>Salmonella choleraesuis</i> serotype enteritidis	>99.99	>6.04	>99.99	>6.23
<i>Salmonella typhimurium</i>	>99.97	>3.58	>99.99	>6.30
<i>Serratia marcescens</i>	>99.99	>5.83	>99.99	>6.26
<i>Shigella dysenteriae</i>	>99.99	>6.71	>99.99	>6.62
<b>Anaerobic Bacteria</b>				
<i>C. Difficile</i>	>99.68	>2.49	>99.98	>3.64
<b>Fungi</b>				
<i>Candida albicans</i>	99.97	3.52	>99.99	>4.34
<b>Viruses</b>				
<i>Herpes Simplex Type I</i>	>99.999	5.3	>99.999	5.3
<i>Herpes Simplex Type II</i>	>99.9	3.7	>99.9	3.7
<i>Rotavirus</i>	>99.9	3.9	>99.9	3.9



**Sween**

**Coloplast**

**The Canadian Journal of**  
**INFECTION CONTROL**  
*Revue canadienne de prévention des infections*

<b>Is skin irritancy of the hand wash products solely related to their pH? _____</b>	<b>10</b>
<b>Using a network model to promote standards in respiratory outbreak prevention and management _____</b>	<b>16</b>
<b>Calgary Health Region recommendations for rehabilitation services _____</b>	<b>56</b>
<b>CHICA-Canada Annual Conference _____</b>	<b>21</b>
<b>Editor's Message _____</b>	<b>6</b>
<b>President's Message _____</b>	<b>8</b>
<b>Message de la Présidente _____</b>	<b>9</b>
<b>Industry News _____</b>	<b>64</b>
<b>User Alert _____</b>	<b>67</b>
<b>Association News _____</b>	<b>69</b>
<b>Reach Our Advertisers _____</b>	<b>83</b>

### 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.

©2007 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.

#### 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.

#### EDITOR-IN-CHIEF

Patricia Piaskowski, RN, HBSn, CIC

#### EDITORIAL BOARD

Joanne Braithwaite, RN, BAA, CHPIc, CIC  
 Toronto, Ontario  
 Diane Thornley, ART  
 Hamilton, Ontario  
 Allison McGeer, MD, FRCPC  
 Toronto, Ontario  
 Cathy Munford, RN, CIC  
 Victoria, British Columbia  
 Joanne M.D. Mousseau, RN, NP, MSc  
 Toronto, Ontario  
 Héléne Senay, MD  
 Sainte-Foy, Québec  
 Nicole Tittley, HBSc, CIC, CRSP  
 Thunder Bay, Ontario  
 Louise Holmes, RN, CIC  
 Vancouver, British Columbia  
 Dick Zoutman, MD, FRCPC  
 Kingston, Ontario  
 Scott Henwick, MD, FRCPC  
 Surrey, British Columbia  
 Sandra Callery, RN, HHSc, CIC  
 Toronto, 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  
 webmstr@xplornet.com

#### CHICA CONNECTIONS - WEB DISCUSSION BOARD

Jim Gauthier, MLT, CIC  
 chicacconnections@mts.net

#### POSTING EMPLOYMENT OPPORTUNITIES/OTHER INFORMATION

CHICA-Canada Membership Services Office  
 chicacanada@mts.net

**Website:**  
[www.chica.org](http://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** - Andrea Ardiles

**SALES MANAGER** - Aran Lindsay

Publications Mail Agreement #40065075  
 Return undeliverable Canadian addresses to:  
 CHICA Canada  
 P.O. Box 46125, RPO Westdale,  
 Winnipeg, MB R3R 3S3  
 chicacanada@mts.net



- **Arjo Canada**  
Ph: (800) 665-4831  
Fax: (800) 309-7116
- **BD**  
Ph: (905) 855-4640  
Fax: (905) 855-5515
- **Deb Canada**  
Ph: (519) 443-8697  
Fax: (519) 443-5160
- **Ecolab Healthcare**  
Ph: (651) 293-2914  
(800) 352-5326  
Fax: (651) 204-7372
- **Laura Line**  
Ph: (519) 748-9628  
Fax: (519) 895-2374
- **Les Entreprises Solumed**  
Ph: (450) 682-6669  
Fax: (450) 682-5777
- **Rubbermaid Canada**  
Ph: (905) 281-7324  
Fax: (905) 279-1054
- **SCICAN**  
Ph: (416) 445-1600  
Fax: (416) 445-2727
- **Smith & Nephew**  
Ph: (519) 956-1477  
Cell: (519) 956-1414
- **Steris Corporation**  
Ph: (905) 677-0863  
Fax: (905) 677-0947
- **3M Healthcare**  
Ph: (519) 452-6069  
Fax: (519) 452-6597
- **The Stevens Company**  
Ph: (905) 791-8600  
Fax: (905) 791-6143
- **Tyco Healthcare**  
Ph: (514) 695-1220 ext. 3471  
Fax: (514) 695-4261
- **Vernacare**  
Ph: (416) 661-5552 ext. 232  
Cell: (416) 580-9301
- **Virox Technologies**  
Ph: (800) 387-7578  
(905) 813-0110  
Fax: (905) 813-0220
- **Wood Wyant**  
Ph: (514) 636-9926  
Fax: (514) 636-8722

# CHICA-CANADA

## 2007 Board of Directors

### Executive Officers

#### President

Joanne Laalo RN BScN CIC  
Infection Control Consultant  
Central South Infection Control Network  
56 Governor's Road  
Dundas ON L9H 5G7  
Tel: 905-627-3541  
Fax: 905-627-6474  
laalo@hhsc.ca

#### President-elect

Marion Yetman RN BN MN CIC  
Provincial Infection Control Nurse Specialist  
Gov. of Newfoundland Labrador Dep't of Health & Community Services  
1410 West Block, Confederation Bldg  
PO Box 8700  
St. John's NL A1B 4J6  
Phone: 709-729-3427  
Fax: 709-729-0730  
marionyetman@gov.nl.ca

#### Secretary/Membership Director

Pearl Orenstein RN BA DIA CIC  
Infection Control Coordinator  
SMBD Jewish General Hospital  
3755 Cote St. Catherine  
Montreal QC H3T 1E2  
Phone: 514-340-8222 Ext. 5778  
Fax: 514-340-7578  
porenste@lab.igh.mcgill.ca

#### Director of Finance

Cynthia Plante-Jenkins, MLT, BSc(MLS), CIC  
Clinical Informatics Specialist - Lab  
Trillium Health Centre  
100 Queensway West  
Mississauga, ON L5B 1B8  
Phone: 905-848-7100 ext. 3754  
Fax: 905-804-7772  
cplante-jenkins@thc.on.ca

#### Past President

Karen Hope BSc MSc  
Infection Control Practitioner  
Foothills Medical Centre  
1403 29<sup>th</sup> ST NW  
Calgary AB T2N 2T9  
Phone: 403-944-2897  
Fax: 403-944-2484  
karen.hope@calgaryhealthregion.ca

### Directors

#### Director of Education

Elizabeth Henderson PhD  
Epidemiologist  
Foothills Medical Centre  
1403 29<sup>th</sup> St NW  
Calgary AB T2N 2T9  
Phone: 403-944-4373  
Fax: 403-944-2484  
elizabeth.henderson@calgaryhealthregion.ca

#### Director, Programs & Projects

Karen Clinker Med BScN CCOHN CIC  
Infection Control Practitioner  
Northwestern Ontario  
Infection Control Network  
75D Van Horne Ave.  
Dryden ON P8N 2B2  
Phone: 807-223-4408  
Fax: 807-223-5754  
clinker@tbh.net

#### Director, Standards & Guidelines

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

#### Physician Director

Dick Zoutman MD FRCPC  
Medical Director, IC Service  
Kingston General Hospital  
76 Stuart Street  
Kingston ON K7L 2V7  
Phone: (613) 549-6666 Ext. 4015  
Fax: (613) 548-2513  
zoutmand@kgh.kari.net

### Other Positions

#### Clinical Editor

*Canadian Journal of Infection Control*  
Pat Paskowski RN HBSn CIC  
Network Coordinator  
Northwestern Ontario  
IC Network  
289 Munro Street  
Thunder Bay ON P7A 2N3  
Phone: 807-683-1747  
Fax: 807-683-1745  
piaskowp@tbh.net

#### Web Communications Manager

Shirley McDonald ART CIC  
webmstr@xplornet.com

#### CHICA Connections/ Webboard Manager

Jim Gauthier MLT CIC  
chicacomm@mts.net

#### Employment Opportunities

See [www.chica.org](http://www.chica.org) for posting information and fees. Send postings to [chicacanada@mts.net](mailto:chicacanada@mts.net)

### Professional Agents

#### Legal Counsel

Sidney Troister/S. Fay Sulley  
Torkin, Manes and Cohen  
151 Yonge Street, Suite 1500  
Toronto ON M5C 2W7  
Phone: (416) 777-5419  
Fax: (416) 863-0305

#### Auditor

Philip Romaniuk CA  
Stefanson & Lee  
1151 Portage Avenue  
Winnipeg MB R3G 0S9  
Phone: (204) 775-8975  
[promaniuk@slrca.ca](mailto:promaniuk@slrca.ca)

### Membership Services Office

PO Box 46125 RPO Westdale  
Winnipeg MB R3R 3S3  
Phone: (204) 897-5990/866-999-7111  
Fax: (204) 895-9595  
[chicacanada@mts.net](mailto:chicacanada@mts.net)

Deliveries only:  
67 Bergman Crescent  
Winnipeg MB R3R 1Y9

#### Administrator/Conference Planner

Gerry Hansen BA  
Membership Services Office  
Phone: (204) 897-5990/866-999-7111  
Fax: (204) 895-9595  
[chicacanada@mts.net](mailto:chicacanada@mts.net)

# ChloroPrep®

2% chlorhexidine gluconate and 70% isopropyl alcohol

The one step,  
single use,  
non-touch,  
skin antiseptic  
system

To truly appreciate  
ChloroPrep, you need  
to get your hands on it.  
Call 1800 268 2848 for a  
product demonstration or  
visit [chloroprep.com](http://chloroprep.com) for  
more information.



**Sepp®**  
Minor  
Peripheral  
Procedures



**Frepp®**  
Peripheral,  
Arterial and  
Blood Culture  
Procedures



**3mL**  
Central Line  
Insertion  
and Site Care  
Procedures

Also  
Available  
in Clear



**10.5mL and 26mL**  
Major and  
Minor Surgical  
Procedures



**enturia™**

ChloroPrep® is a registered  
trademark of Enturia, Inc.  
© 2007 Enturia, Inc. ADV-2007CA

**ChloroPrep®**  
Patient Preoperative Skin Preparation  
2% chlorhexidine gluconate  
70% isopropyl alcohol



Pat Piaskowski, RN, HBScN, CIC  
Clinical Editor,  
*Canadian Journal of  
Infection Control*

## In five short years 2002-2007

**T**ime flies and so much has taken place in just five years. Avian flu, SARS, CA-MRSA and a new, more virulent strain of *C. difficile* are just a few examples of some of the disease threats that have emerged as “significant forces to be reckoned with”.

What else has changed?

Certainly, CHICA-Canada and the annual conference are no strangers to change. A comparison of the annual reports and conference programs from 2002 and 2007 is evidence of the growth and change that has taken place.

- Membership of CHICA-Canada has increased dramatically from 872 in 2002 to 1372 in 2007. As membership increases the circulation of our journal expands as well.
- The number of CHICA-Canada interest groups has increased from two to eight which cover the continuum of health care settings.

- Abstracts accepted for either oral or poster presentations at the annual conference have increased from 31 in 2002 to 82 in 2007.
- Another notable change is the increase in length of the conference. This year the conference now runs over five-and-a-half days as compared to three-and-a-half days in 2002.
- In addition, instead of one pre-conference day there are now novice and advanced practitioner days in addition to the pre-conference day to meet the needs of both new and more experienced ICPs.

In 2002 the conference theme was “Rediscovering Infection Prevention and Control”. Now in 2007 the conference theme is “Changing-Evolving-Improving”, which certainly describes our voyage and our destiny. ●







**Try Sterillium® Rub**  
**and your hands will**  
**love you for it.**

**A treat for tender hands**

Unlike other surgical hand antiseptics, Sterillium Rub leaves hands feeling soft and smooth, not greasy or sticky. It dries quickly and leaves no buildup—allowing quicker, easier gloving—and it won't irritate or dry out your skin.

**Convenient, hygienic delivery system**

Sterillium Rub is available in a state-of-the-art touchless dispenser—a good choice if you're tired of foot pedals that break easily, get dirty, or are hard to reach. A two-minute application of this FDA-compliant antiseptic provides immediate and persistent bactericidal activity.



Touchless dispenser certified as intrinsically safe for use in an OR setting.

**Feel the difference. Try Sterillium Rub in your OR.**

Contact your Medline representative  
or call 1-800-MEDLINE.





Joanne Laalo, RN, BSc N, CIC

# Spring fever

Spring is my favourite time of year and luckily the fever that comes with it is not the kind we infection prevention and control professionals (IPCPs) have to worry about! It is a time for new growth, rejuvenation and anticipation of CHICA-Canada's national education conference.

The CHICA-Canada conference this year is entitled "Changing-Evolving-Improving" and will be in Edmonton, June 9-14. The title is aptly named as the conference this has changed in several key ways:

- This is the first time that the conference has been planned by a central planning committee as opposed to a CHICA-Canada chapter.

- An extra day has been added to accommodate the meetings of our eight interest groups.
- In keeping with CHICA-Canada's environmental awareness, hand-outs of speaker presentations will not be provided; rather they will be made available as speakers submit them and posted on [www.chica.org](http://www.chica.org).

Membership at an all-time high of 1,372. In response to our growth your board of directors has responded to the challenge by continuing to work on expansion of our infrastructure through the hiring of a bookkeeper in 2006 and the eventual transition of our office administrator to a full-time position. Look for the posting of the newly created CHICA-Canada position of E-learning education coordinator in this edition of the journal. We also plan to offer online capability to our members so that you can register for the annual conference and join or renew your CHICA-Canada membership.

Since I began my term as president I am astounded and pleased by the number of requests of CHICA-Canada from the public, media, industry and associations. We are definitely meeting our second strategic direction of "expanding CHICA-Canada's influence and profile nationally and internationally, as a leader in infection prevention and control".

CHICA-Canada continues to strengthen its relationship between the Canadian Council of Health Care Services accreditation (CCHSA), the Canadian Patient Safety Institute (CPSI) and the Public Health Agency of Canada (PHAC). So far the outcome of the work of CHICA-Canada and our three partners has resulted in the creation of a stand-alone infection prevention and control CCHSA standard and involvement in the planning of the CPSI national hand hygiene campaign including a survey of hand hygiene practice in Canada. I would like to thank our board members, Dr. Dick Zoutman, Pearl Orenstein, Rick Wray, and Karen Hope for their great work that made these alliances so successful.

CHICA-Canada's ongoing alliance with the Certification Board of Infection Control and Epidemiology (CBIC) allowed me to represent CHICA-Canada at the February meeting of the CBIC in San Francisco. I was equally proud and pleased to discover in attendance two of CHICA-Canada's previous presidents, Sheila McDonald and Rick Wray as CBIC president and board member respectively. Of note, if you have never received a Certification in Infection Control (CIC), CBIC is offering CHICA-Canada conference attendees a discounted examination rate with further details available at [www.chica.org](http://www.chica.org).

*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 189, Moab, UT  
USA 84532  
1-800-842-6622  
Fax 435-259-5930  
[www.glogerm.com](http://www.glogerm.com)



Canadian Distributor • Michael Ladd - Marlatek Phone: 613-342-8561 Toll Free Order Fax: 1-800-342-8988



Joanne Laalo, RN, BSc N, CIC

**L**e printemps est ma période préférée de l'année et, heureusement, la fièvre qui accompagne cette saison n'est pas de celles dont les professionnels de la prévention et de la lutte contre les infections ont à se préoccuper! C'est plutôt une période de croissance, de renouveau et d'anticipation dans l'attente du congrès national de formation de CHICA-Canada.

Cette année, le congrès de CHICA-Canada se déroule sous le thème « Changer, évoluer, transformer » et il aura lieu à Edmonton, du 9 au 14 juin. Ce thème est tout indiqué puisque la formule du congrès a changé à plusieurs égards cette année :

- C'est la première fois que le congrès est planifié par un comité central de planification plutôt qu'une section locale de CHICA-Canada.
- Un jour supplémentaire a été ajouté pour permettre à nos huit groupes d'intérêts de se réunir.
- Par souci pour l'environnement, CHICA-Canada ne distribuera pas de documents d'accompagnement pour les ateliers et les conférences; ces documents seront plutôt versés sur notre site, [www.chica.org](http://www.chica.org), à mesure que les conférenciers nous les feront parvenir.

Le nombre de membres a atteint un record de tous les temps, soit 1 372. Pour relever les défis qui découlent de notre croissance, votre conseil d'administration a continué de travailler à l'amélioration de l'infrastructure en

## La fièvre du printemps

embauchant en 2006 une personne pour la tenue de livres et prévoit transformer le poste actuel d'agente administrative en un poste à temps plein. Vous trouverez aussi dans le présent numéro de notre magazine l'appel de candidatures pour le nouveau poste de coordonnateur à la formation en ligne de CHICA-Canada. Dans un avenir rapproché, nous prévoyons également offrir aux membres plus de possibilités en ligne, notamment pour s'inscrire au congrès annuel, devenir membre ou renouveler sa cotisation à CHICA-Canada.

J'ai constaté avec surprise et plaisir que nous recevons de nombreuses demandes d'information au sujet de CHICA-Canada de la part du public, des médias, de l'industrie et d'autres associations. Nous répondons tout à fait à notre deuxième objectif stratégique, à savoir « accroître l'influence et la visibilité de CHICA-Canada à titre de leader dans le secteur de la prévention et de la lutte contre les infections ».

CHICA-Canada continue de renforcer ses liens avec le Conseil canadien d'agrément des services de santé (CCASS), l'Institut canadien sur la sécurité des patients (ICSP) et l'Agence de santé publique du Canada (ASPC).

Jusqu'à maintenant, les efforts déployés par CHICA-Canada et ses trois partenaires ont conduit à la création d'une norme CCASS de prévention et de lutte contre les infections ainsi qu'à la participation à la planification de la campagne nationale de l'ICSP sur l'hygiène des mains, y compris une enquête sur la pratique dans ce domaine au Canada. J'aimerais remercier les membres de notre conseil d'administration, D<sup>r</sup> Dick Zoutman, Pearl Orenstein, Rick Wray et Karen Hope, pour leur excellent travail.

L'alliance continue entre CHICA-Canada et le Certification Board of Infection Control and Epidemiology (CBIC) m'a donné l'heureuse occasion de représenter CHICA-Canada à la réunion de février de cet organisme, à San Francisco. J'ai éprouvé autant de fierté et de plaisir à y retrouver deux anciens présidents, Sheila McDonald et Rick Wray, qui agissent respectivement à titre de président et de membre du conseil du CBIC. Si vous n'avez jamais reçu la certification CIC (Certification in Infection Control), notez que le CBIC offre aux participants au congrès de CHICA-Canada un tarif d'examen réduit; vous pouvez obtenir plus de détails à l'adresse [www.chica.org](http://www.chica.org). ●

*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 EVIDENT!**

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 cie Glo Germ™  
Box 189, Moab, UT  
USA 84532  
1-800-842-6622  
Fax 435-259-5930  
[www.glogerm.com](http://www.glogerm.com)



Canadian Distributor • Michael Ladd - Marfatek Phone: 613-342-8561 Toll Free Order Fax: 1-800-342-8988

Pierre Grascha  
PhD, Doctor in Microbiologist,  
Expert in Chemical Processes  
for Industry  
Deb Group – Crown Square,  
Gibraltar House, Burton-Upon-  
Trent, DE14 2WE, England  
Tel: 01283 546083  
Fax: 01283 548698  
Email: Pierre.grascha@  
debgroup.com

Laurence Mathieu  
PhD, ESCM Chemical Engineer.  
Laboratoire PREVOR – Moulin  
de Verville, 95760 Valmondois,  
France  
Tel: (0)1 30 34 76 76  
Fax: (0)1 30 34 76 70  
Email: lmathieu@prevor.com

Pascale Denis  
Doctor of Medicine  
Laboratoire IDEA  
Centre Montesquieu, 1  
Allée Jean Rostand, 33651  
MARTILLAC Cedex, France  
Tel: 05 56 64 82 33  
Fax: 05 56 64 82 11  
Email: idea@idea-tests.com

Benoit Latouche  
Director  
Laboratoire IDEA – Centre  
Montesquieu, 1 Allée Jean  
Rostand, 33651 MARTILLAC  
Cedex, France  
Tel: 05 56 64 82 33  
Fax: 05 56 64 82 11  
Email: idea@idea-tests.com

Navid Omidbakhsh  
Director of Research  
& Development, Virox  
Technologies, 2815 Bristol  
Circle, Unit #4, Oakville,  
Ontario, L6H 6X5, Canada  
Tel: 1-905-813-0110  
Fax: 1-905-813-0220  
Email: navid@virox.com

# Is skin irritancy of the hand wash products solely related to their pH?

## SUMMARY

**Background:** It is undeniable that diligent and effective hand hygiene will assist in reducing the spread of potentially harmful pathogens. There are many active ingredients to select from including but not limited to alcohols, parachlorometa-xylenol (PCMX), 2,4-dichlorophénoxyphénol (Triclosan) and even new hydrogen peroxide mixtures. To be credible, each product with its designated active ingredient must demonstrate antimicrobial activity according to the local regulatory requirements in order to make such claims.

Often, the mix and levels of the active ingredients in competing products are identical. So manufacturers have resorted to differentiation of their respective products through fragrance, packaging format, price and most notably the 'skin friendly' profile, which is determined based on an estimated frequency of hand decontamination by healthcare professionals. It is also often implied by manufacturers that the pH of the product must be neutral (~6 to 7) to be considered mild and non-irritating to skin over prolonged use. This study was designed to dispel this long-held notion through a scientific examination of the effects of pH of a given solution on skin.

**Methods:** Five formulations were tested for their dermal irritation. Ten healthy subjects (Laboratory IDEA-France) were tested to validate the innocuousness of hand cleansing lotions whose pH had been adjusted to 3 or 10, using strong and weak acids and bases.

**Results:** Formulations tested herein at pH of 3 or 10 were found to be non-irritating.

**Conclusions:** This study shows that pH cannot be considered as the sole criterion in determining the irritancy of handwash formulations.

## INTRODUCTION

Many cosmetic and hygiene products have an acidic pH (alpha hydroxy-acid-based creams for instance) or an alkaline pH (soaps for example). Is this enough to consider them as potentially irritant to the skin? Or, are there other factors that contribute to the skin irritation of these products?

The circumstances surrounding the development of dermatitis are complex but do not involve any immunological mechanism.<sup>1</sup> The level of skin irritation is generally linked to numerous factors such as the chemical structure of components (acids, alkali, oxidants, reducers, solvents, chelators, surfactant, etc.), their concentration, the contact time, the skin area, the skin's integrity, the environmental conditions (temperature, hygrometry) and so forth.

The typical symptomatology is represented by the appearance of a local inflammatory reaction (vasodilatation of micro-blood vessels with redness, oedema, pain and itching), which might evolve, in extreme cases, towards skin necrosis.<sup>1</sup>

The purpose of this study was to demonstrate that an acidic or alkaline pH in itself does not mean that a given preparation will be irritating to the skin.

## IRRITATION/ CORROSION THEORY

To better understand the skin irritation or corrosion's process, we need to take into account the following criteria:

- The mechanism of the chemical reaction.
- Activation energy required by these reactions.
- Influence of the aggressive chemical's electron balance.

For the skin to be damaged, a contact between the xenobiotic and the organism is required.<sup>2</sup>

# Smarter Cleaning.

## MICROFIBRE

### COMPLETE INTEGRATED CLEANING SYSTEM

Best-in-class microfibre  
products deliver proven  
benefits

- Superior cleaning
- Reduced chemical requirements
- Ergonomic and lightweight construction for easier cleaning



Microfibre's unique construction collects and holds bacteria, dust, dirt and allergens better than traditional cleaning methods. Ask your Rubbermaid Commercial Products supplier about smarter cleaning with microfibre.

Learn more about Microfibre Cleaning at  
[www.rubbermaidmicrofiber.com](http://www.rubbermaidmicrofiber.com)  
[www.rcpworksmarter.com](http://www.rcpworksmarter.com)  
or call 1-800-998-7004

**Work Smarter.**



During the chemical reaction, corrosives and irritants exchange electrons with the skin components (lipids, sugars, amino acids, enzymes, mineral salts). This concept is called 'donor-acceptor electron exchange' where the chemical and the skin components can alternatively play the role of electron donor or acceptor. This exchange involves six types of aggressive chemical reactions: acidic, alkaline, oxidation, reduction, chelation (calcium or magnesium) and solvation.<sup>2</sup>

Ions for acido-alkaline reactions, electrons for oxido-reduction reactions, or parts of molecules (addition-substitution) are exchanged between the aggressive chemical and the skin components.<sup>2</sup>

In this study, corrosive and irritant substances such as acids and alkali will be developed by using the concept of pK or dissociation constant or, in other words, the real skin corrosion/irritation potential brought by acids or alkali.

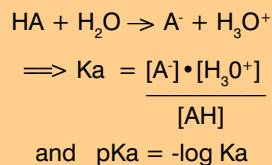
pH (in log) is the relative measure of the activity of hydrogen ions H<sup>+</sup> in a given solution:

$$\text{pH} = -\log [\text{H}^+]$$

Thus, pH 2 means that the concentration in H<sup>+</sup> ions is 10<sup>-2</sup>.

The pK, or dissociation constant, represents the capacity of a chemical to dissociate in water to liberate H<sup>+</sup> ions, in the case of acids, or OH<sup>-</sup> ions in the case of alkali.

For an acid, for which the dissociation constant is K<sub>a</sub>, the reaction with water will be:



As can be seen from the above equations, the stronger the acid, the lower the pK<sub>a</sub>.

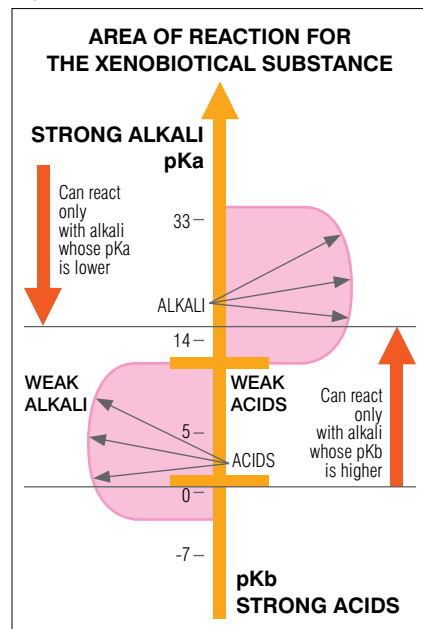
It can also be demonstrated in the same way that the stronger the alkali, the higher the pK<sub>b</sub>.

Strong acids have a pK<sub>a</sub> inferior to 0 and strong alkalis have a pK<sub>b</sub> superior to 14 since they dissociate completely in water while weak acids and alkali are only partially dissociated.

The concept of pK explains why the pH cannot really be taken into consideration to evaluate the irritation or corrosive potential of a preparation. At a given pH, the quantity of liberated H<sup>+</sup> or OH<sup>-</sup> ions may be important (the preparation will be irritant or corrosive) or not (depending on the concentration and/or the contact time, the preparation might be slightly irritant or perfectly well tolerated)<sup>3,4</sup>.

The following figure shows the possible reaction between acids and alkali<sup>3</sup>.

Figure 1. Acid-alkali reactions



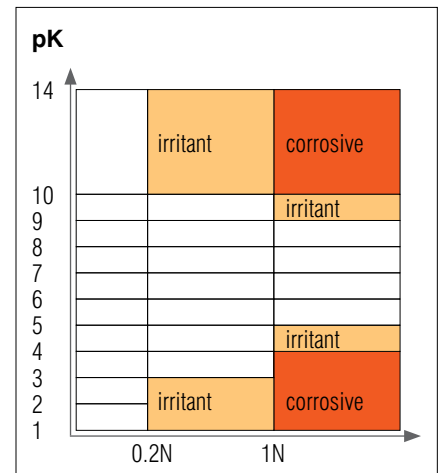
Based on Figure 1, it is easier to understand that a given acid AH is going to react with the alkali B, which has a higher energy value and, if it is sufficiently concentrated, it will also react with all alkali situated between B and A; A being the conjugate base of the acid AH. Of course, this principle also applies to alkali.

The irritant or corrosive potential of an acidic or alkaline preparation may be predicatively evaluated taking into account the pK and the concentration of the components responsible for the pH; the contact time is also a factor which determines the kinetic and the intensity of the dermatological reaction.

Studies on the eye proved that an acidic or an alkaline solution at a concentration inferior to 0.2N has absolutely no corrosive or even irritant action on the eyes.<sup>5</sup>

The following figure<sup>6</sup> shows that an acidic or a basic solution with a pK ≤ 3

Figure 2. pK and concentration correlation with irritation and corrosion



or > 10, but at a low concentration (0.2 to 1N), will be irritant only.

At concentration ≥ 1N, the solution will be irritant for intermediate pK (4 to 5 or 9 to 10).

And, for pK 5 to 9 and whatever its concentration, the solution will have no effect on eyes.

To illustrate this notion even better, we should remember that certain foodstuffs, such as sodas, lemon juice and vinegar have a pH between 2 and 3. These foodstuffs are obviously in frequent contact with the mouth and mucous membranes.

## MATERIALS & METHODS/ CLINICAL STUDIES

It has been shown, by the means of a study involving 10 healthy subjects (Laboratory IDEA – France), to validate the innocuousness of hand cleansing lotions whose pH have been adjusted to 3 or 10 using, respectively, one weak acid (lactic acid), one strong acid (hydrochloric acid), one weak base (sodium carbonate) and one strong base (sodium hydroxide) whose respective pK are given in Tables 1 and 2. The formulation of the hand cleansing lotion is described in Table 3.

This is an *in vivo* 48h single patch-test method. In this test, a dose of 0.02 ml of test-product, pre-diluted at 2% in distilled water, was applied on the skin of one arm and maintained in contact for 48 hours with a semi-occlusive plaster, in order to maxi-

Table 1. The chemical structure of acids used in this study

ACIDS	CHEMICAL STRUCTURES	pK <sub>a</sub>
Lactic acid	$\begin{array}{c} \text{CH}_3 - \text{CH} - \text{COOH} \\   \\ \text{OH} \end{array}$	3.08
Hydrochloric acid	HCl	< -2.00

Table 2. The chemical structure of alkalis used in this study

ALKALI	CHEMICAL STRUCTURES	pK <sub>b</sub>
Sodium carbonate	$\begin{array}{c} \text{CH}_3 - \text{CH} - \text{COOH} \\   \\ \text{OH} \end{array}$	6.00 10.33
Sodium hydroxide	NaOH	> 14.00

Table 3. The formulation of the hand cleansing lotion

INGREDIENTS (INCI)	% (w/w)
AQUA	Qsp 100.00
TRIDECETH-10	7.00
PEG-33 CASTOR OIL	3.00
CAPRYLGLUCOSIDE 2.00	
PEG-200 HYDROGENATED GLYCERYL PALMATE (and) PEG-7 GLYCERYL COCOATE	2.00
ACID or ALKALI	To make up to pH 3 or 10

mize the potential effects. In all cases, the concentration of acid or base really in contact with the skin was about 0.05 to 0.11N. Obtained diluted solutions of test-products had a pH of 3.00 +/- 0.05 or 10.00 +/- 0.05.

Ten healthy female and male subjects (with normal skin) were 18 to 65 years old and did not suffer from any dermatological disease.

The clinical score measurement, 30 minutes after the plaster removal, took into account the redness, oedema and blistering. Depending on the intensity of the skin reaction, the score ranges from 0 to 4. The sum of the scores, divided by the number of subjects, defines the Medium Irritation Index (M.I.I.)<sup>7</sup>, which allows us to classify the test-products according to the table 4.

## RESULTS

*In-vivo* test results showed that there is no irritation for any of the samples. Table 5 shows that all samples have medium irritation index of zero, which classifies them as non-irritant.

# Medical Keyboards

- Sealed, Liquidproof Designs
- Compatible with Hospital Cleaning Agents
- Extremely flat design, Low-profile keys for easy cleaning
- Backlit keys for low-light environments

(Medical Mouse)

**STEALTH**  
COMPUTER CORPORATION

www.stealthcomputer.com

1-888-STEALTH  
(905) 264-9000

Table 4. Medium Irritation Index Classification

<b>M.I.I. ≤ 0.20</b>	Non irritant
<b>0.20 &lt; M.I.I. ≤ 0.50</b>	Slightly irritant
<b>0.50 &lt; M.I.I. ≤ 2.00</b>	Moderately irritant
<b>2.00 &lt; M.I.I. ≤ 3.00</b>	Very irritant
<b>M.I.I. &gt; 3.00</b>	Extremely irritant

## CONCLUSIONS

The perception for product safety is that if the pH of a product is not neutral, it will be an irritant and/or corrosive. In this study, it was shown that this perception is not true. The formulations at pH of 3 and 10 were non-irritating in these experiments.

Thus, for weak acids and alkali, as well as for diluted strong acids and bases (< 0,2N), the quantity of H<sup>+</sup> or OH<sup>-</sup> free ions will still be too low to react with the epidermal amino acids and provoke the production of irritation inducers. The pH must not be the only criteria used to predict the potentially irritant character of a cosmetic preparation; lots of ingredients (sur-

Table 5. Summary of irritation test results for test solutions

PRODUCTS	A.I.I.	RESULTS
Formulation pH 3 (lactic acid)	0.00	Non irritant
Formulation pH 3 (hydrochloric acid)	0.00	Non irritant
Formulation pH 10 (sodium carbonate)	0.00	Non irritant
Formulation pH 10 (sodium hydroxide)	0.00	Non irritant

factants, preservatives, perfumes...) have an intrinsic irritating power independent of their pH. Their chemical structure, as well as their concentration, must be taken into account during the formulation process and during the toxicological investigations, which are run before launching the products on the market. ●

## LITERATURE CITED

1. F. Testud « *Pathologie toxique en milieu du travail* ». Edition Alexandre Lacasagne, 1993.
2. F. Burgher, J. Blomet, L. Mathieu « *Le risque chimique et la santé au travail* ». Edition Prévor Valmondois, 1996.
3. J.L. Antoine, J.L. Contreras, D.J. Van Neste « *Dermatosen in beruf und umwelt* » Band 1989, 37, 3, 96-100.
4. Nangia, P.H. Andersen, B. Berner and I. Maibach « *High dissociation constants (pKa) of basic permeants are associated with in vivo skin irritation in man* ». Contact Dermatitis. 1996, 34, 237-242.
5. Reim M, Schmidt-Martens FW, Horster B, Scheidhauer E. « *Morphologische und biochemische befunde bei experimentellen verätzungen mit alkali* ». Ber Dtsch Ophtalmol Ges 77; 749-759, 1980.
6. F. Burgher, L. Mathieu, J. Blomet « *Fiches de Données de Sécurité – Prévention du risque chimique – Outil pratique d'interprétation* ». Edition AFNOR, 2004.
7. Docteur Pascale DENIS-KANDEL, Protocole n° 1.01 48H 05/04, Evaluation de la tolérance cutanée d'un produit cosmétique après application unique sous pansement occlusif pendant 48 heures, (sous contrôle médical), 1er décembre 2005.



"Where service is a commitment"

Providing Infection Control Products in Canada Since 1874















**Ontario**  
200 Walker Drive  
Brampton, Ontario L6T 4H1  
Tel (905) 791-8600  
Toll free 1-800-268-0184  
Fax (905) 791-6143  
Toll free fax (866) 222-3317

**Manitoba/NW Ontario**  
38 Teeracon 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**  
117-2634-45th Ave. S.E.  
Calgary, Alberta T2B 3M1  
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) 565-0193



# *Safe* alternatives for reprocessing your medical devices



Gone are the fumes and hazards associated with commonly used aldehyde-based reprocessing solutions. STERIS's oxidative chemistries allow for choices in endoscope reprocessing.

- » Safe for your staff
- » Safe for your patients
- » Safe and efficient for your GI and OR Departments.

## **Reliance™ EPS Endoscope Processing System (HLD)** **SYSTEM 1® Sterile Processing System**

**The Choice is yours!**

For more information, contact your  
STERIS Canada Account Manager or call 1.800.661.3937.



Valerie Schall, RN, BScN  
Bruce Gamage, RN, BScN  
Bonnie Henry, MD, MPH, FRCPC  
PICNet RI Working Group  
Sam Sheps, MD, MSc, FRCP

# Using a network model to develop standardized evidence-informed guidelines in respiratory outbreak prevention and management

## Abstract

This article describes the methodology used to develop a set of provincial, collaborative, standardized, research-informed guidelines for the prevention and control of seasonal respiratory infections in all healthcare settings. Instead of using a hierarchical model, these guidelines were developed by a group of volunteers from BC's Provincial Infection Control Network (PICNet). The three-phase methodology included 1) development of a conceptual model for the guidelines, 2) drafting of a 'skeleton document', 3) iterative cycle of reviewing and re-drafting by a group of PICNet stakeholders and experts from across the province. The success of this project and methodology supports the notion that the collegial nature of the network governance model can be a powerful alternative to the potentially coercive forces of the hierarchical model.

## Introduction

Since 1957, when the Hospital Insurance and Diagnostic Services Act was unanimously passed, the Canadian healthcare system has slowly evolved to become one of the most prized possessions of Canadians<sup>1, 2</sup>. Nevertheless, since the turn of the century the sustainability and effectiveness of the current system has been put into question, and this has led to an ongoing and heated debate on the most effective strategies for system reform<sup>3,4,5</sup>. Part of this reform has focused on improving hospital infection control programs so patient safety is enhanced and infection control program costs and costs associated with infections are minimized.

In January 2005, the British Columbia Ministry of Health appointed 19 individuals representing a cross-section of the infection control community of practice in British Columbia to form a Steering Committee for BC's Provincial Infection Control Network (PICNet). PICNet's mandate was to bring together

infection control specialists from across disciplines and across the province to form a multidisciplinary network that maximizes coordination and integration of activities related to the prevention, surveillance and control of healthcare-associated infections. The overarching strategic objective of PICNet is to optimize sustainable capacity within the infection control community of practice. This is achieved by providing strategic advice for pressing infection control issues, by providing and sharing knowledge to guide practice, surveillance and research, by supporting and coordinating communication, education and research, by sharing information and by advocating for the community of practice.

Early in the development of PICNet, numerous working groups were formed to develop a strategic plan. One of these groups was the Urgent-Emergent Issues Working Group. Its members identified a need to develop a consensus document of standardized provincial guidelines for the prevention and control of respiratory infection (RI) outbreaks in all healthcare settings. PICNet stakeholders were concerned that precious resources may be wasted in duplicating the work needed for strategic planning related to RI outbreaks, and they wished to minimize inconsistencies in the actions recommended in regional guidelines written to prevent and control outbreaks.

This issue was ranked as third in priority using a standard prioritization tool, after development of surveillance protocols for *Clostridium difficile*-associated diarrhea and surgical site infections. One reason for the high ranking was the high morbidity and mortality associated with RI outbreaks. During the 2005-2006 RI outbreak season, there were 206 RI outbreaks in BC and 3590 British Columbians lost their lives to either pneumonia or influenza<sup>6</sup>. Secondly, this issue was given a high priority because of the major impact of RI outbreaks on some of our most vulner-

able citizens. Although 149 of the outbreaks occurred in schools, greater than 95% of those who died were 65 years of age or older. Thirdly, with the advent of SARS and the threat of pandemic influenza, there has been growing interest and concern that healthcare providers have a well-planned and concerted response to RI outbreaks.

The purpose of the guideline development project was to develop a practical and effective tool based, in part, on currently used regional, provincial, national and international guidelines, as well as expert body advisory reports. Since existing guideline-development methodologies are designed to develop guidelines based solely on evidence, a new methodology was needed to take into account areas where evidence was lacking.

In addition, the document was to be developed by a network of PICNet stakeholders and experts from across the province, and the product was to reflect both the current evidence and a consensus of methods to prevent and control RI outbreaks in all healthcare settings. Guideline development methodologies have traditionally been based on a hierarchical model in which a group of experts are funded to develop a set of recommended rules. These guidelines were to be based on a network model that relies on voluntary participation, collegiality and trust.

The guidelines are meant to be a collaborative product that provides facilities with recommendations on the best evidence-informed practices for RI outbreak prevention and control. Rather than replacing local or regional guidelines, this new document is meant to serve as a common reference for all healthcare settings when developing or updating their own guidelines. To ensure that this document will remain a valid reference in the future, the guidelines are being developed as a living document that will be reviewed and updated at least yearly by PICNet based on current research findings and advisory report recommendations.

### Three Phases

With this purpose in mind, a three-phase guideline development methodology was developed. Because of the compre-

hensive nature of the guidelines, the first phase of the project involved designing a new conceptual framework that highlighted the crucial role of pre-seasonal mitigation strategies and reflected the iterative process involved in RI outbreak prevention and management. This cyclical process includes year-round surveillance, methods for controlling spread after the first case has been identified, additional measures needed to control an outbreak, identification of the causative organism and control measures specific to common pathogens, and declaration of the end of an outbreak and withdrawal of control measures.

The second phase of the project involved the use of the new framework to build a 'skeleton document'. This involved drawing together the information found in current scientific literature, BC epidemiology reports, expert body advisory reports such as those from the National Advisory Committee on Immunization, the BC Centre for Disease Control, the Public Health Agency of Canada, the Provincial Infectious Disease Advisory Committee of Ontario, and the US Healthcare Infection Control Practices Advisory Committee and Centers for Disease Control and Prevention, and regional, provincial, national and international guidelines. The 86-page 'skeleton document' was intentionally very comprehensive in scope and in specificity, and inconsistencies and gaps were highlighted for discussion with the group formed in the third phase.

The third and final phase involved the formation of a working group of PICNet stakeholders and experts in public health, occupational health and safety and infection control from across the province to transform the skeleton document into a consensus document that exemplifies best practices.

The response to PICNet's call for volunteers was overwhelming and truly reflected the importance stakeholders place on this issue. The final respiratory infection working group consisted of 25 members, with 14 experts in infection control, three in occupational health and safety and eight in public health. The expertise was very broad with three medical health officers,

two virologists, two microbiologists, a physician epidemiologist, and an occupational hygienist, as well as two public health nurses, two occupational health and safety nurses and 12 infection control practitioners working in a broad spectrum of settings.

In order to better coordinate the work produced by such a large group, the skeleton document was divided into four sections using thematic divisions. RI working group members then formed four sub-groups that took ownership of modifications made to one of the guideline sections, yet all group members also participated in discussions and decision-making for the entire document. Early in the process group members voiced concerns that certain expertise may not be adequately represented in our group. We therefore invited 'global reviewers' in public health nursing and occupational health and safety to participate in the RI working group by providing direct feedback regarding the entire document. The following questions were asked of all group members when reviewing the document:

1. What other information would make this document more complete?
2. Which information should be deleted?
3. Which areas need more supporting evidence or a more in-depth literature review?
4. Should we re-word certain parts of this document?
5. Are we addressing the needs of all healthcare settings in all regions of BC?
6. Do we need a quick reference or template added as an appendix for this section?

Sub-groups and global reviewers were asked to prepare recommended changes to the document, and these were then presented by the sub-group leads and discussed at length with the entire group during regular meetings. The meeting attendance over the summer months ranged from 80 to 86 percent, and all decisions were made by reaching a group consensus informed by scientific evidence. After each meeting, modifications were made according to



*Leave nothing to chance.*

Hep C and other bloodborne viral infections don't have a face. But they do have an impact. Approximately 2.7 million Americans are chronically infected with HCV.<sup>1</sup> Is your next patient infected? Why risk it? Only double gloving with Biogel® Patented Puncture Indication System alerts you and your staff with visible evidence of a perforation, in the presence of fluid. This alert allows you to react, change gloves and resume doing what you do best.

**Double Gloving with Biogel® Patented Puncture Indication System**

- Spot your risk without losing tactile sensitivity<sup>2</sup>
- Powder-free
- Latex or Non-Latex
- Easy to don
- Proven to work with a variety of outer Biogel surgical gloves

**Spot the risk.** Call 1.800.516.9236 for a FREE sample



Spot enables rapid detection of glove perforation in the presence of fluid.

**NON-LATEX**  
Now Available

Shown: Biogel® Indicator™ Underglove donned with Biogel® Surgeon as outer glove.

From the maker of **Biogel®** | **HIBICLENS®** | **BARRIER®**

**Biogel®** Patented Puncture Indication System



U.S. Patent #6,234,231 and 6,324,294. MH Chemicals, Division of Management of Health Care, Inc. ©2004. MH Chemicals and State of the Science. Biogel, Patented Puncture Indication System, Spot, Spot the risk, Double Gloving, and Non-Latex are trademarks of Management of Health Care, Inc. HIBICLENS, BARRIER, and Biogel are registered trademarks of Management of Health Care, Inc. All rights reserved.

Product sponsor of  
**OperatingCircle**

the consensus decisions and a new draft prepared and sent to the entire group for review. This iterative review and re-drafting process continued until the RI working group felt that the document was ready to be sent to the PICNet Steering Committee for endorsement.

The development of these provincial, collaborative, standardized, research-informed guidelines by the group of volunteers from BC's Provincial Infection Control Network was a unique process that was well valued by those who participated. This supports the notion that the collegial nature of the network governance model can be a powerful alternative to the potentially coercive forces of the hierarchical model. Of course, the real indicator would be to assess how many health authorities adopt these guidelines within the next two years. This would ensure that they are effective at minimizing inconsistencies in local and regional guidelines and at reducing the resources needed for guideline development for respiratory outbreak prevention and control as hypothesized by PICNet stakeholders.

## Acknowledgements

We would like to acknowledge the contribution and expertise of the PICNet RI Working Group members who developed the Respiratory Outbreak Prevention and Control Guidelines (in alphabetical order):

L. Adam, D. Costello, L. Crossgrove, B. Gamage, N. Gill, L. Gustafson, D. Hembroff, F. Hemming, B. Henry, J. Hlaji, L. Holmes, C.Y. Hon, D. Horne, P. Kibsey, L. Kingsbury, M. Krajden, T. Lanier, K. Leslie, M. Litt, M. Mayhew, M. Petric, L. Poirier, S. Pugh, V. Schall, D. Spence, J. Tobo, E. Thomas.

The lead for this Provincial Infection Control Network (PICNet) project was supported and funded in part by the Western Regional Training Centre in Health Services Research (WRTC), which is funded by Canadian Health Services Research Foundation (CHSRF), Alberta Heritage Foundation for Medical Research (AHFMR) and Canadian Institutes of Health Research (CIHR). ●

## References

1. Begin HM. Revisiting the Canada Health Act (1984): What are the impediments to change? National Arts Centre, Ottawa, Canada: The Institute for Research on Public Policy; 2002:1-9.
2. Canadian Institute for Health Information. Waiting for health care in Canada: What we know and what we don't know. 2006:1-69.
3. Standing Senate Committee on Social Affairs, Science, and Technology (Chair: The Honourable Michael J.L. Kirby). The health of Canadians. Ottawa: Senate of Canada; 2002.
4. Commission on the future of health care in Canada (Commissioner: Roy J. Romanow). Building on values: The future of health care in Canada. Ottawa, Canada: Health Canada; 2002:i-xxxiv-1-357.
5. Rachlis M. Public solutions to health care wait lists. Ottawa, Canada: Canadian Centre for Policy Alternatives; 2005:1-38.
6. BC Center for Disease Control. June 2006.

**tb Minuteman**  
Fast Acting  
BACTERICIDAL/TUBERCULOCIDAL/SPOROICIDAL  
HARD SURFACE DISINFECTANT

**Your Answer  
to Microbial Reduction**

**The synergy of tb Minuteman**  
tb Minuteman's formula combines the right quantities of ethanol, phenolic and quat to be your weapon of choice if you need to clean blood spills or other areas where potentially infectious body fluids exist. The Occupational Safety and Health Administration (OSHA) bloodborne pathogen regulation has established strict standards for the cleaning and disposal of blood spills to protect workers from exposure and transmission of bloodborne diseases, like HIV-1, the AIDS virus. Say goodbye to your narrow spectrum disinfectant that can only offer sub-lethal doses of antimicrobial action and bring your infection control program into the 21st century.

Call maxill today and take advantage of tb Minuteman's rapid broad-spectrum disinfection. For more information on this disinfectant and infection control, visit us on-line at [www.tbminuteman.com](http://www.tbminuteman.com).

**maxill** 1-800-268-8633 [www.maxill.com](http://www.maxill.com) St. Thomas, Ontario, Canada, N5R 6C3  
Edmonton, Alberta



New  
**Flexi-Seal**  
FMS

Interested in  
dramatically advancing  
the way you manage  
fecal incontinence?



Find out more,  
call 1-800-465-6302  
to arrange a demonstration

Flexi-Seal® FMS is an effective fecal diversion and containment system designed to reduce the risk of: *skin breakdown, spread of infection due to fecal contamination and complications that can extend length of hospital stay*<sup>1</sup>. Created by ConvaTec, a Bristol-Myers Squibb Company with a long history of developing innovative skin, wound, and ostomy products that respond to the needs of the caregiver and patient alike.

Please see package insert for full product information, including instructions for use.

1. Clinical evaluation of a flexible fecal incontinence management system. Phase II clinical results (n=10). July 2004. Data on File, ConvaTec.

©2005 ER, Squibb & Sons, L.L.C.

 **ConvaTec**  
A Bristol-Myers Squibb Company



# CHICA-CANADA

## 2007 NATIONAL EDUCATION CONFERENCE



Changing ▶ Evolving ▶ Improving

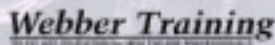
Shaw Conference Centre, Edmonton, AB – June 9-14, 2007

### CONFERENCE CONTENTS

Education sessions .....	22
Meetings and special events .....	28
Survival skills .....	31
Floor plan and exhibitors .....	32
Abstracts .....	37

### 2007 CONFERENCE SPONSORS

(at time of printing)



### CONFERENCE HOTELS

#### The Westin Edmonton

(FULLY BOOKED AT TIME OF PRINTING)

Telephone: 1-800-WESTIN1  
(937-8461)

10135-100 Street  
CHICA-Canada Booking Website  
Underdevelopment  
Edmonton, AB T5J 2E7

- Traditional Room \$149.00 single/double (plus 11% tax)
- Suite Room \$184.00 single/double (plus 11% tax)

When booking, refer to "Community and Hospital Infection Control Association" OR "CHICA Canada"

The Westin Edmonton is completely non-smoking. This includes all public areas and all guest rooms.

#### Courtyard by Marriott Edmonton

Telephone: (780) 423-9999  
(866) 441-7591

1 Thornton Court NW  
Edmonton, AB T5J 2E7

Room Rate:

- \$145.00 SINGLE/DOUBLE
- Refer to CHICA-Canada or Community and Hospital Infection Control Association – Canada. Rate Code COME (1 bed king) or COMF (2 beds).

## EDUCATION SESSIONS AND OBJECTIVES

Session time and locations to be confirmed in the final program. The language of the conference is English.  
For registration, download registration form from [www.chica.org](http://www.chica.org).

SUNDAY, JUNE 10:

### NOVICE PRACTITIONER DAY

*These sessions are recommended for practitioners with less than three years' experience in infection prevention and control*

Sponsored in part by University of British Columbia Certificate Program in Education

7:00-9:00 a.m. Registration

7:00 -8:15 a.m. Continental Breakfast

#### Conference Survival Skills

Richard Wray, RN, BA, CIC, 2007 Conference Chair; Karen Hope, BSc, MSc, 2007 Past President, CHICA-Canada; Gerry Hansen, BA, CHICA-Canada  
Conference Planner

First-time attendees will want to attend this breakfast session but all attendees are sure to find it enlightening.

8:30-9:15 a.m.

#### The Role and Scope of Infection Prevention and Control

Melody Cordoviz, RN, BSc, BScN, CIC, Samantha Woolsey, RN, BScN, CIC, Royal Alexandra Hospital, Edmonton, Alberta

This session describes 'A Day in the Life of an IPCP', how Infection Prevention and Control fits into the health care system/structure, the role of an IPCP, finding and using resources including identification of common resources available to the IPCP, how to do a literature search and how to find articles on-line.

9:15-10:15 a.m.

#### The Principles of Routine Practice and Its Application

Bern Hankinson, RN, BN, CIC, Wetaskiwin Hospital and Health Centre, Wetaskiwin, Alberta; Deborah Doe, RN, BScN, Centennial Centre, Ponoka, Alberta

This session outlines the importance of routine practice and describes five components of routine practice including their application in different settings. The session will also review ways of teaching routine practices.

10:15-10:45 a.m. Refreshment break

10:45-11:30 a.m.

#### Surveillance

Maureen Buchanan-Chell, BScN, RN, CIC, University of Alberta Hospital, Edmonton, Alberta

The session will describe the types of surveillance, doing surveillance with a purpose and using surveillance to change practice.

11:30-12:30 p.m. Lunch provided

12:30-1:30 p.m.

#### Basics of Cleaning, Sterilization and Disinfection

Susan Lafferty, RN, BScN, CIC, Capital Health, Edmonton, Alberta

This session will describe the importance of cleaning and define the differences between disinfection and sterilization. It will explain the differences between non-critical, semi-critical and critical medical devices. The session will describe Spaulding's Classification. It will also identify three common re-use issues and identify two medical devices that have been identified as challenges for sterilization and disinfection (e.g. endoscopes, etc.)

1:30-2:15 p.m.

#### Microbiology/Significant Pathogens

Uma Chandran, MD, FRCPC, Dynacare Kasper Medical Laboratories, Edmonton, Alberta

During this session, attendees will learn how to read a microbiology report, determine what the report means, what the IPCP should be paying attention to, and acting on the microbiology report.

2:15-2:45 p.m. Refreshment break

2:45-3:30 p.m.

#### Outbreak Management

Denise Sorel, RN, BScN, CIC, East Central Health, Camrose, Alberta

The session will define an outbreak and describe the types of outbreaks. Attendees will also learn the basic components of outbreak management.

3:30-4:00 p.m.

#### Making Recommendations and Communications

Karin Fluet, RN, BScN, CIC, Capital Health, Edmonton, Alberta

Attendees will learn how to develop recommendations and write reports that will 'make it real' for the administrator.

4:00-4:30 p.m. Questions and Answers

SUNDAY, JUNE 10:

### ADVANCED PRACTITIONER DAY

*These sessions are recommended for practitioners with greater than three years' experience in infection prevention and control*

7:00-5:00 p.m. Registration

7:00-8:15 a.m. Continental breakfast

#### Conference Survival Skills

Richard Wray, RN, BA, CIC, 2007 Conference Chair; Karen Hope, BSc, MSc, 2007 Past President, CHICA-Canada; Gerry Hansen, BA, CHICA-Canada Conference Planner

8:30-10:00 a.m.

#### Developing an Orientation Package for the Novice IPCP

Pamela Ritchie, RN, BN, Calgary Health Region, Calgary Alberta

This session will cover the principles of orientation, topics commonly covered in orientation of a new IPCP, and tips for developing an orientation package. There will also be demonstration of some practical activities that aid in developing an orientation package.

10:00-10:30 a.m. Refreshment break

10:30-12 noon

#### Developing the Next Generation of IPCPs: Mentoring

Wayne Ormond, Team Leader, Leadership and Development, Calgary Health Region, Calgary, Alberta

This session focuses on the next steps after orientation. The session will describe the meaning of 'mentoring' including the distinction between mentoring and preceptorship. The roles and responsibilities of the mentor and mentoree will be described. Attendees will learn how to develop their skills as a mentor and "Mentoring and Communities of Practice" will also be discussed.

12 noon - 1:00 p.m. Lunch provided

#### Personal Development

Elizabeth Ann Henderson, PhD, Calgary Health Region, Calgary, Alberta; Donna Moralejo, PhD, Memorial University School of Nursing, St. John's, Newfoundland Labrador

1:00-1:45 p.m.

#### Core Competencies for Infection Prevention and Control Professionals

This session will review professional and practice standards and core competencies for IPCPs

1:45-2:15 p.m.

#### Defining and developing your professional persona

This session will define the attendee's role in their own professional development, including defining success in their role as an IPCP.

2:15-2:45 p.m. Refreshment break

2:45-4:15 p.m.

#### Developing a Professional Development Plan

What is a professional development plan and why is a plan important? The session will review the roles and responsibilities of a professional, define realistic short- and long-term goals, and describe strategies and tools that can help you achieve your goals and evaluate success.

4:15-4:30 p.m.

#### Marketing Yourself

This session will discuss how to market your knowledge and skills.



# Advanced Hard Surface Disinfection & Hand Hygiene is Just a Wipe Away!

*Désinfection perfectionnée des surfaces dures  
et hygiène des mains grâce  
à nos serviettes!*



**SANI-CLOTH®**  
Premoistened Disposable Wipes

- Bactericidal, tuberculocidal, and virucidal.
- Cleans, disinfects, and deodorizes non-porous hard surfaces.
- Low and high alcohol-based formulas for every situation.

**SANI-CLOTH®** – Serviettes jetables préhumidifiées

- *Bactéricide, tuberculocide, et virucide.*
- *Nettoie, désinfecte et désodorise les surfaces dures non poreuses.*
- *Formules à haute et à basse concentration d'alcool pour toutes les situations.*



**SANI-DEX®**  
Antimicrobial Hand Wipes

- Effective against gram positive and gram negative bacteria (including MRSA and VRE) and fungi.
- Contains 0.5% PCMX for persistent kill.
- Wipe away debris and soil.
- Emollient enriched formula helps retain moisture on the skin.

**SANI-DEX®** – Essuie-mains antimicrobiens

- *Efficace contre les bactéries Gram positif et Gram négatif (y compris le SARM et l'ERV) et contre les champignons.*
- *Contient 0,5 % de chloroxylène pour une action désinfectante persistante.*
- *Enlève les débris et la saleté.*
- *La formule émollissante aide à garder la peau hydratée.*



## Convenience, Compliance, Control

*Commodité, Conformité, Contrôle*

Call 1-800-263-7067 for more information on the Sani-System® Program, or visit us at [www.pdipdi.com](http://www.pdipdi.com)

Composez le 1 800 263-7067 pour de plus amples renseignements au sujet du programme Sani-SystemMD, ou consultez notre site Web [www.pdipdi.com](http://www.pdipdi.com)

**MONDAY, JUNE 11:  
PRE-CONFERENCE DAY**

**MORNING SESSION**

Collaborating with Patient Safety – What does it mean for Infection Prevention and Control?

**Overall Objectives:**

- To provide an opportunity for attendees to interact with colleagues and experts in the field of healthcare epidemiology.
- To promote multidisciplinary dialogue and collaboration among attendees and industry thus facilitating advances in hospital epidemiology and infection prevention.

8:30-9:00 a.m.

**Patient Safety 101**

Dr. Anne Matlow, MD, FRCPC, Hospital for Sick Children, Toronto  
The session will provide the attendees with high quality and up-to-date information regarding the science and practice of healthcare epidemiology in 2007.

9:00-09:30 a.m.

**Safer Healthcare Now – Focusing on Infection Prevention & Control**

Carolyn Hoffman, RN, MN, Canadian Patient Safety Institute, Edmonton  
The session will review the rationale for, implementation strategies and results from Canada's Safer Healthcare Now campaign.

9:30-9:45 a.m. Questions

9:45-10:15 a.m. Refreshment break

10:15-11:00 a.m.

**Where Infection Prevention & Control meets Patient Safety in the ICU**

Dr. Barb Brady-Fryer, RN PhD, Stollery Children's Hospital, Edmonton  
The session will provide attendees with strategies to improve patient safety in the intensive care unit by targeting nosocomial infections.

11:00-11:45 a.m.

**What can we learn from critical occurrence review?**

Dr. Gerarda Cronin, MD, MBA, Winnipeg Regional Health Authority, Winnipeg  
The session will advise attendees of the value of critical occurrence review to improve patient safety.

11:45-12 noon Questions

*SESSION SPONSORED BY BD*

**MONDAY, JUNE 11: PRE-CONFERENCE DAY  
AFTERNOON CONCURRENT SESSION (A)**

1:30–5:00 p.m.

**SURVEILLANCE**

Presented by: Elizabeth Ann Henderson, PhD, Calgary Health Region, Calgary, Alberta, Donna Moralejo, PhD, Memorial University School of Nursing, St. John's, Newfoundland Labrador

12:00-1:30 p.m. Lunch in Exhibit Hall/Poster presentations

1:30-2:00 p.m.

**Focus Your Surveillance**

The session will identify the purpose and objectives of surveillance including distinguishing between purpose and objectives of a surveillance program, developing clearly defined objectives for a particular surveillance program, and describing the outcomes or indicators to be used.

2:00-2:45 p.m.

**Maximize Data Collection**

The session will present an understanding of the importance of using appropriate definitions, collecting only the data needed to meet objectives, dealing with competing demands and identifying key sources of data used in surveillance and outbreak investigation. The attendee will learn how to assess data sources for validity and reliability, ease of access, time needed for data collections, etc.

2:45-3:15 p.m. Refreshment break in Exhibit Hall

3:15-3:45 p.m.

**Basic Data Handling**

The session will identify the essentials of data management and how to distinguish between data and information. It will assist attendees in describing the data using the appropriate measures of disease frequency (incidence, incidence density, prevalence).

3:45-4:45 p.m.

**Interpret and Report Surveillance Results**

The session will review assessing cause and effect relationships in the data, interpreting rates, trends and risk relative to person, place and time; critically evaluating and interpreting the significance of the findings. Discussion will review real vs. perceived changes in rates. Attendees will learn to evaluate and compare surveillance data to either internal or external data sources, as well as identifying the essential elements of a report and making recommendations.

4:45-5:00 p.m.

**Implementing Evaluative Change**

The session will identify strategies for changing practice and involving stakeholders.

**MONDAY, JUNE 11: PRE-CONFERENCE DAY  
AFTERNOON CONCURRENT SESSION (B)**

1:30–5:00 p.m. CONSTRUCTION AND RENOVATION

12:00-1:30 p.m. Lunch in Exhibit Hall/Poster presentations

1:30-2:00 p.m.

**Keeping Up with Technology:**

**Infection Prevention and Control and Hybrid Procedures**

Karen Stockton, MHSc, CIC, University Health Network, Toronto, Ontario  
This session will review hybrid procedures: what they are, what it means to you, and what are relevant standards that relate to hybrid procedures. The session will also discuss considerations when assessing your facility's readiness to accommodate new-age procedures. It will also describe how to manage a present-day facility and what design considerations may be needed for the future.

2:00-2:45 p.m.

**Incorporating Infection Prevention and Control Principles During Healthcare Facility Design and Construction**

Karen Hope, BSc, MSc, Calgary Health Region, Calgary, Alberta  
This session will focus on the importance of cultivating a relationship with planning committees using data to facilitate changes in practice and to support changes in policy, and some practical examples of implementation.

2:45-3:15 p.m. Refreshment break in Exhibit Hall

3:15-3:45 p.m.

**Update on the CSA Standard on Infection During Construction or Renovation of Health Care Facilities**

Gordon Burrill, President, Teegor Consulting; Chair of CSA Technical Sub-Committee For Infection Control during Construction or Renovations of Healthcare Facilities.  
This session will highlight the latest recommendations related to construction and renovation.

3:45-4:45 p.m.

**Mold Health Effect Investigations and Remediation for Health Care Facilities**

Andrew Streifel, Hospital Environment Specialist, Department of Environmental Health and Safety, University of Minnesota  
This session will assist attendees to develop a plan to mitigate Aspergillosis in healthcare facilities based on environmental risk factors. It will enable attendees to understand the relationship between ventilation deficiency and environmental contamination, and provide guidance for the remediation of water damage and mold growth.

**TUESDAY, JUNE 12, 2007  
CONFERENCE DAY 1**

7:00 a.m.-5:00 p.m. Registration

7:00-8:15 a.m. Continental breakfast

8:30-9:30 a.m.

**KEYNOTE SPEAKER**

**Using Intervention to Improve Practice**

Robert A. Weinstein, MD, Professor of Medicine, Rush Medical College; Chairman, Department of Infectious Diseases, John H. Stroger Jr. Hospital of Cook County, Chicago, Illinois

Dr. Weinstein will describe why intervention is important. What strategies and evidence might be needed for successful interventions? What types of intervention are likely to be effective? What are some examples of interventions that have worked well? What are some of the barriers commonly encountered and how can they be overcome?

*SESSION SPONSORED BY SAGE PRODUCTS*



9:30-10:20 a.m.

**Zero Tolerance – What does it mean?**

Denise Murphy, RN, MPH, CIC, Barnes-Jewish Hospital, St. Louis, Missouri

This session will discuss the rationale for this approach to reducing hospital-acquired infections, what the term “zero tolerance” actually means for both infection prevention and control and patient safety initiatives, and what has been implemented to evaluate the approach.

10:20-10:50 a.m. Refreshment break in Exhibit Hall

10:50-11:40 a.m.

**Communities of Practice**

John Parboosingh, MB, FRCSC, Professor Emeritus, University of Calgary; Consultant, Community Learning

Attendees will learn about the ‘Natural’ Communities of Practice (CoP) that develop around irritants such as concerns and challenges in practice. Groups that ‘culture’ CoPs find that they share practical knowledge and ‘know-how’, especially with newcomers, in ways not easily achieved by traditional work groups. Participants will leave knowing the principles of fostering and sustaining CoPs. SESSION SPONSORED BY ECOLAB HEALTHCARE

11:40-2:00 p.m. Lunch in Exhibit Hall/Poster presentations

2:00-3:00 p.m. **ORAL PRESENTATIONS** (*Schedule in Final Program*)

3:00-3:15 p.m. Refreshments in Exhibit Hall

3:15-5:00 p.m. **CONCURRENT SESSION #1**  
**Clinical Dilemmas****No Rash Judgement:****Inside the Dermatologist approach to rashes**

Gilles J Lauzon, MD, FRCPC, Dermatologist, Edmonton, Alberta

This session will focus on the process of making a diagnosis, infectious versus non-infectious causes and background information needed to make a decision about precautions.

**Is It Productive? Approach to sorting out coughs**

William Sevcik, MD, Assistant Clinical Professor, Department of Emergency Medicine, University of Alberta, Edmonton, Alberta

The session will review assessing/triaging coughs on admission, what other components go into making a diagnosis, infectious versus non-infectious causes and background information needed to make a decision about precautions.

**Bring on the Cranberry Juice:****Urinary Tract Infections in Long-Term Care**

Kathleen Hunter, RN, NP, PhD, GNC(C), Faculty of Nursing, University of Alberta

This session will focus on the scope and prevalence of the problem and the challenges of managing urinary tract infections in long-term care.

3:15-5:00 p.m. **CONCURRENT SESSION #2**  
**Community Dilemmas****COMMUNITY ACQUIRED MRSA – Is it yours to give?****Scope of the Problem**

Geoffrey Taylor, MD, FRCPC, University of Alberta Hospital, Edmonton, Alberta

This session will describe the unique epidemiology of community-acquired methicillin-resistant *Staphylococcus aureus* from a national perspective.

**Implications for Acute Care**

Mark Joffe, MD, FRCPC, Royal Alexandra Hospital, Edmonton, Alberta

This session will focus on the IPC challenges in Acute Care when community-acquired *Staphylococcus aureus* is endemic in your community.

**Implications for Community**

Marcia M. Johnson, MHS, FRCPC, Deputy Medical Officer of Health, Capital Health, Edmonton, Alberta

This session will describe the challenges of community-acquired methicillin-resistant *Staphylococcus aureus* in community settings and strategies for management.

3:15-5:00 p.m. **CONCURRENT SESSION #3**  
**Staff Dilemmas**

This concurrent session will present the occupational hygiene and the infection prevention and control paradigms of health care worker safety and how they can be put into practice.

**Occupational Hygienist Paradigm of HCW Safety**

George Astrakianakis, PhD, Occupational Health and Safety Agency for Healthcare in BC (OHSAB)

**Infection Prevention and Control Paradigm of HCW Safety**

Mary Vearncombe, MD, FRCPC, Sunnybrook Health Sciences Centre, Toronto, Ontario

**Putting the Paradigms into Practice**

Shirley Paton, MN, Public Health Agency of Canada

WEDNESDAY, JUNE 13, 2007

**CONFERENCE DAY 2**

7:00-5:00 p.m. Registration

7:00-8:15 a.m.

**Strut Your Stuff! Breakfast**

Presentation by: Dick Zoutman, MD, FRCPC, CHICA-Canada Physician Director

8:30-9:20 a.m.

**Reaching Your Audience – Enhancing Your In-Services**

Susan Crichton, PhD, University of Calgary, Calgary, Alberta

This session will describe who the “learners” are that we are teaching, how these learners are changing and why does it matter? What are some strategies for engaging and supporting them to make us more responsive to our learners now and in the future?

9:20-9:50 a.m. Refreshment break in Exhibit Hall

9:50-11:35 a.m. **CONCURRENT SESSION #4**  
**Innovative Education****Storytelling**

Jeanette Boman, RN, PhD, Edmonton, Alberta

This session will describe how storytelling can be used to educate health care workers and will provide some practical examples. SESSION SPONSORED BY WEBBER TRAINING

**Edu-Tainment**

Gwyneth Meyers, BSc, MSc, Calgary Health Region, Foothills Medical Centre, Calgary, Alberta, Donna Ledgerwood, RN, BN, MSc, Calgary Health Region, Peter Lougheed Centre, Calgary, Alberta

What is Edu-tainment and why is it important? The session will demonstrate the practical applications of Edu-tainment.

9:50-11:35 a.m. **CONCURRENT SESSION #5**  
**Evidence-based Practice****Implementing Evidence Based Practice**

Anne Sales, MSN, PhD, Faculty of Nursing, University of Alberta

This session will review current concepts related to getting evidence in IP&C practice, provide an overview of the role of the work environment in knowledge translation, and discuss how much evidence is needed to make defensible decisions.

**Reviewing the Evidence Around Promoting Hand Hygiene**

Donna Moralejo, PhD, Memorial University School of Nursing, St. John's, Newfoundland Labrador

This session will present a recent Cochrane Systematic Review on interventions to promote hand hygiene. Available evidence will be discussed, including limitations of the studies done to date.

9:50-11:35 a.m. **CONCURRENT SESSION #6**  
**Ethical Dilemmas****Disclosure of Nosocomial Infections**

Nathalie Lecoq, BSc, M(International Law) LLB, LLM, Heenan Blaikie, Montreal, Quebec

This session will discuss what must be considered when developing policies around disclosure of institution based infection rates or patient-based risks.

**Ethics of Planning with Limited Resources**

Eric Wasylenko, MD, FRCPC, Calgary Health Region

The session will describe the principles used when planning for allocation of scarce resources in outbreaks and pandemic influenza.

FOR HEALTHCARE PROFESSIONALS

## THE NEXT GENERATION OF HAND SANITIZER™

**KILLS 99% OF GERMS THAT MAY MAKE YOU SICK.**



Visit Spartan Distribution at our booth at the CHICA show. (#406)

**1-888-941-2060**

- ALCOHOL-FREE
- GENTLE LOTION – DOESN'T STING
- LASTS UP TO 4 HOURS
- STAYS ACTIVE THROUGH HANDWASHING

VNSE  
DIN# 02244287



## AIR TECHNOLOGY SOLUTIONS




Providing air purification systems for infectious disease control, medical, municipal and indoor quality issues.

**Installed in over 3,000 hospitals.**

**1-866-735-1480**

[www.airtechnologysolutions.com](http://www.airtechnologysolutions.com)  
[www.biologicalcontrols.com](http://www.biologicalcontrols.com)  
[airtechnology@bellnet.ca](mailto:airtechnology@bellnet.ca)

### Care versus Isolation

Jim Hutchinson, MD, FRCPC, Health Care Corporation of St. John's, Newfoundland Labrador

This session will discuss the pros and cons of isolation with respect to the need to provide quality care, and identify practices which will balance the scale in the patient's favour.

11:35-1:00 p.m. Lunch provided

1:00-2:30 p.m. ORAL PRESENTATIONS (Schedule in Final Program)

2:30-3:00 p.m. Refreshment break

3:00-3:45 p.m.

### Accreditation as a Stand-Alone Program

Karen Hope, BSc, MSc, Calgary Health Region, Foothills Medical Centre, Calgary, Alberta; Jessica Peters, Canadian Council on Health Services Accreditation.

This session will review the Accreditation process using a clinical (ambulatory) standard and the Calgary Health Region accreditation experience. The new Guidelines for accreditation of Infection Prevention and Control programs will be discussed.

3:45-4:30 p.m.

### Public Health Agency of Canada – Partnering with Infection Prevention and Control

Shirley Paton, MN, Public Health Agency of Canada

This session will provide an update on changes within the Public Health Agency of Canada with particular focus on activities in the Nosocomial and Occupational Infections Section including the Canadian National Infection Surveillance Program.

## THURSDAY, JUNE 14, 2007 CONFERENCE DAY 3

7:00-12 noon Registration

7:00-8:30 a.m.

### CHICA-Canada ANNUAL MEETING AND TOWN HALL

Breakfast provided – all welcome.

CHICA-Canada Voting Members must pick up a voting card before entering Annual Meeting.

8:45-9:15 a.m.

### Infection Prevention and Control Vignettes and... Silly Questions – What is the weirdest thing you have been asked about?

Jim Gauthier, MLT, CIC, Providence Continuing Care Centre, Kingston, Ontario  
Diane Roscoe, MD, FRCPC, Vancouver General Hospital/Vancouver Coastal Health

9:15-10:15 a.m.

### Changing, Evolving, Improving: Provincial responses to Infection Prevention and Control Challenges

Moderator: Nancy Alfieri, RN, BScN, CIC, Calgary Health Region Panel: Clare Barry, BN, MSc, CIC, Ontario Ministry of Health and Long Term Care, Karin Fluet, RN, BScN, CIC, Capital Health, Edmonton, Alberta, Bruce Gamage, RN, BScN(Microb), CIC, BC Provincial Infection Control Network, Ramona Rodrigues, MSc(A), CIC, West Island Health and Social Services Centre, Pointe Claire, Quebec, Marion Yetman, RN, BN, MN, CIC, Government of Newfoundland Labrador

Panelists will describe networks, structures and innovations to address infection prevention and control challenges.

*SESSION SPONSORED BY BC PROVINCIAL INFECTION CONTROL NETWORK AND ONTARIO REGIONAL INFECTION CONTROL NETWORKS*

10:15-10:45 a.m. Refreshment break

10:45-11:45 a.m.

### IGNITE THE MAGIC WITHIN!

There is magic all around us and within us. Most people are stopped from using their inner magic to achieve their dreams, goals and aspirations by the illusions of fear and self-doubt. By using his MAGIC formula of Motivation, Awareness, Goals, Imagination and Choices, Wayne Lee inspires, entertains and instructs people to break through fears and to discover how to unleash the power of their inner magic to design and create the ideal life.

From this session, attendees will learn:

- The 3-Step Strategy to discover, design and create a magical life.
- How to focus on what you want in order to achieve outstanding results.
- How to use the tools given to overcome fears.
- How to replace bad habits with productive ones.
- How to create a peak emotional state that will lead you to a peak performance.
- How to live with more success and fulfillment.

11:45-12:15 p.m. **CLOSING CEREMONIES**

# Protect yourself, protect your patients



## Cardinal Health Infection Prevention Products

As a trusted manufacturing partner, Cardinal Health has been providing clinicians with top-quality products for more than 30 years. These products are designed to help *protect you and your patients* from the transmission of infection.

Visit us at the CHICA Conference in Edmonton, **booths 205/207** and see our offering of Infection Prevention products.

Cardinal Health offers these Infection Prevention products:

- A full line of surgical and exam gloves
- Fluid-resistant face masks and shields
- Tiburon® surgical drapes
- SAF-T Pump™ system for medical waste disposal
- Rechargeable surgical clippers
- Medi-Vac® suction systems
- Astound™ and SmartGown™ surgical gowns
- Isolation gowns
- Convenient isolation kits



Cardinal Health  
175 Britannia Road East, Suite 1  
Mississauga, Ontario L4Z 4B9  
Canada  
1.888.871.5950

[www.cardinal.com](http://www.cardinal.com)

© Copyright 2006, Cardinal Health, Inc. or one of its subsidiaries. All rights reserved. (MC2695)

**SCHEDULE OF MEETINGS AND EVENTS**

Meetings, education and exhibits will be held at the Shaw Conference Centre (unless otherwise noted). Final schedule will be posted to [www.chica.org](http://www.chica.org) and included with registration confirmation.

THURSDAY, JUNE 7	CHICA-Canada Board of Directors Meeting (Westin Edmonton)
FRIDAY, JUNE 8	CHICA-Canada Chapter Presidents Meeting (Westin Edmonton)
SATURDAY, JUNE 9	CHICA-Canada Interest Group & Committee Breakfast and Meetings (Shaw Conference Centre) CHICA-APIC/CBIC/IFIC Presidents Meeting (Westin Edmonton)
SUNDAY, JUNE 10	Breakfast Session: Conference Survival Skills Novice Practitioner Day Advanced Practitioner Day Opening/Awards Ceremonies President's Reception
MONDAY, JUNE 11	Run for IFIC Education and Exhibits/Exhibitors Host Lunch Pre-Conference Day International Attendees Reception
TUESDAY, JUNE 12	Education and Exhibits/Exhibitors Host Lunch Special Event: Fort Edmonton Park
WEDNESDAY, JUNE 13	Education Sessions Fun and Farewell: Hosted by CHICA Northern Alberta
THURSDAY, JUNE 14	CHICA-Canada AGM/Town Hall Meeting Education Sessions Closing Ceremonies

**INTERNATIONAL ATTENDEES RECEPTION**

**THE WESTIN EDMONTON, 6:00-7:30 p.m.**

International attendees are invited to a casual reception with the Board of CHICA-Canada.

Welcome to Canada and CHICA-Canada!

**SPECIAL EVENT**

TUESDAY, JUNE 12, 2007

FORT EDMONTON PARK

Buses leave Westin

Edmonton – 6:00 p.m.

Dinner – 7:30 p.m.

Entertainment – 9:00 p.m.

\$65.00 per person plus GST

(Not included in Registration)

The site traces the develop-

ment of Edmonton from

the early 1840s to the

1920s, highlighting four

historical periods. Enjoy a

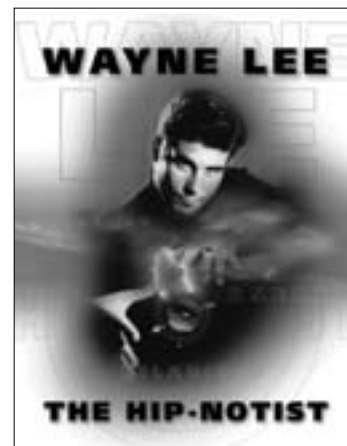
tour of the village, relax at

the 'Hangar' with a drink

before a BBQ dinner, and

enjoy the awesome enter-

tainment to follow.



**FUN AND FAREWELL!**

Hosted by CHICA Northern Alberta

Buses leave Westin Edmonton at 5:30 p.m.

Buses return from West Edmonton Mall at 9:30 p.m.

\$20.00 per person, not included in registration

The West Edmonton Mall is Alberta's number one attraction and the

largest shopping centre in the world today! Your Retail Therapy will start

with a Wine & Cheese Reception at the Fantasyland Hotel. You will be

equipped with maps and directions so you can spend the evening brows-

ing over 800 stores and services, 100 eating establishments or 7 theme

park attractions of varying admissions prices: Galaxy land, Adventure

Golf, the Ice Palace and the new Aquatics Entertainment Stage.



**Pall-Aquasafe™ 14-Day Water Filters**



- ▶ Pleated filter membrane validated to trap bacteria, fungi and parasites
- ▶ 14-day maximum life
- ▶ Provides safer water for at-risk patients such as the immunosuppressed, elderly and neo-natal
- ▶ Reduces staff and equipment exposure to waterborne pathogens

For More Information Please Call 800.465.8555

Filtration. Separation. Solution.™

Safer Water . . . Instantly

**QUICK CONNECTION, QUICK PROTECTION**

# CHICA RUN FOR IFIC

Fun 5 km RUN or 2.5 km WALK

**Monday, June 11, 2007 at 6:30 a.m.**

(No rain date)

**Hosted by CHICA Northern Alberta In support of the IFIC\* Scholarship fund**

\*International Federation of Infection Control

Please help support IFIC in its effort to support IC practitioners. Collect sponsors and then come and run or walk with us on one of the Festival City's many river valley running trails. Registration will be at the Shaw Conference Centre (look for the CHICA-Canada Registration area) and the run will begin from the Shaw Conference Centre.

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.

Entry fee and sponsorship will be paid at the conference. Do not send with your conference registration. The entry fee is \$25.00 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 waiver to be signed 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:** Nicole Gartner, RN BScN, Telephone: 780-735-7790, or email: nicolegartner@cha.ab.ca

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

## CHICA RUN FOR IFIC, Fun 5 km RUN or 2.5 km WALK, Monday, June 11, 2007 at 6:30 a.m.

Departing from Shaw Conference Centre, Edmonton

(No rain date)

CHICA-Canada is a professional organization comprised of individuals and health care facilities who are professionally or occupationally concerned with the prevention of infections in all health care settings. The

2007 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. If sponsors wish to have a charitable tax receipt, they must complete their full name and address.

**THANK YOU FOR YOUR SUPPORT!**

NAME (Please print)	ADDRESS	TELEPHONE	PLEDGE	PAID

<p>NAME OF RUNNER</p> <p>_____</p> <p>TELEPHONE NUMBER</p> <p>_____</p>	<p><b>Community and Hospital Infection Control Association – Canada</b>  <b>Association pour la prévention des infections à l'hôpital et dans la communauté – Canada</b>          PO Box 46125 RPO Westdale, Winnipeg MB R3R 3S3</p> <p><b>Courier address only:</b>          67 Bergman Crescent, Winnipeg MB R3R 1Y9</p>	<p><b>Telephone:</b> 1-204-897-5990/ 1-866-999-7111</p> <p><b>Fax:</b> 1-204-895-9595</p> <p><b>Email:</b> <a href="mailto:chicacanada@mts.net">chicacanada@mts.net</a></p> <p><b>Web:</b> <a href="http://www.chica.org">http://www.chica.org</a></p> <p>CHICA-Canada Charitable # 11883 3201 RR0001</p>
---	--	---



## Can You Identify the Risks? Nine Areas Where 3M Can Help

When it comes to finding Infection Prevention Solutions,  
we can all make a difference.

For information on 3M Infection Prevention products and services, contact  
your 3M Health Care representative or visit [www.3M.com/CA/IP](http://www.3M.com/CA/IP)





# MAKING THE MOST OF THE 2007 CHICA-CANADA CONFERENCE

## CONFERENCE SURVIVAL SKILLS

“Changing, Evolving, Improving” applies not only to infection prevention and control. CHICA-Canada conferences have gained recognition as the premier Canadian education and networking opportunity for IPCPs. With the dynamic educational programs developed by a committee of ICP experts, delegate attendance has grown and offerings of current research via poster and oral presentations have tripled in the last five years. There is also an increased industry presence.

With this growth comes a dizzying mix of education, networking, industry showcase, interest group meetings, committee meetings, and special events. How do delegates make the most of their time and money at the conference?

### SET GOALS

Do you need to brush up on clinical applications? Do you want to learn the latest research? Do you want comparative product information for product recommendations? Start planning your days well in advance. Think about information you need for your practice and consider what others at your institution might need. Before leaving for the conference, talk to others whose work involves infection prevention and control. Show them the conference schedule and exhibitor list and ask if you can gather specific information for them.

### SET PRIORITIES

If your goal is to learn the latest in clinical applications, focus on education sessions. There is a lot of knowledge offered. Decide which topics are most important and which sessions you will attend. Purchase recordings of education sessions you may miss. Find out how to get information on interest group or committee meetings you cannot attend. Obtaining product information from industry suppliers is a valuable education in itself. Spend as much time as possible touring the exhibits, using the following hints.

### WHAT?! NO HANDOUTS?

Printed handouts will NOT be distributed at the conference. Take notes and ask pertinent questions. Speakers have provided handouts for download, available at [www.chica.org](http://www.chica.org). The Shaw Conference Centre, the Westin Edmonton, and the Courtyard by Marriott have business centres for printing services (contact them for fees).

### MAP OUT YOUR EXHIBIT HALL ‘FLIGHT PLAN’

Look through the Exhibitors List (pages 33-36) and decide which are most important to you. Make a list for the first day of exhibits and a list for the second. Visit the companies you are familiar with but also visit companies new to the conference.

### KNOW THE QUESTIONS – GET YOUR ANSWERS

Make a list of well-defined questions that address product performance. Ask specific, yet open-ended questions. That way the representative has to really address the issue. Ask for peer-review articles or ask the rep to compare the product with a competitor’s. Compare notes with your peers. Ask for a list of institutions currently using the product or service.

There is an Exhibitor Passport program to increase traffic in the exhibit hall and has some wonderful giveaways at the end. But do not forget that ‘time is money’ to a sales rep. It is polite to listen to what a rep has to say. Industry is a source of education for ICPs. However, if you are not interested, be honest and move on. It is better for the rep to have 10 solid leads than 100 poor ones.

### EVALUATION

After each session, complete an evaluation card. Not only does this assist next year’s planning committee, but it gives speakers an evaluation so they can improve their presentations.

### THE MOST IMPORTANT PEOPLE? RIGHT BESIDE YOU!

Use this opportunity to meet people outside your chapter or job. Talk to those with similar fields of expertise; ask for permission to communicate with those who may be able to mentor you.

### HAVE FUN!

Attend the special events designed to let you meet, greet and eat. But it is most important to take time to rest, reflect, re-organize, and re-energize. We want you to have the best experience at the 2007 conference and come back next year.

### FIRST-TIME ATTENDEE? WHAT TO EXPECT

**Plan ahead.** Plan your travel days carefully. For example, you may not want to arrive or depart on days that you also plan to attend sessions

or activities. Know where your hotel is in relation to the conference, and plan adequate time to get to sessions and activities. We have asked which sessions you expect to attend. You are not bound by this. You can change your mind and attend any session you wish. However, indicating which sessions you may attend does not guarantee a place. Sessions fill up quickly, so arrive early. Be prepared for varying temperatures in large rooms. Wear comfortable shoes.

### ASSISTANCE

The registration desk in the Shaw Conference Centre is the point of all information and assistance. Need directions? Need to find out about the city? Need to leave a message for a colleague? Drop by the registration desk at any time – the friendly staff will be happy to help you.

### UP-TO-DATE INFORMATION

Sessions are presented and moderated by some of the most knowledgeable ICPs in the field. The Novice Practitioner Day has valuable basic information for those who have been in the field for three years or less. Preconference Day focuses on three major areas of practice. The main conference program is two-and-a-half days of information designed to provide an educational experience for all healthcare settings. At the end of the conference, you can pick up a Certificate of Attendance. If you are governed by the Royal College of Physicians and Surgeons, you should pick up the tri-part CME credit form from the registration desk.

### TIME WELL SPENT

CHICA-Canada National Education Conference is carefully planned. All the details have been worked out for you; all you need to do is plan your days to gain the best experience.

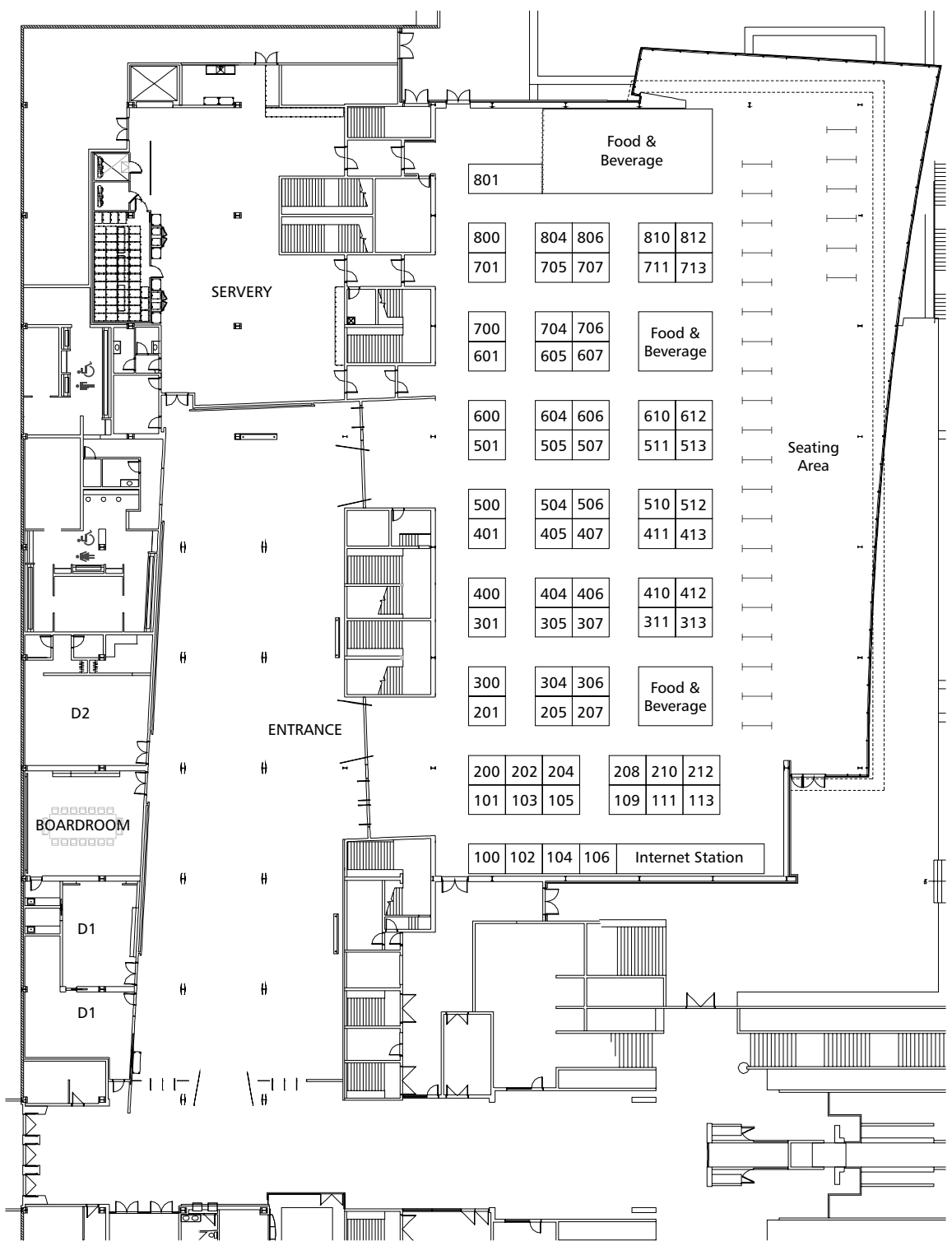
*For further information or assistance, contact: Gerry Hansen, CHICA-Canada Conference Planner, 204-897-5990/1-866-999-7111, [chicacanada@mts.net](mailto:chicacanada@mts.net)*

Enjoy the session on  
“Conference Survival Skills”  
at breakfast on  
Sunday, June 10  
7:00 a.m.-8:15 a.m.,  
Shaw Conference Centre

# THE 2007 CHICA-CANADA CONFERENCE

## SHAW CONFERENCE CENTRE - HALL D

JUNE 11-12, 2007



PLEASE REFER TO PAGE 33 FOR EXHIBITOR BOOTH LISTINGS



## EXHIBITOR BOOTH LISTINGS

BOOTH	COMPANY	BOOTH	COMPANY	BOOTH	COMPANY
100	Remington Medical	400	Lynx Medical Products/Solumed	610	SciCan
101	Arjo Canada Inc.	401	Steris Canada Inc.	612	SciCan
102	Medline Canada	404	Bayer Inc.	700	Medonyx
103	BBFM Inc.	405	Maxill Inc.	701	Canadian Health Network
104	Carsen Medical Inc.	406	Spartan Distribution	704	Hand Hygiene Campaign – CHICA/CPSI/CCHSA/PHAC
105	Baxter Corporation	407	Johnson Wax Professional	705	CHICA-Canada
106	Carsen Medical Inc.	410	Ansell	706	BLS Systems
109	Webber Training	411	Summit Technologies Inc.	707	Ontario Infection Control Networks
111	3M Infection Prevention Solutions	412	Medical Mart West	711	Watts Industries (Canada)
113	3M Infection Prevention Solutions	413	Inviro Medical Devices, Inc.	713	Pharmax
200	Arjo Canada Inc.	500	Steris Canada Inc.	800	BC Provincial Infection Control Network
201	Ecolab	501	Angus Medical Inc.	801A/B	The Stevens Co.
202	Celastis Inc.	504	Integra Environmental Inc.	804	BD Canada
204	AMG Medical Inc.	505	Convatec Canada	806	BD Canada
205	Cardinal Health Canada/ Source Medical	506	Abatement Technologies Limited	810	PDI - Professional Disposables International
207	Cardinal Health Canada/ Source Medical	507	priMed	812	LauraLine Skin Care
208	Hollister Limited	510	Association for Professionals in Infection Control (APIC)		
210	Virox Technologies	511	International Federation of Infection Control (IFIC)		
212	Virox Technologies	512	Certification Board of Infection Control (CBIC)		
300	Pall Medical	513	Public Health Agency of Canada		
301	Sage Products	600	Kimberly-Clark Inc.		
304	Vernacare	601	Chemspec		
305	Hoffman-LaRoche	604	Butcher's/Johnson Diversey Inc.		
306	Deb Canada	605	Cardiomed Supplies Inc.		
307	Tyco Healthcare	606	Enturia		
311	ICPA, Inc.	607	Metrex		
313	Bowers Medical Supply				

### Tables (not shown on Floor Plan)

T1/2	CHICA Northern Alberta (Run for IFIC) (By CHICA Registration Desk)
T3	Canadian Journal of Infection Control
T4	Canadian Standards Association
T5	Registered Nurses Foundation of Ontario
T6	Canadian Committee on Antibiotic Resistance

## EXHIBITORS

### 3M INFECTION PREVENTION SOLUTIONS

#### Booths 111/113

300 Tartan Dr., London, ON N5V 4M9  
800-265-1480 www.3m.ca

### ABATEMENT TECHNOLOGIES

#### Booth 506

7 High St., Fort Erie, ON L2A 3P6  
800-827-6443 www.abatement.com

*High-efficiency air purification systems for controlling airborne pathogens in patient care areas of healthcare facilities. Hepa-Care systems convert patient rooms to code-compliant isolation rooms and Hepa-Aire systems are used during construction and renovation projects.*

### AMG MEDICAL INC.

#### Booth 204

8505 Dalton, Montreal, QC H4T 1V5  
800-361-2210 www.amgmedical.com

*Leading Canadian manufacturer and distributor of personal protective equipment, disposable medical supplies, and durable medical equipment used by healthcare facilities nationwide.*

### ANGUS MEDICAL INC.

#### Booth 501

3567 52nd St. SE, Calgary, AB T2B 3R3  
866-418-1689 www.angusmedical.com

*Canadian medical distribution company specializing in IV systems and medical safety devices, providing top level support in education, standardization and implementation.*

### ANSELL HEALTHCARE INC.

#### Booth 410

800-363-8340  
www.ansellhealthcare.com/canada

*You emphasize preventive care to your clients? Ansell does the same for you. By proposing a variety of superior quality gloves, Ansell has your best interests well in hand. With Ansell gloves, you'll be protected right to the tips of your fingers.*

### ARJO CANADA INC.

#### Booths 101/200

Unit c, 1575 South Gateway Rd.  
Mississauga, ON L4W 5J1  
800-665-4831 www.arjo.com

*For labour-saving bedpan flusher disinfectors, patient lift and transfer, bathing and showering systems, to skin care, hygiene, and infection control products, Arjo's comprehensive selection is unparalleled.*

### ASSOCIATION FOR PROFESSIONALS IN INFECTION CONTROL & EPIDEMIOLOGY APIC

#### Booth 510

1275 K St. NW, Suite 1000, Washington, DC 20005  
202-798-1890 www.apic.org

*Association representing 11,000+ infection prevention specialists in 45 countries whose mission is to improve health and patient safety by reducing risks of infection and other adverse outcomes.*

### BAXTER CORPORATION

#### Booth 105

4 Robert Speck Pkwy., Suite 700,  
Mississauga, ON L4Z 3Y4  
905-281-6683 www.baxter.com

*Trusted leader in healthcare providing critical therapies for people with life-threatening conditions and dedicated to customer success.*

### BAYER HEALTHCARE INC.

#### Booth 404

77 Belfield Rd., Toronto, ON M9W 1G6  
416-240-5258 www.bayer.ca

**BBFM INC.**

**Booth 103**

6705 Jean-Talon St. E, Suite 201  
Montreal, QC H1S 1N2  
514-257-5899 www.ges-int.com

*Integrated solutions for asset management (design, construction, operation). Applied research centre for asset performance and management to prevent/control the risk of nosocomial infections.*

**BD CANADA**

**Booth 804/806**

2771 Bristol Circle, Oakville, ON L6H 6R5  
905-855-4650 www.bd.com

**BLS SYSTEMS**

**Booth 706**

1108 South Service Rd. W.  
Oakville, ON L5L 5T7  
905-339-1069 www.blssystemsltd.com

**BOWERS MEDICAL SUPPLY**

**Booth 313**

Unit 11, 3691 Viking Way  
Richmond, BC V6V 2J6  
800-663-0041 www.bowersmedical.com

*Pandemic kits, apparel, gloves, Sanipull washable nurse call cords, Deko 190 bedpan washers.*

**BUTCHER'S/JOHNSON DIVERSEY INC.**

**Booth 604**

#66-3500 144 St., South Surrey, BC V4P 3J6  
778-229-3103 www.butchers.com

*Leading national brand manufacturer of cleaning and maintenance chemicals sold through select distributors throughout North America. AHP hydrogen peroxide products a specialty.*

**CANADIAN COMMITTEE ON ANTIBIOTIC RESISTANCE**

**Booth T6**

300-1275 W. 6th Ave., Vancouver, BC V6H 1A6  
604-909-3844 www.ccar-ccra.org

**CANADIAN HEALTH NETWORK**

**Booth 701**

1750 Courtwood Cr., Ottawa, ON  
613-569-6411 www.canadian-health-network.ca

*If you have questions, www.canadian-health-network.ca has answers! Brought to you by the Public Health Agency of Canada and leading non-profit health organizations, CHN is a trusted source for credible info on a range of health topics.*

**THE CANADIAN JOURNAL OF INFECTION CONTROL**

**Booth T2**

aran@kelman.ca – Advertising sales  
cheryl@kelman.ca – Editorial

*The official quarterly publication of the Community and Hospital Infection Control Association-Canada.*

**HAND HYGIENE CAMPAIGN: CANADIAN PATIENT SAFETY INSTITUTE**

**Booth 704**

100-1730 St. Laurent Blvd., Ottawa, ON K1G 5L1  
613-738-9130 www.patientsafetyinstitute.ca

*Working with Canadian Council for Health Services Accreditation, Public Health Agency of Canada, and Community and Hospital Infection Control Association to support, supplement, and integrate existing hand hygiene initiatives locally, regionally, and provincially, by developing and implementing a national hand hygiene campaign.*

**CANADIAN STANDARDS ASSOCIATION**

**Booth T3**

5060 Spectrum Way, Suite 100  
Mississauga, ON L4W 5N6  
416-747-2322 www.csa.ca

**CARDINAL HEALTH**

**Booths 205/207**

175 Britannia Rd. E, Unit 1  
Mississauga, ON L4Z 4B9  
888-871-5950 www.cardinal.com

*The premier provider of products, services, and solutions for safer, more efficient healthcare in Canada.*

**CARDIOMED SUPPLIES INC.**

**Booth 605**

199 Saint David St., Lindsay, ON K9V 5K7  
705-328-2518 www.cardiomed.com  
*Alcavis – Disinfectant for dialysis machines and equipment; Retractable Technologies Inc. – vanish point syringes; ICU Medical – Tego connectors.*

**CARSEN MEDICAL INC.**

**Booth 104/106**

151 Amber St., Markham, ON L3R 3B3  
866-677-4121 www.carsenmedical.com

**CELLESTIS INC.**

**Booth 202**

28043 Smyth Dr., Valencia, CA 91355  
800-519-4627 www.cellestis.com  
*QuantiFERON®-TB GOLD, an FDA-approved and CDC-recommended blood test for tuberculosis, providing a superior alternative to the 100-year-old tuberculin skin test.*

**CERTIFICATION BOARD OF INFECTION CONTROL (CBIC)**

**Booth 512**

18000 W. 105 St., Olathe, KS 66061  
202-454-2500 info@cbic.org

**CHEMSPEC**

**Booth 601**

211 Westcreek Dr., Suite 100  
Woodbridge, ON L4L 9T7  
416-421-5212 www.chemspecworld.com

**CHICA-CANADA**

**Booth 705**

PO Box 46125, RPO Westdale  
Winnipeg, MB R3R 3S3  
204-897-5990 www.chica.org

*Professional association of those professionally or occupationally interested in the prevention and control of infections in all healthcare settings.*

**CHICA-NORTHERN ALBERTA**

**Booth T1/2**

**CONVATEC**

**Booth 505**

2365 Côte de Liesse, St-Laurent, QC H4N 2M7  
800-465-6302 www.convatec.ca  
*A division of Bristol-Myers Squibb Company, is a world leader in ostomy care and one of the leaders in wound care products and services.*

**DEB CANADA**

**Booth 306**

PO Box 730, 42 Thompson Rd. W.  
Waterford, ON N0E 1Y0  
519-443-8697 www.debcanada.com  
*Leading Canadian away from home skin care system company dedicated to increase hand hygiene compliance by protecting, cleansing, sanitizing and restoring skin with safe, effective products.*

**ECOLAB**

**Booth 201**

370 N. Wabasha St./5105 Tomken Rd.  
St. Paul, MN 55102/Mississauga, ON L4W 2X5  
651-293-2914/800-352-5326  
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 makes Ecolab the total solutions brand providing people, support, research, and selection for infection prevention.*

**ENTURIA**

**Booth 606**

1400 Tomahawk Cr. Pkwy., Suire 310  
Leawood, KS 66211  
913-345-3557 www.chloraprep.com

**HOFFMAN-LAROCHE**

**Booth 305**

2455 Meadowpine Blvd.  
Mississauga, ON L5N 6L7  
800-561-1759 www.rochecanada.com

**HOLLISTER LTD.**

**Booth 208**

95 Mary St., Aurora, ON L4G 1G3  
800-263-7400/  
905-727-4344 www.hollister.ca  
*Zassi Bowel Management System – a patented rectal catheter intended for the diversion of fecal matter to minimize external contact with patient skin and to facilitate the collection of fecal matter for patients requiring stool management.*

**ICPA, INC.**

**Booth 311**

515 S. Capital of Texas Hwy., Suite 240  
Austin, TX 78746-4305  
512-892-4594 www.icpa.net

*Providing healthcare software solutions to reduce healthcare-associated infections (AICE®); detect and report community disease outbreaks (RedBar®); protect and improve employee health (Respond®)*

**INTEGRA ENVIRONMENTAL INC.**

**Booth 504**

1430 Cormorant Rd., Ancaster, ON L9G 4V5  
800-661-6678 www.integraenv.com

**INTERNATIONAL FEDERATION OF INFECTION CONTROL**

**Booth 511**

c/o 1508-5229 Dundas St. W.  
Toronto, ON M9B 6L9  
416-237-0462 www.theific.org

*IFIC's vision is for every nation to have a functioning infection control organization. IFIC develops and provides educational and reference materials to promote infection control practice.*

**INVIRO MEDICAL DEVICES, INC.**

**Booth 413**

3235 Satellite Blvd., Building 400, Suite 300  
Duluth, GA 30096  
770-291-2186 www.inviromedical.com

*The innovative, patented SNAP!® Safety Syringe is a manually retractable safety syringe that provides distinct protection and performance advantages over retrofitted devices.*

**JOHNSON WAX PROFESSIONAL**

**Booth 407**

31 Bridlewood Green SW, Calgary, AB T2Y 3L1  
403-256-4609 www.johnsondiversey.com

**KIMBERLY-CLARK**

**Booth 600**

50 Burnhamthorpe Rd. W.  
Mississauga, ON L5B 3Y5  
416-839-3261 www.kchealthcare.com

*Leading provider of trusted clinical solutions for surgical site infections, ventilator-associated pneumonia, and healthcare worker infection protection and safety.*

**LAURALINE SKIN CARE PRODUCTS**

**Booth 812**

30 McLeod Ct., Kitchener, ON N2R 1B1  
800-257-5592 www.lauralineskincare.com

*Complete line of Canadian-made products for the healthcare professional. We carry a full range of fragrance-free products: soaps, lotions, sterilizing gels.*

**LYNX MEDICAL PRODUCTS INC.**

**Booth 400**

3495 Laim Rd., Unit G,  
Mississauga, ON L5L 5S5  
905-820-3360 www.lynxmedical.com

*Antiseptics for IV therapy, dialysis, and Ors.*

**MAXILL INC.**

**Booth 405**

80 Elm St., St. Thomas, ON N5R 6C8  
800-268-8633 www.maxill.com

*Proud supplier of disinfectants, gloves, and disposables to Canada's public and private hospitals, dentists, EMS, fire/police departments, etc.*

**MEDICAL MART WEST**

**Booth 412**

11607 178 St., Edmonton, AB  
780-444-5800 www.medimart.com

*Affiliated company of Medical Mart Supplies Ltd. Of Mississauga, representing a large number of manufacturers of infection control products including exclusive relationships with Steris and Enturia.*

**MEDLINE CANADA**

**Booth 102**

228 Matheson Blvd. E, Mississauga, ON L4Z 1X1  
905-755-5500 www.medline.com

*Largest privately held manufacturer and distributor of health care supplies in North America, bringing to the market over 100,000 products.*

**MEDONYX**

**Booth 700**

341 Lesmill Rd., Toronto, ON M3B 2V5  
416-633-6990 www.medonyx.com

**METREX**

**Booth 607**

1717 W Collins Ave., Orange, CA 92867  
800-841-1428 www.metrex.com

*Providing high-quality infection prevention products including a complete line of enzymatic pre-cleaners and detergents, high-level disinfectants, surface disinfectants, liquid medical waste solidification products, and hand hygiene products.*

**ONTARIO INFECTION CONTROL NETWORK**

**Booth 707**

**PALL MEDICAL**

**Booth 300**

2535 De Miniac, St-Laurent, QC H4S 1E5  
800-465-8555 www.pall.com

*Global leader in the filtration and separation industry, providing a wide variety of products to help protect patients, environments, and healthcare workers.*

**PDI – PROFESSIONAL DISPOSABLES INTERNATIONAL**

**Booth 810**

Two Nice-Pak Park, Orangeburg, NY 10962-1376  
845-365-1700 www.pdipi.com

**PHARMAX LIMITED**

**Booth 713**

4-80 Galaxy Blvd., Toronto, ON M9W 4Y8  
416-675-3333 www.pharmax.ca

*Global resource for infection control solutions that are consistent, dependable, timely, and innovative. Instruments cleaners & disinfectants; hard surface cleaners & disinfectants; hand sanitizers; medical devices.*

**PRIMED MEDICAL PRODUCTS INC.**

**Booth 507**

900, 10707 100 Ave., Edmonton, AB T5J 3M1  
780-497-7600 www.primed.ca

*Carrying a wide range of (Judy) disposable personal protective equipment for infection prevention and control, examination gloves, face masks, isolation & surgical gowns, headwear and footwear, basic wound care, and bandages.*



Laura Line

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

**PROVINCIAL INFECTION CONTROL NETWORK OF BC**

**Booth 800**  
 Room 2083, 655 W. 12th Ave.  
 Vancouver, BC V5Z 4R4  
 604-660-0296 www.picnetbc.ca  
*Provincially supported infection control knowledge collaborative and network, providing guidance and advice on healthcare associated infection prevention and control in BC.*

**PUBLIC HEALTH AGENCY OF CANADA**

**Booth 513**  
 100 Eglantine Driveway, A.L. 0601E2  
 Ottawa, ON K1A 0K9  
 613-952-5221 www.phac-aspc.gc.ca  
*Publications/handouts: Infection Control Guidelines, Canadian Nosocomial Infection Surveillance Program.*

**REGISTERED NURSES FOUNDATION OF ONTARIO**

**Booth T4**  
 1185 Eglinton Ave. E., Suite 104  
 Toronto, ON M3C 3C6  
 416-426-7127 info@rnfoo.org

**REMINGTON MEDICAL EQUIPMENT LTD.**

**Booth 100**  
 401 Bentley St., Unit 9, Markham, ON L3R 9T2  
 905-470-7790 www.remingtonmedical.com  
*Manorapid Synergy hand antiseptic is effective against norovirus, SARS, and bird flu viruses.*

**SAGE PRODUCTS**

**Booth 301**  
 3909 Three Oaks Rd., Cary, IL 60013  
 815-955-4700 www.sageproducts.com

**SCICAN**

**Booths 610/612**  
 1440 Don Mills Rd., Toronto, ON M3B 3P9  
 416-445-1600 www.scican.com  
*Offering INNOVA™ cleaning-disinfection units for rigid or flexible endoscope, STATIM autoclaves for fast, gentle sterilization that won't damage expensive, fragile instruments.*

**SOURCE MEDICAL CORPORATION**

**Booths 205/207**  
 175 Britannia Rd. E. Unit 1  
 Mississauga, ON L4Z 4B9  
 905-502-3300 www.sourcemedical.com  
*Canada's leading and only national full service and value-added distributor of medical, surgical, and laboratory products with more than 70,000 products from over 400 suppliers.*

**SPARTAN DISTRIBUTION**

**Booth 406**  
 5 Furbacher Lane, Unit 5, Aurora, ON L4G 6W2  
 888-941-2060 www.spartandistribution.com  
*Safe4Hours® is the next generation of hand sanitizer. It is a gentle alcohol-free lotion that stays active through handwashing and lasts up to four hours.*

**STERIS CANADA INC.**

**Booths 401/500**  
 6280 Northwest Dr., Mississauga, ON L4V 1J7  
 905-677-0863 www.steris.com

**THE STEVENS COMPANY LTD.**

**Booth 801A/B**  
 200 Walker Dr., Brampton, ON L6T 4H1  
 905-791-8600 www.stevens.ca  
*As a leading Canadian medical supply distributor, our mission is to bring innovative products and services to healthcare providers.*

**SUMMIT TECHNOLOGIES INC.**

**Booth 411**  
 5470 Harvester Rd., Burlington, ON L7L 5N5  
 905-639-4440 www.summittechnologies.ca  
*Distributes, services, and educates the medical profession on emerging respiratory products designed to maximize patient outcomes while preventing the spread of airborne contaminants.*

**TYCO HEALTHCARE CANADA**

**Booth 307**  
 7300 Trans-Canada Hwy.  
 Pointe-Claire, QC H9R 1C7  
 877-664-8926 www.tycohealthcare.com  
*Leading marketer, manufacturer, distributor, and servicer of medical devices and drug products, including disposable medical supplies, diagnostic imaging agents, monitoring equipment, medical instruments, bulk analgesics, and nuclear medicines.*

**VERNACARE**

**Booth 304**  
 800-268-2422 www.vernacare.com  
*Vernacare's closed system for human waste disposal, utilizing disposable utensils is environmentally friendly, protects nurses from microbial splash and impacts outbreak costs.*

**VIROX TECHNOLOGIES INC.**

**Booths 210/212**  
 2815 Bristol Circle, Unit 4,  
 Oakville, ON L6H 6X5  
 800-387-7578 www.virox.com  
*Accelerated hydrogen peroxide (AHP) has been developed and patented by Virox and is under licence to leading infection control companies around the globe. The AHP technology offers a broad array of products ranging from surface cleaners and disinfectants, instrument cleaners and disinfectants and hand sanitizers to products for any medical device needing high level disinfection or sterilization, including heat-sensitive devices.*

**WATTS INDUSTRIES (CANADA) INC.**

**Booth 711**  
 5435 North Service Rd., Burlington, ON L7L 5H7  
 905-332-4090 www.powerscontrols.ca  
*Powers introduces faucets that include an inorganic antimicrobial finish on faucet touch points. This finish has been designed to last the life of the faucet.*

**WEBBER TRAINING**

**Booth 109**  
 58 Lambert Dr., Belleville, ON K8N 4K6  
 613-962-0437 www.webbertraining.com  
*Continuing education for ICPs through teleclass education. Inservice training tools for ICPs to teach about clinical infection control activities through Trainer's Resource for Infection Control.*



**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: 780-413-5147 • Fax: 780-413-4744 • E-mail: olivia.marcotte@capitalhealth.ca**

## ORAL PRESENTATION ABSTRACTS

Oral presentation sessions will be held Tuesday, June 12 and Wednesday, June 13. Schedule will be published in conference program.

07-001

### USE OF A NOVEL COLLABORATIVE PROCESS TO DEVELOP A STANDARDIZED EVIDENCE-INFORMED GUIDELINE FOR RESPIRATORY OUTBREAK MANAGEMENT IN BC

**Authors:** Schall, V\*, Gamage, B, Henry, B, PICNet RI Working Group, Sheps, S. <sup>1</sup>University of British Columbia, Vancouver, BC, Canada, <sup>2</sup>BC's Provincial Infection Control Network, Vancouver, BC, Canada, <sup>3</sup>Western Regional Training Centre for Health Services Research, Vancouver, BC, Canada

**Issue:** BC's Provincial Infection Control Network (PICNet) brings together infection control specialists from across disciplines and the province to form a transdisciplinary network that maximizes coordination and integration of activities related to the prevention, surveillance and control of healthcare-associated infections. In April 2006, PICNet began a project to develop a standardized provincial guideline for the prevention and control of respiratory outbreaks in health care settings. When developing the guidelines, two issues quickly surfaced. First, most guideline development methodologies are based solely on evidence, yet these guidelines were to be based, in part, on currently used regional, provincial, national and international guidelines, as well as expert body advisory reports. Second, guideline development processes are usually based on a hierarchical model in which a group of experts are funded to develop a set of rules or regulations that must be followed. These guidelines were to be developed using a network model that relies on voluntary participation, collegiality and trust.

**Project:** A three-phase methodology was developed and used to create a practical and effective set of guidelines that could serve as a common reference for all healthcare settings when developing or updating local or regional guidelines.

**Results:** The first phase of the project involved designing a new framework that highlighted the crucial role of year-round mitigation strategies and reflected the iterative process involved in respiratory outbreak prevention and management. The second phase of the project involved the use of the new framework to build a skeleton document. This involved drawing together the information found in current scientific literature, BC epidemiology reports, expert body advisory reports, and regional, provincial, national and international guidelines. The third and final phase of the guideline development process involved the formation of a working group of PICNet stakeholders who were experts in Public Health, Occupational Health and Safety (OHS) and Infection Prevention and Control (IPC) from across the province to transform the skeleton document into a set of guidelines that exemplify best practices. The working group consisted of 25 members, with 14 experts in IPC, 3 in OHS and 8 in Public Health. The skeleton document was divided into four sections using thematic divisions. RI working group members then formed four sub-groups that took ownership of modifications made to one of the guideline sections, yet all group members also participated in discussions and decision-making for the entire document. After each meeting, modifications were made to the document according to the consensus decisions and a new draft was prepared and sent to the entire group for review. This iterative review and re-drafting process continued until consensus was reached on all the issues. The document was then sent to the PICNet Steering Committee for endorsement.

**Lessons learned:** The guideline development methodology developed by BC's PICNet effectively produced guidelines that reflected the current evidence and incorporated the concerns of all the stakeholders in the field. The process was well received by the multi-disciplinary community in infection prevention and control in BC.

**Acknowledgements:** We would like to acknowledge the contribution and expertise of the PICNet RI Working Group members who developed the Respiratory Outbreak Prevention and Control Guidelines (in alphabetical order): L. Adam, D. Costello, L. Crossgrave, B. Gamage, N. Gill, L. Gustafson, D. Hembroff, F. Hemming, B. Henry, J. Hlagi, L. Holmes, C.Y. Hon, D. Home, P. Kibsey, L. Kingsbury, M. Kraiden, T. Lanier, K. Leslie, M. Litt, M. Mayhew, M. Petric, L. Poirier, S. Pugh, V. Schall, D. Spence, J. Tobo, E. Thomas. This project has been supported and funded in part by the Western Regional Training Centre in Health Services Research (WRTC), which is funded by Canadian Health Services Research Foundation (CHSRF), Alberta Heritage Foundation for Medical Research (AHFMR) and Canadian Institutes of Health Research (CIHR).

07-002

### INJECTION PRACTICES AND WASTE DISPOSAL IN HEALTHCARE FACILITIES

**Author:** M.C.I.N. Nandili, P.M. Musakhi, A.N.W. Waudoo; *AIDS control program, Nairobi, Kenya*

**Background:** The staff in limited resource settings stand a high risk of acquiring blood-borne diseases from unsafe injection practices and poor management of medical wastes.

**Objective:** To determine unsafe practices that could lead to the transmission of nosocomial infections.

**Methodology:** The study design was of baseline form done between May-June 2005 in two Provincial General Hospitals of Kakamega and New Nyanza. A sample size of 125 was selected with study areas selected purposively on the basis of HIV prevalence. Random selection of injection sites was done with study subjects who comprised of staff and patients interviewed randomly. Observation and personal interview by use of structured questionnaire was applied. Data was analyzed using Statistical Package for Social Science (SPSS).

**Results:** 41.1% indicated they never went out of stock for safety boxes for the last 6

months. 15/40 indicated they use protective gears during segregation and disposal of medical wastes. Open-hole burning and high temperature incineration, >1000°C were significant methods of disposal. Presence of used sharps was left around injection sites uncovered neither secured from public access. 9.5% reported presence of the job aids at some facilities. 76.5% indicated administering injections in the best recommended practices possible. Needle stick injuries among providers and waste handlers were at an average of 2.6 pricks per health care worker in the last 6 months.

**Conclusions:** It is necessary to sensitize health staff and members of the public on risks associated with unsafe injection practices and unnecessary prescriptions of injections. Injection safety policy and guidelines is not well distributed or accessible to staff constituting to poor practices.

**Recommendations:** Copies of the policy and guidelines with information education and communication materials should be made available to enhance proper practices at facility.

07-003

### HAND HYGIENE PRACTICES AND THE INCIDENCE OF HEALTHCARE ASSOCIATED INFECTIONS – AN INTEGRATIVE REVIEW

C Backman<sup>1</sup>, D Zoutman<sup>2</sup>, PB Marck<sup>3</sup>

<sup>1</sup>Canadian Patient Safety Institute, Ottawa, Ontario, Canada, <sup>2</sup>Queen's University & University Hospitals Kingston, Kingston, Ontario, Canada, <sup>3</sup>Faculty of Nursing & John Dossator Health Ethics Centre, University of Alberta, Edmonton, Alberta, Canada

**Objective:** The objective of this integrative review is to examine the current evidence over the last decade that hand hygiene practices have an impact on the incidence of healthcare associated infections in acute care hospitals.

**Methods:** We searched for original research and reviews of research published between January 1, 1996 and July 31, 2006. Studies were identified through the electronic databases Medline, CINAHL, EMBASE, PUBMED, The Cochrane Library and expert consultation. Due to the large volume of publications, we limited our search to include only English articles that had the terms hand hygiene or hand washing in their title. All studies that investigated a relationship between hand hygiene practices and healthcare associated infections in acute care facilities were considered. These hand hygiene practices included the initiation of educational programs or campaigns, multimodal hand hygiene initiatives, introduction of alcohol sanitizers, hand hygiene performance improvement and implementation of changes in the infection control practices. Studies only examining hand hygiene compliance, efficacy of alcohol hand gels, plain soap, and anti-microbial soap in reducing bacteria count recovered from hands were excluded.

**Results:** Of the 1120 papers retrieved, there were 36 studies which met the inclusion criteria. The eligible studies included: 21 (58.33%) observational studies without control groups, 3 (8.33%) observational with a control group, 8 (22.22%) experimental studies, and 4 (11.11%) reviews of research. Two independent reviewers conducted the evaluation of all eligible studies, critiquing and scoring each study using two rating scales: the Oxford Centre for Evidence-based Medicine Levels of Evidence (2001) and the tool identified as the Fatal Flaws of Quasi-Experimental and Before and After Studies by Larson (2005).

**Conclusions:** There is a lack of rigorous evidence linking specific hand hygiene interventions with the prevention of healthcare associated infections. The varied nature of the interventions used and the diverse factors affecting the acquisition of healthcare associated infections make it difficult to demonstrate the specific effect of hand hygiene alone. The most frequent methodologies currently used in this research area are before and after observational studies. In our analysis, we will define the characteristics of a well designed before and after observational study and discuss their limitations. We will also explore other possible criteria, approaches and research designs that may be more fruitful for this area of literature in the future.

07-004

### BUILDING SUCCESSFUL PANDEMIC INFLUENZA PLANS: OVERCOMING CHALLENGES AND IMPLEMENTING RELIABLE STRATEGIES

S. Trowbridge<sup>1</sup>, K. Clark<sup>2</sup>

<sup>1</sup>St. Joseph's Healthcare, Hamilton, Ontario, Canada, <sup>2</sup>Hamilton Health Sciences, Hamilton, Ontario, Canada

**Issue:** In 2003, Ontario experienced the impact of a highly contagious virus, Severe Acute Respiratory Syndrome (SARS). This virus caused a tremendous impact on the healthcare system along with economic and social disruption. This health emergency clearly demonstrated our lack of preparedness for dealing with a health crisis within our communities. Pandemic planning can help to ensure that healthcare facilities are prepared to respond efficiently and effectively while minimizing disruption to healthcare services.

**Project:** In the fall of 2005, the acute care facilities within our region, initiated a joint planning project to develop a detailed Clinical Health Services Pandemic Influenza Plan. The goal of pandemic influenza planning and response is to minimize serious illness, deaths and disruption to the clinical health services essential to our community. During a pandemic of any nature, healthcare facilities must be prepared to respond and provide services within the context of limited availability of both internal and external resources and support.

**Results:** Through the collaborative working efforts a pandemic influenza plan was developed. The plan is based on the World Health Organization pandemic periods and phases, and is reflective and consistent of the Ontario Health Pandemic Influenza Plan and the Canadian Pandemic Influenza Plan. The ability to identify the key components of a successful emergency preparedness model – Communication, Surveillance, Business Continuity, Infection Prevention & Control, Occupational Health & Safety and

Ethics – resulted in an effective and comprehensive pandemic influenza plan that meets the health and safety needs of all persons who enter our hospitals.

**Lessons learned:** Critical key lessons learned during the development of the plan were: ensuring that the plan had strategies in place to mobilize staff quickly and effectively, ensuring that the hospital had a supporting structure to coordinate and deal with increased surge capacity and capability, and communication strategies to the staff conveying the commitment to the principle of equity. Above all, every patient within our community will have equal claim to receive the health care they need, and that clinical resources will not be allocated on the basis of age, race, social status or relationship to the institution.

#### 07-005

### DEVELOPMENT OF PROVINCIAL METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) INFECTION PREVENTION AND CONTROL GUIDELINES

B Heinrichs, G Keays, B Hansen, L Hare; *Alberta Health and Wellness, Edmonton, Canada*

**Issue:** The need to develop a provincial MRSA infection prevention and control (IPC) guideline was identified as a priority item by a Steering Committee of experts.

**Project:** An IPC MRSA working group of key stakeholders was appointed by the Deputy Provincial Health Officer to develop MRSA IPC guidelines across the care continuum. Urban and rural representatives from long term care, public health, acute care, community, and emergency care identified key components of the guidelines, conferred on best practices, and identified outstanding issues for consideration such as implementation challenges, standardized communication and evaluation.

**Results:** Congruent with the MRSA working group terms of reference, the provincial guidelines considered and incorporated the following sections: definitions, assessment of risk, decreasing MRSA transmission, medical transport, surveillance, screening, outbreaks, decolonization, education and occupational health and safety. A final draft of the provincial MRSA IPC guidelines was distributed to various expert groups for consultation and comment. Educational materials, vital in communicating a consistent message, have been developed as appendices for placement on the public website for access and adaptation by regional health authorities. An internal government review process must be completed prior to release.

**Lessons learned:** Effective management and control of MRSA is vital to the sustainability of the healthcare system and consistent messaging across the province provides the greatest opportunity for adherence to recommended practices and procedures that support optimal care delivery.

#### 07-006

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

I.R Adesoye, S.O Faleye; *Department of Microbiology, Osun State Polutechnic, Ire, Osun State, Nigeria*

**Background/objectives:** HIV/AIDS is the number one deadly infectious disease known today, and has drawn global attention concerning its cause, how it is contracted, symptoms, prevention, etc. There has been a lot of advocacy, education, enlightenment on the disease but the target is mostly on the urban dwellers and few 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 Odo-otin Local government 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 extramarital affairs is allowed.

**Conclusions:** 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 to disseminate information about HIV/AIDS in Africa and rural dwellers don't have access to these media due to lack of basic facilities like 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. They also think it can only be contracted through sexual intercourse. There is a need to emphasize community outreach to rural people in developing countries in order to have effective awareness.

#### 07-007

### RESPIRATOR VERSUS MEDICAL MASK USE IN THE HEALTH CARE SETTING

B.A. Borst; *3M Canada Company, London, ON, Canada*

Health care workers don many different types of personal protective equipment depending on the type of interaction with patients and clients. With avian influenza and pandemic preparedness there has been a great deal of dialogue regarding the use of a medical mask compared to that of a NIOSH approved N-95 type respirator. This discussion will outline the differences between medical masks and NIOSH approved filtering facepiece disposable type respirators. The difference in the type of claims made, based on the tests completed for each device, will be reviewed. The primary purpose of a medical mask is to filter some of the exhaled wearer-generated organisms to help prevent contamination of the work environment or the sterile field. Some manufacturers have added features to their surgical/procedural mask such as fluid resistance properties to help reduce the health care worker's possible exposure

to blood and other potentially infectious body fluids, secretions or excretions. A surgical or procedural mask is not designed to provide the wearer with respiratory protection. Compare this to a NIOSH approved respirator which is designed to provide respiratory protection to help reduce the risk of exposure to certain airborne contaminants. Respirators are designed to seal to the face of the wearer, therefore, most of the inhaled air is drawn through the filter media. When a half facepiece respirator is properly selected, fitted and worn it is expected to provide 90% or greater reduction in exposure to a contaminant.

This discussion will also review the regulatory environment in Canada including an overview of CSA Z94.4-02 Selection, Use and Care of Respirators.

#### 07-008

### A PRACTITIONER'S GUIDE TO INSTALLING HAND HYGIENE PRODUCTS IN A HEALTH REGION

K Bush, G Meyers, P Armstrong, J Stoesz, S Stropole, M Mah  
*Calgary Health Region, Calgary, AB, Canada*

**Issue:** A key influence for hand hygiene compliance in health care workers (HCWs) is the provision of products that are easy, convenient, accessible and acceptable to the staff. Installation of new hand hygiene products was a critical component of a social marketing campaign to increase compliance with hand hygiene recommendations.

However, very little practical information exists on how to execute a large installation.

**Project:** We coordinated the installation of a new commercial line of hand hygiene products in a large, integrated health care region and developed a practical guide that can benefit infection control professionals. Some key considerations while managing such a large hand hygiene products installation are stakeholder collaboration, management of occupational hand dermatitis, environmental services (housekeeping and maintenance) support, and communication.

**Results:** The critical steps of a successful installation are: Create an installation team to drive the process; Identify the stakeholders that should be involved in the installation; Solicit written recommendations from these stakeholders on their area of expertise (e.g. facilities provides safety guidelines for installation of product dispensers near gas or electrical lines in walls, fire safety for relevant code requirements); Plan the placement of dispensers to make the product easily accessible; Estimate the number of dispensers in advance to allow purchasing to order both dispensers and hand hygiene products; Develop a plan to manage hand dermatitis issues; Work with housekeeping for staff education and to develop tools for refilling product dispensers; Use a variety of communication channels to inform HCWs about the installation process and the new products.

**Lessons learned:** The installation of over 20 000 product dispensers throughout our region offered the IPC team valuable opportunities to talk to HCWs about their hand hygiene practices; to understand attitudes, knowledge, and beliefs about hand hygiene; and to demonstrate a commitment to enabling hand hygiene in the region.

#### 07-009

### A REVIEW OF THE SCIENTIFIC EVIDENCE ON MODES OF TRANSMISSION OF INFLUENZA: IMPLICATIONS FOR INFECTION CONTROL

Jennifer Goyl<sup>1</sup>, Dick Zoutman<sup>2</sup>, Chris O'Callaghan<sup>1</sup>

<sup>1</sup>*Department of Community Health and Epidemiology, Kingston, Ontario, Canada,*

<sup>2</sup>*Pathology and Molecular Medicine, Queen's University and University Hospitals Kingston, Kingston, Ontario, Canada*

**Background/objectives:** Pandemic planning for infection control in healthcare settings, in particular the use of personal protective equipment health care workers should be based in how influenza is transmitted. Despite having a longstanding presence in our population, significant controversy remains whether influenza is transmitted through the droplet or through the aerosol route. The objective of this research is to investigate the relative importance of the droplet and aerosol routes of transmission of influenza.

**Methods:** The scientific evidence on routes of transmission was examined along two lines: (1) *A systematic review of the scientific literature on aerosol spread of influenza.* A search strategy was developed and executed in order to identify all published English language studies that provided some suggestion of spread of influenza via the aerosol route. Studies were categorized by observational or experimental setting and assessed according to pre-established criteria. (2) *Analysis of the long-term spread of influenza in our populations.* Patterns of spread of influenza were compared to varicella, a well-established aerosol-transmitted virus with respect to the two main indicators of aerosol spread infection: high attack rates and transmission in the absence of close contact.

**Results:** 12 studies that provided some suggestion of spread of influenza via the aerosol route were evaluated. Key limitations of these studies in establishing aerosol transmission were large inconsistencies between experimental settings and natural transmission, and a failure to exclude transmission via droplet route. Household attack rates of influenza, estimated from 6 antiviral randomized control trials ranged from 14-19% and contrast sharply to those observed for varicella [61-100%]. While transmission of varicella in absence of close contact has been documented in the hospital setting, this hallmark characteristic of aerosol-spread infection has not been observed for influenza.

**Conclusions:** Taken together, this evidence provides no proof that influenza is transmitted through aerosols and demonstrates transmission more consistent with the droplet route. The infection control measures for aerosol transmission of influenza, including the use of N95 respirators, are not supported by the scientific evidence.



07-010

### PCR – THE QUICKER PICKER UPPER: THE USE OF PCR TESTING FOR MRSA IMPROVES BED MANAGEMENT AND THROUGHPUT IN A TERTIARY CARE HOSPITAL

*Royal Alexandra Hospital, Edmonton, Alberta, Canada*

J Barclay, I Albert, M Cordoviz, S Woolsey, M Joffe

**Objective:** Isolation and screening for Methicillin Resistant *Staphylococcus aureus* (MRSA) negatively impacts bed management in hospitals. Rapid PCR screening for MRSA was initiated to facilitate transfers into and out of, the Intensive Care Unit (ICU) and to reduce bed closures due to MRSA exposures throughout the hospital.

**Methods:** Data collection was initiated in September 2005 and included: wait times for ICU transfer (both into and out of the unit), numbers of critically ill patients accommodated in non-ICU patient care areas; and bed closures due to MRSA both within and outside of the ICU. MRSA screening using the IDI-MRSA™ Assay (Infectio Diagnostic Inc., Canada) was initiated on Dec. 7, 2005 and limited to ICU admissions and screening of roommate contacts of patients newly diagnosed with MRSA. Data collection continued through June 30, 2006. A retrospective survey was also undertaken to allow comparison of bed utilization and isolation statistics for other patient care areas prior to (Jan-Mar, 2005), and following MRSA PCR implementation (Jan-Mar, 2006).

**Results:** Between Dec. 7, 2005 and June 30, 2006 1420 MRSA PCR tests were performed. Wait times for transfer into or out of ICU were not affected. Bed closures due to MRSA in ICU were significantly reduced and isolation times for ICU admissions were cut in half. Outside of the ICU, isolation days related to contact with MRSA and bed days lost through bed closures were reduced.

**Discussion:** Implementation of PCR screening for MRSA led to a reduction in total days of isolation, bed closures and bed days lost both within the ICU and on general hospital wards. The cost of PCR testing (\$46.00/patient) is more than offset by the cost savings of reduction in isolation days, conservatively estimated at \$76/day in the ICU. Anecdotally, staff satisfaction in the ICU was improved due to the reduction in isolation days. This may contribute to improved isolation technique as precautions are dedicated to those who truly require isolation, rather than to the entire ICU population. Rates of nosocomial MRSA in ICU were significantly reduced though there are likely multiple contributing factors to this observation.

07-011

### INTERDISCIPLINARY COLLABORATION IN THE MANAGEMENT OF STAFF DURING A METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS OUTBREAK AT A PAEDIATRIC HOSPITAL

*Peskun, Colleen; The Hospital for Sick Children, Toronto, Ontario, Canada*

**Issue:** A hospital-acquired strain of methicillin resistant *Staphylococcus aureus* (MRSA) was identified in 13 neonatal intensive care unit patients. Epidemiological investigation concluded a possible staff reservoir. A Canadian literature review deemed minimal information about staff screening surveillance for a MRSA outbreak. The collaboration of different medical disciplines was required to develop a complete strategy for investigation of staff to contain this outbreak strain and eliminate further transmission.

**Project:** The project was to screen all staff providing direct patient care on affected units. The number of staff requiring screening was 378. To uphold the medical confidentiality of each staff member, Occupational Health collected and processed all specimens. Screening sites were nasal, rectal and any open lesions or areas of dermatitis. Healthcare professionals were given the choice to collect their own specimens or visit the occupational health clinic for collection. All support staff were required to visit occupational health for their specimen collection. Only colonized staff were contacted and given a referral to the occupational health physician where decolonization therapy was prescribed on a case-by-case basis.

**Results:** Occupational health collected 89% of specimens in a 4-month period. No formal complaints about the specimen collection process were received. No new nosocomial MRSA patients have been identified in the specific units to date. Open communication and consistent messaging between disciplines resulted in program success.

**Lessons learned:** Constant and consistent communication between participating disciplines and the healthcare worker was necessary for identifying problems requiring immediate resolution and for gaining staff cooperation, trust, and compliance. Specimen collection needed to be easy and convenient for the worker. Personal reminders via email and paper letters were distributed to non-compliant staff. A close working relationship with the Microbiology Lab was important to best follow-up with colonized staff and tailor decolonization therapy for the individual. In conclusion, developing a transparent message from the beginning and anticipating potential challenges can help to establish a smooth process for accomplishing staff screening surveillance in an outbreak setting.

07-012

### FACTORS ASSOCIATED WITH VRE ACQUISITION IN ROOMMATE CONTACTS OF VRE COLONIZED/INFECTED PATIENTS IN AN ACUTE CARE HOSPITAL

*Q Zhou<sup>1</sup>, C Moore<sup>2</sup>, A McGeer<sup>2</sup>, Infection Control Team<sup>2</sup>*
<sup>1</sup>University of Toronto, Toronto, Canada, <sup>2</sup>Mount Sinai Hospital, Toronto, Canada

**Background:** VRE is a nosocomial pathogen. VRE spread within hospitals involves person to person transmission but may be facilitated by selective antibiotic pressure. Roommates of VRE positive patients are likely to be at higher risk of VRE colonization than other patients. **Objective:** To identify risk factors for VRE acquisition in roommates of VRE positive patients in a teaching hospital.

**Methods:** A cohort study was designed. All patients who shared a room with a VRE positive patient during hospitalization in Mount Sinai hospital between January 1, 1999 and December 31, 2006 were included. All roommates of VRE positive patients were screened

by rectal swabs on day 2, 5, 7 after the last exposure to the index case. Followup (FU) was considered complete if at least 2 screens were obtained after the last exposure with at least 1 screen 7 days or more after the last exposure. Patients with incomplete FU were excluded from the analysis. A retrospective chart review was conducted for roommates with complete FU to identify risk factors for VRE acquisition. Data were analysed using SAS for PC version 9.0.

**Results:** 88 roommates of VRE positive patients were identified. Of these, 50 without complete FU (34 no FU, 16 partial FU) were excluded from the analysis. Of the 38 roommates with complete FU, 8(21%) became VRE positive. 19 (50%) index cases acquired VRE nosocomially, and 14 (37%) index cases were VRE admission positive. In the roommates with complete FU, age  $\geq 65$  (8/8 vs 12/30, OR 25, 95%CI 1.3, 476,  $P < 0.01$ ),  $> 3$  days sharing the same room with index case (8/8 vs 17/30, OR 13, 95%CI 0.69, 248,  $P = 0.03$ ),  $> 7$  days sharing the same ward with VRE positive patients (7/8 vs 9/30, OR 16, 95%CI 1.7, 153,  $P < 0.01$ ), requiring assistance for ADL (7/8 vs 14/30, OR 8.0, 95%CI 0.87, 73,  $P = 0.05$ ), third generation cephalosporin use within 30 days before last exposure (5/8 vs 5/30 OR 8.3, 95%CI 1.5, 47,  $P = 0.02$ ), the index case had nosocomially acquired VRE (7/8 vs 12/30, OR 7.6, 95%CI 0.81, 71,  $P = 0.08$ ), serum creatinine level  $> 110$   $\mu\text{mol/L}$  (3/8 vs 1/29, OR 17, 95%CI 1.4, 196,  $P = 0.03$ ), serum albumin  $\leq 30$  g/L (5/7 vs 3/14, OR 9.2, 95%CI 1.1, 73,  $P = 0.06$ ) are associated with the higher risk of VRE acquisition.

**Conclusion:** Isolation precaution should be applied to the roommates who share a room with a VRE positive patient  $> 3$  days,  $\geq 65$  years old, need assistance for ADL and previously use third generation cephalosporin. Risk factors analysis will allow us to reduce the need for additional precautions while still preventing transmission.

07-013

### IMPLEMENTATION OF INFECTION PREVENTION AND CONTROL CORE COMPETENCY EDUCATION IN PROVINCIAL ACUTE CARE SETTINGS

*L Van Horne<sup>1</sup>, C Barry<sup>1</sup>, R Luke<sup>2</sup>*
<sup>1</sup>Ministry of Health and Long-Term Care, Toronto, Ontario, Canada, <sup>2</sup>University Health Network, Toronto, Ontario, Canada

**Issue:** In June 2004, the Ontario Ministry of Health and Long-Term Care released *Operation Health Protection*. This three-year action plan recognized the importance of enhanced access to infection prevention and control education for frontline healthcare providers. The final report of the Campbell Commission has reinforced this need.

**Project:** A Steering Committee with content experts and stakeholders identified the priorities for development and rollout process for infection prevention and control core competency education (IPCCCE). An interactive web-based education format with modules geared to acute care, long-term care and public health was developed with three levels of modules, Level 1 (support staff), Level 2 (professional staff) and Level 3 (physicians). The goal is that each health care provider will be able to access the program through attendance at group education sessions or as part of a self-directed learning program. The first three acute care level 2 modules (chain of transmission, routine practices and hand hygiene) were pilot tested with successful results. Next step was a phased in launch beginning with these modules. The Coordinators and Educators from the Regional Infection Control Networks (RICN) acted as a pilot for the rollout to acute care settings. The implementation process included a four hour videoconference, train the trainer sessions through stakeholders (including RICN, CHICA chapters and Ministry of Labour) to address questions and discuss implementation. As part of the rollout a communiqué to Senior Administrators in acute care was sent by the Ministry and stakeholders to obtain administrative support of the program.

**Results:** The modules provide a standardized ready to use education program on infection prevention and control to assist the healthcare provider in protecting their patients and his/herself from healthcare associated infections. Ongoing evaluation on retention of information is being carried out and will guide the Steering Committee in recommendations for frequency of completion of the modules.

**Lessons learned:** Collaboration with content experts and stakeholders has enabled the Ministry to develop a standardized evidence-based education program that meets the needs of frontline healthcare providers.

07-014

### DEVELOPING A HAND HYGIENE OBSERVATIONAL AUDIT TOOL AND TRAINING PROGRAM TO IMPROVE INTER RELATED RELIABILITY

*C Barry, A Harris, L McCreight Ministry of Health and Long-Term Care, Toronto, Ontario, Canada*

**Issue:** Observational audits with timely feedback have been shown to improve hand hygiene compliance. There has been difficulty in developing a hand hygiene observational tool that provides for consistency and inter rater reliability.

**Project:** As part of the Ontario hand hygiene program for acute care, a training program and observational audit tool was developed and trialled in 10 pilot sites. A one-day training program for the 9 observers doing the observational audits and using the audit tool included the use of simulated situations and discussions to increase consistency and inter rater reliability. A third party oversees the evaluation process. In the testing of the provincial hand hygiene program, there is an extensive evaluation component that includes: health care provider surveys and focus groups, key informant surveys, patient surveys, review of the coordinators log, collection of product usage and MRSA and VRE rates and observational audits. Evaluation is done at baseline, 3 months into the testing phase and at the end of the pilot-testing phase. Comparison of all the components will assist in verifying whether the observational tool is measuring practice

accurately. The audit tool, the PowerPoint education session and the assimilation training video along with key discussion points will be presented.

**Results:** Interim findings from the use of the training process and tool will be presented.

**Lessons learned:** To design an audit tool that provides for consistency in auditing hand hygiene, the opportunities to be audited for hand hygiene must be clarified and the consistency and inter rater reliability requires an effective training program to accompany the tool.

07-015

#### IT'S WORTH A SHOT: EXPERIENCES IN ORGANIZING AN IN-PATIENT INFLUENZA/ PNEUMOCOCCAL VACCINATION PROGRAM

S.J. Walpole, Mount Sinai Hospital Infection Control Team  
*Mount Sinai Hospital, Toronto, Canada*

**Issue:** The national goal of influenza immunization programs is to prevent influenza and its complications, including death. The National Advisory Committee on Immunization (NACI) recommends that immunization programs target people who are at high risk to develop influenza-related complications and those that care for these high risk people. However, NACI encourages annual vaccine for all Canadians. NACI also recommends a single dose of pneumococcal polysaccharide vaccine for those aged >65 years and those <65 who have a chronic illness. Several studies have identified hospitalization as a missed opportunity for vaccination.

**Project:** Hospital based influenza and pneumococcal vaccination programs are recommended, but are difficult to implement. We report the experience of a hospital based vaccination program that has been in place for 7 years. Initially, influenza and pneumococcal vaccine was offered to admitted patients in all services for a defined time period during influenza season. Recently, the program was extended to surgical patients prior to admission, during their outpatient pre-admission unit (PAU) visit.

**Results:** Since 2000 Mount Sinai Hospital has had a dedicated part time or full time in-patient influenza nurse to screen patients to determine eligibility for vaccination and offer them influenza and pneumococcal vaccines. The dedicated nurse offered vaccines either over 2 weeks in Oct/Nov or over an extended 6-8 week period commencing late fall to winter. In 2001, a dedicated nurse was unavailable and the staff nurses on inpatient units offered vaccinations to patients. Additional education and support was provided to these nurses from infection control. In 2004, the PAU began assessing patients for vaccination opportunities as part of their assessment before surgery during influenza season. The number of admitted patients who were offered vaccination varied annually from approximately 600/year when a full time nurse was involved, to 200-300/year with a part-time dedicated vaccination nurse. The uptake of influenza vaccine in the eligible unvaccinated patients varied from 14% to 38%. The uptake of pneumococcal vaccine in eligible patients ranged from 11% to 29%. The PAU offered vaccination to approximately 1300 patients each year, and 12% to 32% of patients accept influenza vaccination.

**Lessons learned:** An organized in-patient vaccination program with a full-time dedicated nurse resulted in a program in which more patients were offered influenza and pneumococcal vaccination. The season we did not have a dedicated nurse to promote and administer the vaccines, the number of patients vaccinated was considerably lower. Pneumococcal vaccine acceptance uptake has generally been low, but the uptake is slowly increasing. Prevention is the best medicine.

07-016

#### A CROSS CANADA SURVEY OF INFECTION CONTROL RESOURCES AND PROGRAMMING IN LONG-TERM CARE FACILITIES

DE Zoutman<sup>1</sup>, BD Ford<sup>1</sup>, J Gauthier<sup>3</sup>

<sup>1</sup>Queen's University, Kingston, ON, Canada, and Kingston General Hospital, Kingston, ON <sup>2</sup>Kingston General Hospital, Kingston, ON, Canada, <sup>3</sup>Providence Continuing Care Centre, Kingston, ON, Canada

**Background/objectives:** Residents in long-term care facilities (LTCFs) are at risk for developing nosocomial infections. There has not been a rigorous examination of infection surveillance and control in Canadian LTCFs.

**Methods:** A list of eligible LTCFs was compiled from the Canadian Health Facilities Directory 2005 and Health Ministry web sites across Canada. Eligible LTCFs had residents who require 24-hour supervision, nursing and personal care. The survey was completed by the staff member most responsible for the infection control program and was completed for 2004. Non-responders received a second survey package and mailings were followed with reminder postcards. The survey was designed to assess resident and LTCF characteristics, personnel, laboratory, and computer resources and surveillance and control activities of the infection control program.

**Results:** 468 of 1681 eligible LTCFs completed the survey, a response rate of 28%. The mean number of beds was 127 (SD 119). 90% of LTCFs had 24-hour RN care. 41% were for-profit and 59% were not-for-profit. 90% of ICPs were RNs and infection control programs received a mean of 7.4 hours ICP service per week. Only 8% of ICPs were Certification Board of Infection Control certified and 36% were CHICA members. ICPs engaged in surveillance 28% (SD 20) and teaching 22% (SD 16) of their time. 82% of LTCFs had Infection Control Committees. Only 20% of LTCFs had physicians providing infection control services other than serving on infection control committees. 66% of LTCFs had access to lab services that provided daily reports on cultures and 77% had access to influenza testing results within 24 hours. 54% of LTCFs use computers for tabulating infection data and preparing reports. 70% of LTCFs conduct admission surveillance for MRSA. The mean MRSA rate was 1.0 (SD 1.0), the CDAD rate was 0.3 (SD 0.5), and the influenza rate was 1.0 (SD 3.0) per

10,000 patient days. MRSA, CDAD, and influenza rates varied between regions.

**Conclusions:** Despite a significant risk of nosocomial infections in Canadian LTCFs, the human and other required resources directed towards infection prevention and control, and the intensity of infection surveillance and control activities fall short of the recommendations of Canadian and international expert recommendations.

07-017

#### CARE AND CENTRAL VASCULAR CATHETERS: BASELINE CRITICAL CARE PRACTICE DATA IN THE CONTEXT OF QUALITY IMPROVEMENT

S.C. Eden, K. Dolson, S. Ramganes, I. Zahrebelny, Mount Sinai Hospital Infection Control Team, *Mount Sinai Hospital, Toronto, ON, Canada*

**Issue:** Central vascular catheter associated bloodstream infections are a cause of increased morbidity and mortality. Therefore, appropriate maintenance and care of central vascular devices when they are used is important for preventing infections.

**Project:** Data related to care practices was collected for the purpose of informing future educational interventions and engaging front line staff in best practices for care of central lines. In our 16-bed mixed adult intensive care unit and 6 bed coronary critical care unit at a tertiary teaching hospital, a quality-focused team was formed with a shared goal of preventing central line associated nosocomial infections. A tool for assessing care practices was developed. In addition to care practices, data on type of catheter, glove and mask use, dating of dressing changes, hand hygiene before and after care, and general comments were included. After assessment for face validity and ease of use, the checklist was completed by nurses to audit their own practices immediately upon completion of care or as peer to peer observational audits. Practice audits were also completed by nurse educators and by the quality improvement project co-ordinator. Forty-nine initial checklists were used to generate baseline descriptive data about care of for central vascular (venous and arterial) catheters.

**Results:** Hand hygiene was reported before care in 48/49 observations. Of these, 60% soap and water, 33% alcohol hand rub, 3% both soap and water and alcohol were used. Jewellery was noted in 24/46 observations. When worn, hand jewellery was removed before hand hygiene and line care 7/24 (29%) of the time. Before being accessed, central line access ports were cleaned with alcohol 13/29 (45%) of the time, with chlorhexidine 15/29 (52%) of the time and 1/29 (3%) of the time they were not cleaned. Sterile technique was reported for central line dressing changes in 27/45 (60%) of responses. However, 22 out of the 27 times sterile technique was indicated, the nurse also indicated that aseptic no touch technique was used. It is difficult to assess if this discrepancy reflects confusion about basics of practice or wording of the data collection tool. On 2/49 (4%) instances, the nurse indicated that sterile technique was not used and that he/she did not understand the term "aseptic no-touch technique".

**Lessons learned:** Different interpretations of the assessment tool related to multiple data collectors and different familiarities with the tool contributed to loss of some data quality. A benefit of having various front line staff collect data and assess practice from a quality improvement perspective is that more nurses are engaged and hopefully will have a greater receptiveness to the changes in practice needed to be consistent with evidence informed guidelines. The project has also highlighted areas in which additional education or improved access to supplies would be useful.

07-018

#### AN ASSESSMENT OF HEALTH-CARE WORKER PERCEPTIONS ON BARRIERS AND ENABLERS TO HAND HYGIENE

J.A. Lourenco<sup>2</sup>, S. Callery<sup>1</sup>, M. Vearncombe<sup>1</sup>

<sup>1</sup>Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada, <sup>2</sup>University of Toronto, Toronto, Ontario, Canada

**Background:** A recent hand hygiene (HH) audit in a large tertiary academic centre found that overall compliance was at 35%, with patient care units ranging from 3% to 75%. Our study describes and compares the range of health-care worker (HCW) opinions on HH, the enablers and barriers to HH, and the HCW's perceptions of their own compliance.

**Methods:** A total of 57 participants were divided into seven focus groups representing four units. Transcripts from the focus groups were analysed for trends that were compared across units and categorized into key themes.

**Results:** Enablers described included an interactive Glo Germ in-service that demonstrates transmission of organisms; a social environment in which there were good role models; and reminders (both contact and visual), with the most important prompts being patient/object contact, being at the patient's bedside, leaving the patient or their room, and seeing the alcohol rub dispensers. Many HCWs complied because it was routine. Others complied in order to prevent microbial transmission, as they did not know what organisms others carried. Convenience and location of HH products was important, especially having dispensers outside every door and inside the patient room. Environmental barriers included having only one type of product available in the unit, not having the rub available at the bedside or in the room, and not having enough sinks. Time was a major barrier, as was not providing direct patient care. Several HCWs felt that compliance rates were low because doctors were not complying. No one product or method was preferred overall and choice depended on the situation and patient contact. While some acknowledged that the soap dried out their skin, many preferred to use it. Many HCWs felt that the alcohol-based rub dried out their hands and was too rough while others enjoyed its speed. Build-up of the rub on HCW hands was a problem for several. Many participants chose to wear jewellery such as rings. Some stated that you should not have to remove your wedding rings since they have personal importance and wearing gloves protects their hands and rings from contamination. Wristwatches were worn as some felt that the wall clocks were not accurate.

**Conclusions:** Further education on when to do HH and its association with health care-associated infections is needed. This should occur through interactive in-services such as



the Glo Germ demonstration. As compliance may be affected by role models, promotional efforts should be targeted to more senior staff members. Also, due to their low involvement in the study, future research should be done on the perceptions and compliance of physicians. Infection Control should work both with facility management and the unit staff to determine optimal product placement within the patient room and provide all types of products. Results demonstrate the importance of bringing awareness to the hand jewelry and nail enhancement policy.

07-019

IN PURSUIT OF INFECTION CONTROL KNOWLEDGE

K. Cargill, N.D. Usher-Hameluck, David Thompson Health Region, Innisfail/Stettler, AB, Canada

Issue: The education and practical training of an infection control practitioner presents many challenges. Individuals come from many different backgrounds and have a varied body of knowledge and experience. Many infection control practitioners have nursing as their background and lack experience in areas of infection control. A new ICP needs to seek out credible and reliable information for their role. Developed programs can provide this credible and reliable information.

Intervention: Several educational institutions are now offering certificate programs in infection control. Several of these have an on-line method of delivery making this education accessible to all geographic areas. The courses contain content that is specific to infection control: epidemiology, microbiology, laboratory testing, construction, outbreak management, surveillance, cleaning and disinfection, occupational health and program management. Educational content was delivered using several modalities, such as, group work on case studies, independent work and group work on questions, discussion board, group telephone conversations/discussions and quizzes/exams. Two novice infection control practitioners took online programs, one from Queen's University and one from the University of Calgary.

Results: Increased knowledge about infection control was obtained. As other participants were from other provinces and health regions, a wealth of networking learning was achieved. The increased knowledge base led to an increased confidence level and enhanced job performance. It also provided preparation for writing the CIC exam.

Lessons learned: The commitment to take a course specific to infection control was worth the time and expenses invested. There were challenges of writing assignments, taking examinations, meeting deadlines and being able to financially support this endeavour. However, the benefits of this educational experience made the effort worthwhile. Sharing our experiences is valuable to ourselves and others.

07-020

THIRD-PARTY REPROCESSING OF SINGLE USE DEVICES: SECRETS BEHIND A SAFE, SUCCESSFUL AND COST-SAVING PROGRAM

P Orenstein, B Amihod, D Tsoller, S Perna, N Consolacion, M Miller, J Portnoy Sir Mortimer B. Davis-Jewish General Hospital, Montreal, Canada

Issues: The Sir Mortimer B. Davis-Jewish General Hospital (SMBD-JGH) is a 637 bed tertiary care hospital in Montreal. The range of major surgeries performed yearly include: cardiac, vascular-thoracic, abdominal, urologic, neurosurgical, orthopedic, otolaryngology. Improper resterilization of critical and semi-critical single-use medical devices (SUMD) is a recognized risk factor for transmission of blood-borne infections. In 2000, the FDA issued new requirements for the use and reuse of single use items: disposal after single use or rigorously performed reprocessing. In 2000, we conducted a hospital-wide inventory to determine which SUMDs were being reprocessed and the procedure for reprocessing. Following this, the practice of SUMD reprocessing was stopped. SUMDs were discarded after one use and we began research into third party reprocessing (TPR). In 2003, we undertook a 2 month pilot project with a TPR company to examine this alternative for reprocessing SUMDs.

Project: Based on the perceived safety of TPR reprocessing and an estimate of the projected cost-savings, a contract was finalized and a project coordinator was hired in October 2004. SUMDs from the Gastroenterology Clinic and the Operating Room were the first departments to participate in this program. The coordinator made an inventory of all SUMDs, served as a liaison with the TRP Company, kept track of price changes in SUMD purchases and reprocessing, analyzed the rejected items by the TPR and monitored compliance by hospital staff.

Results: TPR of SUMDs resulted in major cost savings. Initially (first four months) savings were low due to non-compliance and the expected learning curve for handling SUMDs for reprocessing. After that, savings increased to a stable CDN \$10 000 per month. The program has been expanded to include other clinics, i.e. Colorectal Clinic, Cardiac Catheterization Lab, Urology Clinic, otolaryngology department. An additional benefit of the active participation of a coordinator resulted as well in the decrease of prices of SUMDs through ongoing negotiation with the original equipment manufacturer (OEM).

Lessons learned: TPR of SUMDs involves a significant commitment to education of the individuals involved as well as to the day-to-day monitoring of the process. We believe the program was successful because of an ongoing and full-time coordinator for the project. TPR of SUMDs by a reputable contractor is an effective cost-saving measure in our institution, allowing expenditures on other items while maintaining a high level of patient safety.

07-021

THE USE OF DECLINATION FORMS FOR HEALTHCARE WORKERS AS PART OF AN INFLUENZA IMMUNIZATION CAMPAIGN

C. Proskow, A.U. Chandran\*

<sup>1</sup>Glenrose Rehabilitation Hospital, Edmonton, AB, Canada, <sup>2</sup>Department of Medical Microbiology and Immunology, University of Alberta, Edmonton, AB, Canada

Issue: Glenrose Rehabilitation Hospital (GRH) experienced three influenza outbreaks during the 2005/06 influenza season. Although immunization is recommended for all

healthcare workers (HCWs), influenza immunization rates have remained far below annual targets. As part of an intensive, multifaceted influenza immunization campaign organized by Infection Prevention and Control (IP&C) for 2006/07, the use of declination forms for those HCWs refusing immunization was introduced.

Project: Declination statements were distributed to all HCWs refusing immunization by the roving nurse clinics. Although the form was primarily intended to gather information regarding reasons for refusal, it also served as a cue for individuals to reflect upon the reasons for their decisions. The form was anonymous, and a depository was available in every department. Participation by GRH staff was voluntary. The nonpunitive nature of the forms was stressed during educational in-services.

Results: A total of 73 forms were returned with 110 responses given as reasons for declination. The most frequent reason for refusing vaccine was that the individual believed that their own immune system would develop an adequate immune response to prevent complications and transmission (17.3%; 19/110). Concern regarding potential adverse reactions to the influenza vaccine was the next most common explanation given (14.5%; 16/110). HCW reaction to the forms was varied. As well, distribution by the roving nurses was not consistent.

Lessons learned/conclusion: Declination forms are a valuable component of a multi-pronged approach to increase influenza vaccination uptake, rather than as a sole intervention. Although it is not expected to change a staff member's attitude towards influenza vaccination, it does allow IP&C to gain insight regarding reasons for declination. This information can be used as educational focus areas for future similar campaigns.

07-022

GUIDELINES FOR CLEANING AND DISINFECTION OF GENERAL USE CLIENT CARE EQUIPMENT IN A CONTINUING CARE ENVIRONMENT

M E LeBlanc, E Giesbrecht; Carewest, Calgary

Background: A survey was conducted of all units/departments in the continuing care organization that revealed inconsistencies in the methods, frequency and the type of products used for cleaning and disinfection of different client care equipment.

Objective: To develop a policy based on best practice which would provide consistent cleaning and disinfection of client care equipment and direction for all members of continuing care staff.

Method: The policy Guidelines for Cleaning of General Use Client Care Equipment was developed by the Infection Prevention and Control (IP&C) team. The target audience for the policy and subsequent roll out of education includes nurses, health care aides, therapy, and housekeeping staff. The project involves the development, delivery of an education component and an evaluation process.

The policy includes an easy to use guide, in table format, with headings that include type of equipment, cleaning process, frequency and the designated staff required to do

Largest provider of biomedical waste management services in North America.

Investing in Manitoba.

YOUR PARTNER FOR SUCCESS



Stericycle is a national, intergraded service company that provides SAFE and COST-EFFECTIVE medical waste management and compliance services for customers in the health industry.

P: 1-204-697-4463 dwesa@stericycle.com 1-866-693-3330  
F: 1-204-694-3158 www.stericycle.com 1-866-693-3331

the cleaning and disinfection. As an adjunct to the policy, IP&C and Employee Health & Safety Departments collaborated on the development of a concise pocket guide. The guide summarizes some key cleaning and disinfecting products and their recommended usage for the convenience of the end user.

**Conclusion:** Infection prevention and control maintains that this new policy along with the education and evaluation process will provide the continuing care clients with safer equipment for their care.

**07-023**

**A COMPARISON OF INFECTION CONTROL ACTIVITIES AND RESOURCES AND ANTIBIOTIC-RESISTANT ORGANISM RATES IN CANADIAN ACUTE CARE HOSPITALS IN 1999 & 2005**

DE Zoutman, BD Ford

<sup>1</sup>Queen's University, Kingston, ON, Canada; and Kingston General Hospital, Kingston ON, Canada; <sup>2</sup>Kingston General Hospital, Kingston, ON, Canada

**Background/objectives:** The Resources for Infection Control in Hospitals (RICH) survey assessed the state of infection control programs and antibiotic-resistant organisms (AROs) in Canadian acute care hospitals in 1999. In the meantime, Severe Acute Respiratory Syndrome and pandemic influenza have highlighted the critical need for effective infection control programs.

**Methods:** In 2006, the RICH survey was again mailed to infection control programs in all Canadian acute care hospitals with 80 or more beds. Factorial and repeated measures ANOVA analyses were used to test for differences between 1999 and 2005 for ARO rates, surveillance and control scores, and ICP staffing and training levels.

**Results:** The response rate in 2006 was 60%. The factorial ANOVA analysis found MRSA (F = 26.3, P < 0.0001) and VRE (F = 7.5, P = 0.007) increased from 1999 to 2005 and CDAD remained constant (F = 1.6, P = 0.2). In 2005, the mean MRSA rate was 5.2 (SD 6.1) per 1,000 admissions, VRE was 1.0 (1.8), and CDAD was 4.7 (SD 4.3). Surveillance scores increased over time from 61.7 (SD 18.5) out of a maximum of 100 to 68.1 (SD 15.4) (F = 8.1, P = 0.005) and control scores trended upwards from 60.8 (SD 14.6) in 1999 to 64.1 (12.2) in 2005 (F = 3.3, P = 0.07). ICP FTEs per 250 beds increased from 1.1 (SD 0.5) to 1.9 (SD 0.8) in 2005 (F = 90.8, P < 0.0001), while ICPs certified by the Certification Board of Infection Control (CBIC) decreased from 53% (SD 46) in 1999 to 35% (SD 36) (F = 10.8, P = 0.001). 86 hospitals completed surveys in both 2000 and 2006. The repeated measures ANOVA analysis also found MRSA (F = 19.5, P < 0.0001), VRE (F = 18.3, P < 0.0001), and ICPs per bed (F = 94.6, P < 0.0001) increased in 2005. CDAD remained constant (F = 0.1, P = 0.8), and fewer ICPs were CBIC certified in 2005 (F = 14.1, P = 0.0003). The repeated measures ANOVA analysis; however, found surveillance (F = 0.2, P = 0.7) and control indices (F = 0.1, P = 0.7) did not increase between 1999 and 2005.

**Conclusions:** It is not clear whether infection control programs in acute care hospitals have improved since 1999. There are more ICPs, but fewer are certified and any increases in surveillance and control scores are small. What is clear is that MRSA and VRE rates are rising. Greater investments in infection control programs are warranted to deal with AROs and other threats such as pandemic influenza.

**07-024**

**WELCOME TO THE BIG TOP: PILOTING INFECTION CONTROL GUIDELINES IN A MOBILE TRIAGE CENTRE**

M Cordoviz<sup>2</sup>, I Albert<sup>2</sup>, J Barclay<sup>2</sup>, K Fluet<sup>1</sup>, S Grono<sup>5</sup>, M Kristel<sup>4</sup>, S Wilson<sup>1</sup>, S Winton<sup>1</sup>, A Wolfe<sup>2</sup>, S Woolsey<sup>2</sup>, M Johnson<sup>1</sup>, A.M. Joffe<sup>2</sup>

<sup>1</sup>Regional Infection Prevention and Control, Edmonton, Alberta, Canada, <sup>2</sup>Royal Alexandra Hospital, Edmonton, Alberta, Canada, <sup>3</sup>Office of Emergency Preparedness, Edmonton, Alberta, Canada, <sup>4</sup>Sturgeon Community Hospital, St. Albert, Alberta, Canada, <sup>5</sup>Office of Emergency Preparedness, Edmonton, Alberta, Canada

**Issue:** In the event of pandemic influenza or other emerging infectious diseases, ICPs will be called upon to provide practical guidelines for provision of safe patient care. Acute care centres will be inundated with patients seeking treatment. To prevent overcrowding and unnecessary admissions, triaging of patients should occur outside of acute care centres. Portable Isolation Containment Systems (PICS) can serve as triage centres. PICS are self-contained units equipped with generators, heat exchangers, HVAC systems and a potable water source. In this setting, infection control guidelines and principles will be put to the test. ICPs will be essential resources to provide and implement infection control guidelines.

**Project:** For 3 weeks, a flu assessment clinic (FAC) was piloted, in the PICS. A media campaign encouraged adult patients with symptoms of fever and cough to seek treatment at the FAC rather than their family physicians. ICPs provided infection control guidelines to manage daily patient activities within the FAC. The guidelines incorporated hand hygiene, personal protective equipment (PPE), equipment cleaning, storage of supplies, and set-up of clinical areas. ICPs implemented the guidelines by providing daily inservices.

**Results:** During the pilot, ICPs were required to address many issues in the FAC. One of the major issues was that running water for the sinks was not always available. Although alcohol hand sanitizer was available for hand hygiene, cleaning hands with soap and water is necessary when hands are visibly soiled. Limited and cramped space inside the FAC proved to be another difficult issue. Patient care areas were in close proximity to the clean supply storage areas. Other issues were related to the level of staff knowledge of PPE. Some staff were familiar with PPE donning. However, all staff required direction with PPE doffing. As new issues were encountered, ICPs rapidly adapted the guidelines to ensure they were practical and workable within this unique setting.

**Lessons learned:** ICPs have gained valuable information as a result of conducting the FAC pilot. It is evident that infection control guidelines can be adapted to the environment without compromising infection control principles. In the event of a pandemic, an infection control presence is essential to manage patient care safely and effectively.

**07-025**

**LIVE MEETING: USING NEW TECHNOLOGY TO EDUCATE COMMUNITY CARE PROVIDERS ON INFECTION PREVENTION & CONTROL**

Peggy Swerhun RN, COHN(C), CRSP, CIC, Consultant and Program Specialist, Ontario Safety Association for Community & Healthcare

**Issue:** The Ontario Safety Association for Community & Healthcare (OSACH) received a request from The Ontario Association for Community Care Access Centres (OACCAC) to develop and deliver infection prevention and control education for staff at 14 Community Care Access Centres located throughout Ontario. The Community Care Access Centres (CCACs) are the local point of access to community-based health care services.

The Centres are funded by the Ministry of Health & Long Term Care and were created to coordinate a variety of health services to maintain an individual's health, independence and quality of life. Health care services include nursing, personal support, physiotherapy, occupational therapy, speech therapy, counselling services and provision of medical supplies and equipment. Service providers have a wide range of knowledge and experience in infection prevention and control principles and practice.

**Project:** To develop and deliver a cost effective infection prevention and control education program to CCAC staff and service providers located throughout the province. The program had to meet the following criteria: use Microsoft live meeting software, include infection prevention and control core competencies, be relevant to the community care sector and delivered by a qualified infection control practitioner. The program also had to incorporate occupational health & safety and client health and safety concerns regarding the identification and control of risks related to the transmission of infection.

**Results:** A two-hour program was developed. Prior to delivering the program, the facilitator became familiar and comfortable in using the software. A pilot session with OACCAC and OSACH participants was held to obtain feedback on the content and delivery of the material. Four sessions were delivered to community care participants from across the province. Participants were asked to complete an evaluation of the program. Additional programs are planned for April and September 2007 and February 2008. In addition to basic infection prevention and control the following programs will be offered: Infectious Diseases of Concern in Home and Community Care and Infection Control in a Pandemic.

**Lessons learned:** Live meetings are interactive and provide an opportunity to exchange information and resources. Participants learn from each other as well as the facilitator. Computer based training is very cost effective. Material can be presented to a larger group than in a traditional classroom setting, in a shorter time frame and without the need for travel. This method of delivery requires practice to become familiar with the presentation tools and out of classroom information exchange.

**A Clean Home Is A Chemical Free Home!**



- Turns tap water into an odorless and safe sanitizer and deodorizer, even for babies, pets & people with allergies or sensitive skin.
- Saves hundreds of dollars by eliminating the need to purchase household chemical cleaning and sanitizing products.
- Wipes out germs as effectively and 3000 times faster than bleach.
- Sanitizes any household surface or item as well as any type of fruit or vegetable using plain tap water.



Available at  
**The Shopping Channel**  
Home Improvement Stores

Coming soon to:



www.lotusfilter.com      22 Harwood Dr. St. Catharines ON • 800-858-1774

07-026

### SURVEILLANCE METHODS FOR THE MANAGEMENT OF METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) IN A CANADIAN LONG-TERM CARE FACILITY

O Yow, S Callery, A Simor, M Vearncombe; *Sunnybrook Health Sciences Center, Toronto, Ontario, Canada*

**Background/objectives:** MRSA is often considered to be an acute care hospital-acquired organism. However, a recent MRSA outbreak in our 575-bed long-term care (LTC) facility, may suggest otherwise. This study describes the potential transmission of MRSA in our LTC facility and reviews the current MRSA surveillance methods.

**Method/investigation:** IP&C was initially alerted of the increase in MRSA activity through admission screening results of residents transferred to acute care. Our routine LTC MRSA surveillance, including admission screening, contact tracing and a review of positive culture results from clinical specimen, did not alert IP&C to this transmission. Active surveillance through prevalence screening identified additional cases. Epidemiological information of all cases was obtained from chart review. MRSA isolates were typed by pulsed-field gel electrophoresis (PFGE).

**Results:** Between July and Sept 2006, 13/30 (43.3%) of the residents on one of our LTC units were found to be colonized with MRSA. No residents had clinical infection. This outbreak is a marked increase compared to our baseline (0.3 cases/month vs 4.3 cases/month). PFGE results confirmed that 11/13 (84.6%) residents had one of 2 outbreak strains of MRSA and that these 11 residents had acquired the organism while on the outbreak unit. 8/13 (61.5%) cases were identified by prevalence screening, 3/13 (23%) by contact tracing, and 2/13 (15.4%) by admission screening from acute care.

**Conclusions:** This MRSA outbreak demonstrated that LTC has significant potential for MRSA transmission and our routine LTC MRSA surveillance is insufficient to detect this MRSA outbreak. Hence, more active screening, such as internal transfer/discharge screening and periodic point prevalence screening, may be needed to more accurately monitor MRSA activity within the LTC facility.

07-027

### FACTORS LEADING TO TRANSMISSION OF TUBERCULOSIS (TB) IN AN ENDOSCOPY UNIT

J Shymanski<sup>1</sup>, M Paquette<sup>1</sup>, R Dales<sup>1</sup>, V Roth<sup>1</sup>, D Salisbury<sup>2</sup>

<sup>1</sup>The Ottawa Hospital, Ottawa, Canada, <sup>2</sup>The Ottawa Public Health Department, Ottawa, Canada

**Issue:** In October 2005, a staff nurse working in endoscopy was documented to have a tuberculin skin test (TST) conversion. Retrospective review of records found 4 additional TST conversions among endoscopy staff over the past 12 years. The bronchoscopy room did not meet the current Canadian Standards Association (CSA) ventilation standards for bronchoscopy suites. The personnel wore N95 respirators during the procedure. There was no airborne infection isolation (AII) area for recovery of possible TB cases. All patients were masked post procedure and recovered in a common recovery area.

**Project:** Following the staff TST conversion, staff and physicians working in the endoscopy suites underwent TST. In collaboration with the local public health department, potentially exposed patients were contacted and TST was recommended and offered. As of March 1 2006, the physician has to complete a screening tool to assess TB risk for all patients undergoing bronchoscopy prior to booking the procedure. Bronchoscopies for high-risk patients can only be performed in a AII room on the inpatient units or at another campus.

**Results:** No further TST conversions were identified among the endoscopy unit staff or physicians. 21 of the 29 patients exposed were tested for TB. One patient, who was in the recovery area at the same time as a smear positive case, was TST positive (positivity rate 4.8%). This patient had no previous TST, however, she had no other known risk factors for TB. The epidemiologic investigation indicates that, for both the nurse and the patient, the exposure likely occurred in the recovery area. No further TB exposures have occurred in either endoscopy suite since the implementation of the TB screening tool.

**Lessons learned:** Failure to meet CSA standards for bronchoscopy, including failure to recover patients suspect for TB in an AII room, resulted in TB transmission. Unless all patients undergo bronchoscopy and recovery in an AII room, a mechanism is needed for consistently identifying suspect TB cases and for communicating this information with the endoscopy unit staff.

07-028

### MULTI-RESISTANT ACINETOBACTER CALCOACETICUS-BAUMANNII GR. FROM THE BATTLEFIELD TO THE DELIVERY SUITE

MC Orvidas, C Gittens Webber, F Small, L Ramage, C Dixon, M Loeb  
*Hamilton Health Sciences, Hamilton, ON, Canada*

**Issue:** To provide a safe environment for patients and staff during the delivery of a baby under unique circumstances. We were challenged by the lack of data providing guidance for the management of this unique situation. Our facility has four sites. Infection control (IC) was approached mid-July to investigate the possibility of an ICU patient located at another site, infected with a multi drug resistant Acinetobacter, not previously identified at this facility, to be present at the birth of his first child. The Acinetobacter was identified by pulse field gel electrophoresis as the Afghanistan strain. This patient suffered a critical injury while on military duty in Afghanistan. He was completely dependent on nursing for mobility, activities of daily living and required frequent suctioning of his tracheotomy site. Subsequently this patient became colonized with multi-resistant *Pseudomonas aeruginosa*.

**Project:** A multidisciplinary team was struck including Obstetrics, Neonatal, IC, Infectious Disease, Spinal Cord Injury Advanced Practice Nurse, Midwifery, and Ward Managers from both sites. A very detailed obstetrical plan included pre-labour issues, transporting dad from one site to the other, infection control precautions, obstetrical

considerations, dad in the labour room, possibility of Caesarean section, post partum and newborn activities as well as financial and cleaning concerns. Meetings occurred from mid July until the end of August and the plan changed and evolved as dad's condition changed and issues were resolved. Infection control in-services were provided for obstetrical and orthopaedic units.

**Results:** Two separate teams were developed one to care for dad the other for mom and baby. Anxiety levels were reduced among the staff in the delivery and post partum units. The soldier was successfully able to attend the birth of his first child. The birth was uncomplicated and the organism was not isolated from mom or baby. The organism has not to date been isolated at this site.

**Lessons learned:** Detailed multi disciplinary plans and effective communication can facilitate the presence of a patient in contact isolation to attend a delivery. Providing staff with information and tools reduces their anxiety when dealing with organisms never encountered before. Implementing good infection control precautions reduces the chance of transmission of multi-resistant organisms.

07-029

### THE DEVELOPMENT OF AN ELECTRONIC TOOL, USING MICROSOFT EXCEL, TO SIMPLIFY COSTING OF CLUSTERS, OUTBREAKS AND OTHER APPLICATIONS FOR THE INFECTION CONTROL PRACTITIONER (ICP) IN ACUTE AND LONG-TERM CARE

Jo-Anne Burt\*, *Lakeridge Health Corporation, Oshawa, Ontario, Canada*

**Issue:** ICPs often do not have the time or information at hand to cost outbreaks and clusters. This limits their ability to use costing to influence a change in practice with staff or to justify with management the cost effectiveness of the purchasing specific equipment or tests. A simple program was needed that provided a generic surveillance line list and a costing spreadsheet so that any ICP could ascertain basic costing of a cluster or needs justification in a relatively short period of time without having to do any calculations.

**Project:** The author developed a table in Microsoft Word that had the current costs of accommodation, personal protective equipment, treatment, and of nursing, housekeeping and ICP time. Limitations using Word lead to several different spreadsheets being developed in Microsoft Excel. In a cluster or outbreak, one spreadsheet is used as a line list of affected patients with the ICP inserting date of onset and discharge of precautions and type and number of days of treatment. A number of hidden instructions (formulas) link these line list numbers to the Excel costing spreadsheet giving immediate costing that can be presented while maintaining patient confidentiality. As more patients, days in precautions and treatments are added to the line list, the amounts are adjusted on the costing spreadsheet. The costing spreadsheet can be used alone to justify cost effectiveness in purchasing needed items or services.

**Results:** The line list and the costing spreadsheet have been used to provide costs associated with Hospital Acquired MRSA in a few hours and was then used to rationalize the need for extra cleaning staff to contain the cluster. Also, the costing tool has been used to justify the need for onsite testing for C difficile.

**Lessons learned:** In developing the tool, not all programs are the same and some applications require more flexibility, hence the move from Word to Excel. Also, despite the time consuming initial setup, this tool has proven to be not only cost effective for the ICP but has provided more timely information to hospital staff and management.

07-030

### CLINICAL CLERK KNOWLEDGE OF BASIC INFECTION CONTROL – USE OF A WIRELESS AUDIENCE RESPONSE SYSTEM

Gauthier, J\*, Poole, K, Zoutman, D, Davidson, L, Gibson, M. *Providence Continuing Care Centre, Queen's University*

**Issue:** A wireless hand-held voting device was used to test clinical clerk knowledge level of basic infection control issues prior to their first shift on nursing floors. The six-question quiz was administered using PowerPoint slides at the start of the orientation lecture to infection control practices. A product from Turning Technologies was used, with software called Turning Point, allowing 50 students to simultaneously vote, or answer quiz questions with this hand held wireless voting device. Results are presented in a graph format, comparing answers submitted. **Project:** Six questions were used. The following are a sample: What percentage of patients will acquire a nosocomial infection after being in an acute care hospital for 7 days? (<5, 5, 10, 15)? A surgical or procedure mask and eye protection is required for which of the following procedures? (a. Elective Intubation, b. Administration of nebulized therapies, c. Examination of a febrile coughing patient, d. a and c, e. a, b, and c.)? The door sign indicates "Contact Precautions". At all times in the room you are required to wear: (a. Mask, b. Gown, c. Gloves, d. All of the above, e. b and c). The door sign indicates "Airborne Precautions". At all times in the room you are required to wear: (a. Mask, b. Gown, c. Gloves, d. All of the above). **Results:** Real time voting allowed basic knowledge to be assessed, summarized and analyzed immediately. The instructor was then able to make modifications to the presentation based on the identified learning needs of the students.

**Lessons learned:** Students found the "Millionaire game" style of pre-test entertaining and thus, were more receptive/motivated to the presentation. Pre-testing was managed easily with this product, allowing emphasis on areas identified through this pre-testing.

## POSTER PRESENTATION ABSTRACTS

Poster presentation sessions will be held on Monday, June 11 and Tuesday, June 12. Schedule will be published in conference program.

07-P001

### EPIDEMIOLOGICAL SURVEY OF TB AMONG HEALTH WORKERS IN PUBLIC HEALTH CARE FACILITIES IN KENYA

**Authors:** M.C.I.N. Nandili, J.C. Chakaya, J.S. Sitienei; *National TB Control Program, Nairobi, Kenya*

**Background:** At the Kenyatta National Hospital (KNH), the major referral hospital in the country, a high incidence of TB was found among health care workers. This could be an indicator that significant amount of TB was being transmitted to health care workers in hospital settings.

**Objective:** Establish the burden of TB among health care workers in the health care facilities across the country in Kenya.

**Methods:** A structured quantitative questionnaire was employed. TB registers were perused to determine the number of staff treated from TB and HIV/AIDS during the past 2 years. A total of 19 health facilities were selected with a sample size of 300 health staff. The study areas were selected basing on high TB/HIV and AIDS prevalence. A systematic sampling technique was applied to interview staff in their respective working areas. High-risk areas at the facility were targeted for interview.

**Results:** Nurses (47%), supportive staff (30%) and 21% clinical officers were found to have contracted smear positive TB between 2003 and 2004. Medical wards, pediatric and casualty were determined as the most high risk areas in transmitting infections. A large percentage (97%) of the health staff indicated that they do not know their HIV status or having been tested for TB. **Conclusions:** From the study it was noticed that many of the health staff have contracted TB at their work place and particularly when they over stay in a high risk station. A number of staff affected and infected prefers to seek treatment outside the facility they work. This still tells us that stigma is still on rampage among many without exemption to health staff. There is need for further research to determine whether this population contracted TB infections within the hospital environment. It is also imperative to encourage health staff to know their status since they closely interact with the affected and the infected persons.

07-P002

### PERFORMANCE INDICATOR DEVELOPMENT FOR AN INFECTION PREVENTION & CONTROL PROGRAM

D Wiens; *Saskatoon Health Region, Saskatoon, SK, Canada*

**Issue:** Consistent performance measurement and data reporting informs clinicians to focus improvement activities. Inconsistency within the Infection Prevention & Control Program's (IPCP) data collection methods, application of definitions, analysis and reporting of data affected the credibility of the data.

**Project:** Determine what to measure and why, then where, when and how. Develop templates containing elements common to all IPCP indicators, performance indicator (PI) documents and corresponding reports for acute and long term care indicators. Incorporate user feedback into report content and format.

**Results:** Surveillance criteria and templates established. PI documents and reports established for 6 acute care and 2 long-term care indicators. Reports distributed and well received by user groups.

**Lessons learned:** Must allow adequate time for research, discussion, consensus building and user feedback. Solicit administrative support early in the process and ask for help to overcome obstacles. Tie in with other initiative such as Safer Healthcare Now! when possible to align efforts and standardize processes.

07-P003

### MRSA TASK FORCE: A FRONTLINE APPROACH TO DECREASING HOSPITAL-ACQUIRED MRSA TRANSMISSION

S Rhodenizer - Rose, E Watson, M Nestel; *South Shore Health, Nova Scotia, Canada*

**Issue:** In 2003-04, a small NS health region experienced an unprecedented rise in the incidence of hospital-acquired Methicillin-resistant *Staphylococcus aureus* (MRSA) colonization, with a correlating rise in MRSA infections. MRSA rates were higher than the national average when compared to Canadian Nosocomial Infection Surveillance Program incidence rates (i.e. 12.48 compared to 5.86/1000 pt admissions). The high incidence rate was negatively impacting workload, financial resources (>\$500 000), and healthcare worker/patient interaction, plus patients were left to deal with anxiety, community stigmatization, and clinical repercussions associated with MRSA colonization. Non-compliance of healthcare workers with hospital isolation and screening policies was identified as a significant factor contributing to ongoing hospital transmission of MRSA.

**Project:** An MRSA Task Force (TF) was established in 2005. Involvement of front line clinical/support staff in the process was expected to facilitate peer education, identify barriers to good infection control practices, increase compliance, and ultimately decrease transmission. Using the *Plan-Do-Study-Act* quality improvement model, the TF looked at the issues and barriers from a frontline perspective and detailed a series of recommendations to be approved by senior management. Key recommendations included a train-the-trainer program, media campaign, a hand hygiene campaign focused on empowering the patient, patient information packets (incl. personal sized

hand sanitizer) and numerous solutions for improved cleaning and disinfection of patient care equipment. TF members oversaw implementation on their units. Compliance and incidence rates continued to be monitored.

**Results:** In 2006, rates were consistently calculated at <3/1000 patient admissions as opposed to consistently >10/1000 patient admissions. TF members continue to develop as effective peer educators and infection control liaisons for their departments. Compliance issues are infrequently reported. Initial recommendations are re-evaluated and adapted as necessary.

**Lessons learned:** A physician champion & frontline staff involvement in all stages of the process is crucial. Effective communication of positive outcomes due to the TF interventions created ongoing acceptance of practices changes and provided administrators with valuable indicator data to use for securing additional resources. TF members were empowered as change agents for evidenced-based practice.

07-P004

### EVALUATION OF A DOT-IMMUNOBLOT ASSAY FOR DETECTING LEISHMANIAL ANTIGEN IN PHLEBOTOMUS PAPTASI, IN IRAN

Hassan Nekouie, Aliraza Khabiri; *Pasteur Institute of Iran, Tehran, Iran*

**Introduction:** Leishmaniasis is a polymorphic disease of the skin and viscera caused by an intracellular protozoan. Zoonotic Cutaneous Leishmaniasis (ZCL) is a major health problem in rural areas of Iran.

**Methods:** A simple and highly reproducible dot-immunoblot assay was developed to detect leishmanial antigen in *Phlebotomus papatasi* that were naturally infected with *Leishmania major*. The test was sensitive to as little as 10 ng of antigenic protein and also appeared to be specific, in that it gave a positive result with some *P. papatasi* (the primary vector of *L. major* in Iran) and *L. major* but not with *P. sergenti* or other pathogens when used to investigate a large number of sandflies collected from areas of the Iran where cutaneous leishmaniasis is endemic.

**Discussion:** The assay appeared sufficiently sensitive and specific to detect the naturally infected insects. The simplicity, reproducibility, high sensitivity and high specificity of the assay should make it useful for field studies.

07-P005

### CHALLENGES OF CONTAINING NOROVIRUS IN ADULT PSYCHIATRY

S. Gilbride, S. Forgie, G. Taylor; *University of Alberta Hospital/Stollery Children's Hospital, Edmonton, Alberta, Canada*

**Issue:** Outbreak investigation of norovirus on an acute adult psychiatric area in a tertiary hospital in Edmonton, Alberta, and the challenges of containment due to the nature of the patients' illnesses.

**Project:** Interventions (based initially on a presumptive diagnosis of norovirus) included isolation and cohorting of symptomatic patients, alteration of normal patient routines, enforcement of hand hygiene, use of an accelerated hydrogen peroxide agent for environmental cleaning, and exclusion of symptomatic staff and visitors.

**Results:** Two out of 3 stool specimens tested confirmed Norovirus Genogroup II as the etiological factor. A total of 11 inpatients on two units and 4 day patients became symptomatic. A number of staff members were also symptomatic during the same time period. Challenges from the patients included: refusal to submit stool specimens, lack of compliance with hand hygiene, inability to remain in isolation rooms, and the need to visit common areas in the area. No symptomatic patient became medically compromised. There was no interruption in the therapeutic programme apart from the day patients being excluded while they were symptomatic.

**Lessons learned:** Patients suffering from a norovirus on psychiatric units present unique challenges to infection control. Containment of the disease was made possible by working closely with the staff on psychiatry and adapting isolation precautions to meet the needs of the patients.

07-P006

### AN INTENSIVE SITE-BASED INITIATIVE TO INCREASE INFLUENZA REHABILITATION RATES OF HEALTHCARE WORKERS AT GLENROSE REHABILITATION HOSPITAL, EDMONTON, ALBERTA

C. Proskow, A.U. Chandran

<sup>1</sup>Glenrose Rehabilitation Hospital, Edmonton, AB, Canada, <sup>2</sup>Department of Medical Microbiology and Immunology, University of Alberta, Edmonton, AB, Canada

**Issue:** Influenza immunization is recommended for all healthcare workers (HCWs). However, vaccination rates at Glenrose Rehabilitation Hospital (GRH) have ranged from 42% to 52% from the 2002/03 to 2005/06 influenza seasons, respectively. GRH experienced three influenza outbreaks during the 2005/6 influenza season, two of which were linked to non-immunized staff. A multifaceted approach for the 2006/07 influenza vaccination campaign was planned.

**Project:** An intensive site-based initiative, beyond the regional Occupational Health Safety and Wellness (OHS&W) campaign was decided upon. This included education, increased access to vaccine, declination statements, and friendly competition with prizes. Education was the main focus. Infection Prevention and Control (IP&C) was responsible for providing in-services about influenza and influenza vaccine to all GRH staff, regardless of job title. As well, "ward champions" were appointed to increase awareness amongst their peers. In order to improve access, extra immunization clinics were organized to coincide with departmental rounds and meetings, and two roving nurses were scheduled to visit all departments of the hospital. Hospital administration provided funding for prizes, and draws were held based on achieved rates of immunization by department. Finally, roving nurses distributed declination statements to individuals refusing vaccination in order for IP&C to gain insight regarding staff's reasons for declining

influenza vaccine, and possibly use this information for future similar campaigns.

**Results:** Overall, the influenza vaccination rate at GRH increased from 54.2% in 2005/06 to 60.2% in 2006/07 ( $P < 0.01$ ). Increases were seen primarily in smaller homogenous groups. However, in larger departments, such as nursing, attendance of in-services was lower, and less gain was seen in immunization rates. The overall rate of attendance of in-services was 29% (total staff 1 295). Departments/units with a "flu champion" also showed increased uptake of vaccine.

**Lessons learned/conclusion:** GRH achieved its highest influenza vaccination rate since the vaccine has been offered by OHS&W. Education was an important component of the campaign; increased awareness regarding both the clinical presentation of influenza and myths about the influenza vaccine may have contributed to the higher rates of immunization. Ward champions, increased convenience, and friendly competition were also important factors.

#### 07-P007

##### RURAL DWELLERS NEED TO BE TAUGHT SIMPLE PREVENTION METHODS OF INFECTIOUS DISEASES

Adesoye I.R., *Department of Microbiology, Osun State Polytechnic, Iree, Nigeria*

**Background/ objectives:** Infectious diseases are rampant in African countries (mostly in rural settlements) due to ignorance of various infectious diseases. Effort of global health bodies and associations has little or no impact.

**Methods:** Student volunteers from the microbiology department of Osun State Polytechnic in conjunction with Medical Students Association of Obafemi Awolowo University, Ile Ife were deployed to Okua in Afijio local government area of Oyo State, Nigeria to educate residents on various ways of getting infected by some infectious diseases. This community was attacked with cholera. Question and answer method was used to educate this community on the symptoms and how they can prevent further cholera outbreaks.

**Results:** From most of the questions asked, it was deduced that the community doesn't know causes of infection.

**Conclusions:** The area was attacked by cholera due to the untidy environment but the residents are ignorant of this. Many such cases are happening in Africa and education on simple ways of prevention is needed.

#### 07-P008

##### MOVING THE NEEDLE: MONITORING THE EFFECTIVENESS OF A SOCIAL MARKETING CAMPAIGN TO IMPROVE HAND HYGIENE COMPLIANCE

K Bush, G Meyers, P Armstrong, P Ritchie, MW Mah, Social Marketing Team  
*Calgary Health Region, Calgary, AB, Canada*

**Background/ Objectives:** Interventions to improve compliance with hand hygiene in an entire region of 22 000 staff include installation of alcohol hand rub dispensers, education activities, posters, screensavers, merchandising, and live on-unit drama. An ongoing evaluation plan to monitor the hand hygiene campaign was developed to assess both the perceptions and attitudes of staff as well as actual hand hygiene compliance.

**Methods:** Three key indicators are used to measure hand hygiene compliance: 1) hand hygiene product usage 2) observations of practice and 3) a staff survey to measure attitudes and beliefs about hand hygiene. Hand hygiene product usage for each site is obtained from housekeeping and from the region's purchasing department and standardized by patient days/quarter/site. Quarterly IPC audits of staff hand hygiene performance are done in ICU settings. A staff survey was completed 6 weeks after first social marketing interventions and then every 6 months afterward. The survey measures awareness of interventions; staff attitudes and perceptions of the campaign; self-reported compliance with hand hygiene; and perceived priority of hand hygiene in their normal activities.

**Results:** Routine soap usage in the adult acute care settings has increased from an average 27.8 litres soap/1000 patient days to 44.2 litres/1000 patient days, while alcohol hand rub usage has increased from 8.8 litres/1000 patient days to 15.9 litres/1000 patient days. Compliance with hand hygiene initially increased with the installation of alcohol hand rub in the ICU settings but has been decreasing over time from an average of 80% compliance to approximately 65%. Staff surveys show that while 96% of those surveyed report performing hand hygiene between all patient contacts, the percent of those surveyed who believe that other healthcare workers perform hand hygiene between all patient contacts has increased from 65% to 71% over the survey cycles. Although 95% of respondents report knowing when to wash hands instead of using alcohol hand rub, only 35% report using alcohol hand rub more than hand washing.

**Conclusions:** Ongoing evaluation with a variety of performance indicators provides the most valid measure of the effectiveness of a social marketing program. In social change programs, "cultural change" is reflected by modest increments in performance indicators that must be sustained by long-term efforts.

#### 07-P009

##### EDUCATING MEDICAL STUDENTS ABOUT INFECTION CONTROL: THERE AND BACK AGAIN

K. Bush<sup>1</sup>, G. Meyers<sup>1</sup>, M.W. Mah<sup>2</sup>, E.A. Henderson<sup>2</sup>

<sup>1</sup>Calgary Health Region, Calgary, AB, Canada, <sup>2</sup>Faculty of Medicine, University of Calgary, Calgary, AB, Canada

**Issue:** Evidence indicates that medical student training in infection control is poor. Medical students having direct patient contact do not have the knowledge they need to protect themselves and patients. We were offered the opportunity to teach infection control and outbreak management to first year medical students.

**Project:** Health care worker core competencies formed the basis for the infection control (IPC) competencies including basic microbiology, hand hygiene, routine practices and isolation precautions, use of personal protective equipment (PPE) and personal safety.

Outbreak management competencies included conducting outbreak investigation and intervention strategies. Critical assessment skills were an underlying theme. The teaching was done in 3 separate 4-hour sessions a week apart. Each session consisted of a 2-hour lecture followed by 2 hours of small group discussion. The multifaceted approach included: a short skit called "Bugs on the Run"; a PPE demonstration followed by scenarios in which students put on and removed PPE; an IPC game based on "Who wants to be a Millionaire"; short video clips; and small group discussions using IPC and outbreak scenarios. Students were asked to evaluate the curriculum.

**Results:** The 12-hour curriculum was delivered to 140 medical students (9 small groups) in February/March 2007. Evaluations were completed by 95 (68%) students. Overall, the teaching was well received with more than 90% of students reporting that they found the lectures and discussions useful. Small group activities were particularly well received with 62% reporting that the opportunity to practice using PPE was very informative. Almost half (48%) of the students indicated that the chance to discuss 4 different IPC scenarios that included problems commonly encountered in physicians' offices was very useful.

**Lessons learned:** Keep it real; students were more interested in practical applications of the knowledge they are getting. Giving theoretical knowledge in lecture setting followed by opportunities to reflect and discuss practical application was important. Humour, fun and having students work on scenario solutions in small groups prior to group discussions were strategies for engaging the students in learning.

#### 07-P010

##### AUDIT OF DOCUMENTATION ON ADMISSION SCREENING FOR METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) AND VANCOMYCIN-RESISTANT ENTEROCOCCUS (VRE)

S Jones, S O'Grady, *Bridgepoint Health, Toronto, Ontario, Canada*

**Issue:** The potential problem was identified that staff may be focusing on the nares/perirectal sites when doing MRSA screening and not swabbing open areas and devices. It was noted that if sites were being missed when following up known carriers, it was likely that they were missed during admission screening.

**Project:** The setting is a facility providing complex care and complex rehabilitation through a broad range of inpatient and outpatient services. A chart review was done on all newly admitted patients during November 2006 within 24 hours of admission. Data was collected on whether there was documentation of MRSA swabs being collected, sites specified, and whether there were sites other than nares/perirectal areas to be screened. Documentation on VRE screening was also part of the audit.

**Results:** 80% (124/155) of new admissions were swabbed for MRSA but only 18% (22/124) specified sites swabbed in progress notes. There were 61 sites that should have been collected but no documentation was found in progress notes. Some patients may have had more than one site. Only two thirds of the admissions noted being swabbed for VRE.

**Lessons learned:** Clear, complete and accurate documentation facilitates the evaluation of the client's progress towards desired outcomes; as per College of Nurses guidelines on documentation. This audit shows that documentation is inadequate and there is the potential for sites other than nares/perirectal to be missed during screening. The consequence is the potential that MRSA carriers are not being identified.

#### 07-P011

##### IMPLEMENTING A DISEASE SURVEILLANCE PROGRAM FOR LONG-TERM CARE SETTINGS

L.C. LaCroix, *Niagara Region Public Health Department, Thorold, Ontario, Canada*

The implementation of an infection prevention and control (IPAC) program in a long-term care (LTC) setting poses unique challenges. This presentation discusses the key elements of an infection prevention and control program and then focuses on the development of the disease surveillance component of the IPAC program in a LTC facility. The information presented is meant to assist both administrators and frontline staff working in LTC settings to realize the benefits of a disease surveillance program for staff as well as residents.

#### 07-P012

##### DOES SHE ... OR DOESN'T SHE? AN AUDIT OF COMPLIANCE WITH ANTIBIOTIC RESISTANT ORGANISM (ARO) ADMISSION SCREENING IN TERTIARY CARE

J Barclay, A Hendin, I Albert, M Cordoviz, S Woolsey, M Joffe, *Royal Alexandra Hospital, Edmonton, Alberta, Canada*

**Introduction:** Admission screening for AROs is one of the cornerstones of a successful surveillance program. An admission screening tool was introduced at our hospital in 2001 in conjunction with a hospital-wide staff education campaign. In the spring of 2006, we had an outbreak of VRE which we linked to an out of country transfer and a missed opportunity for isolation as directed by our screening tool. We undertook an audit of the use of this form both for correctness of screening and for compliance with the application of additional precautions when indicated by the tool. Concurrently, a form was developed by the Regional Infection Prevention and Control program which was trialled on two patient care units.

**Methods:** For one month prior to the introduction of the new screening tool, two nursing units (one medical and one surgical) were visited by IPS staff Monday-Friday. All admission charts were reviewed for correctness of screening, and for compliance with the screening tool. These two units were followed for an additional 6 weeks after introduction. During this 6-week period, we also audited correctness of screening and compliance with the old tool, on an additional 3 care units (one each on Medicine, Surgery, and Women's Health).

**Results:** With the introduction of the new tool on the Medicine unit, correct screening and compliance increased from 22%-68%. Correct screening and compliance in surgery increased from 75%-90%. The other units audited using the old tool had correctness and compliance ranging from 66%-85%. Correct screening and compliance with the tool was found on 85% of the charts audited in Women's Health. Common errors were: no form on the chart (screening not done at all); unnecessary screening sent; and risk factors not identified correctly. There were several instances in which additional precautions were not applied though the indication to do so was identified on the screening tool.

**Conclusions:** Despite adequate education, it seems that once a form has been in place for a period of time its utility decreases. This may be because users make assumptions about the contents of the form. This can lead to costly errors. The assumption that screening is being done correctly because of the presence of a form is a dangerous one. It is important to periodically review practice, and to make necessary process changes to ensure patient safety and quality care.

#### 07-P013 CHANGING, EVOLVING, IMPROVING WORKING TOWARDS A HEALTHY ENVIRONMENT IN THE PHYSICIAN'S OFFICE

C. Farella, B. Erwin, M. Flanagan; *Leeds, Grenville and Lanark District Health Unit, Brockville, Canada*

**Issue:** Frontline healthcare workers in the physician's office setting have not been targeted for infection control education. In a survey, 75% of the offices indicated they had not implemented infection prevention and control measures that were based on recently developed best practice guidelines and standards.

**Project:** The Health Unit authors utilized a two-tier approach to address this issue. Physicians were initially targeted. An information evening was provided on Pandemic Preparedness Planning. Allison Stuart, Ministry of Health and Long-Term Care (MOHLTC), Emergency Management Unit presented information and support to the physicians to help them in the development of business continuity plans for their practices. Next the physician's office staff were targeted. An education evening for all office staff was held throughout the tri-county in June 2006 with the goal of reducing transmission of infectious diseases and thus providing a healthier environment for patients and healthcare providers. Risk assessment tools for assessing the office environment and resources to support the Provincial Infectious Diseases Advisory Committee (PIDAC) best practice guidelines were provided. An infection control binder containing the most recent guidelines and resources was sent to those staff from physician's offices who did not attend the education session.

**Results:** 29 physicians and 5 nurse practitioners attended the Pandemic Preparedness evenings. Evaluations indicated an increase in awareness and use of Routine Practices and Additional Precautions. Five education evenings for the physician's office staff (nurses and secretaries) attracted 46 attendees from 66 invited offices. These evenings were held in five communities in the Leeds Grenville and Lanark District Health Unit. Lessons learned: Physicians and office staff are seeking and receptive to Best Practice Guidelines. Increased attention needs to be given to the concepts of cleaning, disinfection and sterilization. Links and partnerships developed through this exercise need to be strengthened and maintained.

#### 07-P014 THE AMAZING RACE: TO MBL HELL AND BACK AN OUTBREAK OF METALLO-BETA-LACTAMASE PRODUCING PSEUDOMONAS AERUGINOSA (MBL-PSA) ON A BLOOD AND MARROW TRANSPLANT UNIT (BMT)

K Pauling-Shepard<sup>1</sup>, S Houshmand<sup>2</sup>, L Ward<sup>1</sup>, TJ Louie<sup>1</sup>, J Russell<sup>2</sup>, M Bouchard<sup>1</sup>, J Leavitt<sup>1</sup>

<sup>1</sup>Calgary Health Region, Calgary, Alberta, Canada, <sup>2</sup>Alberta Cancer Board, Calgary, Alberta, Canada

**Introduction:** Between June 17, 2003 and Nov 3, 2004, the BMT unit experienced a clonal MBL-Psa outbreak involving 28 patients, 16 of whom developed infection (bacteremia = 12, pneumonia = 2, UTI = 1, CVC access site = 1) and 12 patients developed asymptomatic colonization. Colonization was observed both before and after infection. Patients included allogeneic BMT (14), autologous BMT (8), & haematology/other oncology (6). The outbreak began immediately after a 3-month waterborne outbreak involving the same strain in the main ICU which was arrested by eliminating faucet aerator contamination in 4 automatic hand washing sinks. The BMT unit outbreak presented as sporadic cases of MBL-Psa infection occurring every 4-7 weeks

**Methods:** An extensive, protracted outbreak investigation included point prevalence surveys (rectal cultures) and/or roommate contact tracing after each MBL-Psa case/cluster. Weekly patient rectal surveillance established after week 24 of outbreak. Reviewed hand hygiene practices; increased usage of alcohol hand rub; recommended against artificial nails/nail extenders. Reviewed standard/isolation practices with all staff; provided ongoing education/outbreak feedback to stake holders; continued practice of contact isolation for presumptive and confirmed MBL-Psa-positive patients Relocated CVC saline/heparin flush processes away from hand washing sink. Reinforced policy for sterile water use in nebulizers; discontinued ambient air nebulizers for patients with mucositis. Enhanced unit environmental cleaning; intermittently attempted sink drain decontamination with installation of 1:1000 ppm sodium hypochlorite; discontinued use of contaminated (not MBL-Psa) spray cleaner/deodorizer. Reviewed and reorganized equipment cleaning/disinfection processes. Restricted usage of Carbapenems as routine therapy for fever for BMT patients; discontinued use of Ciprofloxacin for antibiotic prophylaxis. Discontinued off-service admissions; initiated private room accommodation for all BMT/Haematology/febrile neutropenic patients. Repeated environmental and water culturing several

times. Removed faucet aerators and sink stoppers; replaced medication room and staff washroom sinks, tub, all sink grout, and 1 cold water shut-off valve.

**Results:** MBL carriage became less common but not eliminated by outbreak control measures. Tap/faucet and sink contamination was documented several times but correction did not stop the outbreak. Ultimately the outbreak was traced to contamination of one patient room sink shut-off valve. Following replacement of this valve, 30 weeks of patient surveillance revealed no MBL-Psa activity.

**Discussion:** Multidisciplinary teamwork was crucial to the outcome of this investigation. Persistent epidemiologic investigation and detailed water cultures arrested this outbreak. Low level water contamination from a single source can result in widespread cases over time, likely by hand/environmental contamination.

#### 07-P015 THE AMAZING RACE: TO MBL HELL AND BACK: AGAIN! THE CONTINUING SAGA OF AN OUTBREAK OF METALLO-BETA-LACTAMASE PRODUCING PSEUDOMONAS AERUGINOSA (MBL-PSA) ON A BLOOD AND MARROW TRANSPLANT UNIT (BMT)

K Pauling-Shepard<sup>1</sup>, S Houshmand<sup>2</sup>, L Ward<sup>1</sup>, TJ Louie<sup>1</sup>, J Russell<sup>2</sup>, M Bouchard<sup>1</sup>, J Leavitt<sup>1</sup>

<sup>1</sup>Calgary Health Region, Calgary, Alberta, Canada, <sup>2</sup>Alberta Cancer Board, Calgary, Alberta, Canada

**Introduction:** From Nov 4, 2004 to Jan 24, 2007, the BMT unit continued to experience clonal MBL-Psa activity in two distinct phases (June 2005 to June 2006 and Nov 2006 to Feb 2007) involving 19 patients. 11 patients developed infection (bacteremia = 8, pneumonia = 2, subphrenic abscess = 1). Eight patients developed rectal colonization. Patient populations included allogeneic BMT (6) autologous BMT (6) & haematology/other oncology (7).

**Methods:** Ongoing weekly patient rectal surveillance for gram negative organisms. Extensive environmental sampling of water sources after each new patient isolate was identified. Antimicrobial soap replaced with plain soap and alcohol hand rub installed throughout patient care unit as per regional hand hygiene initiative. Phase 2: Water sampling from all faucets (patient and staff areas). Environmental sampling of the faucet units. Targeted toilet water/air sampling in 7 patient bathrooms, and toilet water sampling of the remaining toilets. Environmental sampling of sink surrounds and assessment of the integrity of silicone sealant. Extensive sampling of two MBL-Psa positive toilets before and after removal. Procedure and products used for toilet bowl cleaning reviewed. Sink drain decontamination attempted.

Phase 3: Water sampling from all sinks and all countertop puddles. Assessment of faucets and taps for excessive movement and integrity of sealant. Environmental sampling of all silicone seals and other potential water sources in the physically remote Outpatient BMT Clinic. Clean and dirty water samples and pad from automated floor cleaning machine tested for MBL-Psa. Cleaning process for automated floor cleaning machine reviewed. Twice weekly environmental disinfection with 1:1000 ppm sodium hypochlorite of high touch surfaces on patient care unit.

Phases 2 & 3: Provided ongoing education/outbreak feedback to stakeholders. Continued restricted usage of Carbapenems as routine therapy for febrile BMT patients. Ciprofloxacin for antibiotic prophylaxis not recommended. Off service admissions restricted and private room accommodation for all BMT/haematology/febrile neutropenic patients continued. Repairs made to sink sealants; replaced 2 patient toilets and one staff sink; repaired cracked and/or loose faucet/tap units.

**Results:** Sporadic cases of MBL-Psa rectal colonization/infection continued. Toilet and staff washroom sinks (n=2) were believed to be the source of MBL-Psa during Phase 2. Quality workmanship related to environmental maintenance issues was found to be an important aspect in controlling contamination of water sources. Systematic patient/environmental sampling was helpful in the investigation of MBL-Psa.

**Discussion:** MBL-Psa from water sources, even in low colony counts, may be associated with colonization/infection in a vulnerable patient population. Does sporadic bio-film shedding from water sources occur and if so, does it contribute to intermittent MBL-Psa activity?

#### 07-P016 "NO NEED TO LEAVE MY DESK" WEB-BASED VAP SURVEILLANCE

P Ritchie<sup>1</sup>, C Ross<sup>1</sup>, R Shahpori<sup>1</sup>, D Zuege<sup>2</sup>, A Delosangeles<sup>1</sup>, D Gregson<sup>2</sup>, D Ledgerwood<sup>1</sup>, T Louie<sup>1</sup>, N Alfieri<sup>1</sup>

<sup>1</sup>Calgary Health Region, Calgary, Alberta, Canada, <sup>2</sup>University of Calgary, Calgary, Alberta, Canada

A web-based surveillance system for ventilator associated pneumonia (VAP) has improved efficiency for ICPs in a large Canadian health region. The VAP database application, developed by the Information Technology group in the Department of Critical Care Medicine, in conjunction with Infection Prevention and Control, receives demographic data from the bedside electronic charting system (ECS), microbiology data from a Laboratory Information System (LIS), radiology data from a Radiology Information System and pharmacology information from a Patient Care Information System. ICPs receive notification from the LIS as an automated report whenever a respiratory specimen has been received for culture and sensitivity testing on any patient in the ICU. ICPs use this trigger to electronically flag a patient in the bedside ECS as a suspected VAP case. The day after the flag has been placed, the ICP can securely log on to the VAP application from a web browser anywhere in the region and view the demographic, clinical, radiological, microbiological and pharmacological data related to the date of the suspected VAP. If the suspect case meets the case definition, the ICP completes the final assignment of VAP classification (Levels I to VI). Difficult cases are marked for quarterly group review and the case is discussed with all ICPs responsible for VAP surveillance as well as an Intensive Care physician. Built-in real time reports and run charts can be created directly from the database by any employee in the region having a network ID and password. The application includes record keeping



for the ICP that generates reports indicating how many suspect cases are still under review and how many cases are completed.

Web-based surveillance and using a microbiology trigger for case finding has reduced the amount of time ICPs spend on VAP surveillance by approximately 30%. The application has reduced the amount of time ICPs spend retrospectively reviewing charts, eliminated the need to review the chart of every ICU admission and improved accessibility to timely reporting of VAP rates. Default data fields, automated downloads, and the application of business rules reduce the chance of data entry error. The ability and commitment to regularly review cases as a group contributes to interrater reliability.

#### 07-P017

##### **BED BUG FOUND: OUTBREAK AVERTED**

S E O'Grady<sup>1</sup>, B Paul<sup>1</sup>, B Evans<sup>2</sup>, S Jones<sup>1</sup>

<sup>1</sup>Bridgepoint Health, Toronto, ON, Canada, <sup>2</sup>Orkin PCO Services Corp, Toronto, ON, Canada

**Issue:** Bed bugs are human pests that left unchecked can cause severe infestations. This article describes how an infestation with bed bugs was averted in a complex care facility.

**Project:** The setting is a facility providing complex care and complex rehabilitation through a broad range of inpatient and outpatient services. An insect was collected from a patient's pillow and sent for identification to the Parasitology section of the Central Public Health Laboratory in Toronto. Within 48 hours, telephone notification was received that the insect was a bed bug nymph, *Cimex lectularius*. The external pest control contractor Orkin PCO Services Inc. was contacted to assist with the investigation. A meeting was called with representatives from Orkin PCO, the unit, administration, environmental services, infection control and the plant engineer.

**Results:** Planned admissions to the unit were stopped and some patients changed rooms. This opened another four-bed room so that the patients in the affected room could be moved, without any of their belongings. Orkin PCO staff did a visual assessment of the patient's bed and mattress looking for bedbugs, faecal spots or cast bug skins. Nothing was found. Double-sided tape was placed around the bed and the room was locked. A specially trained dog was available to determine the extent of an infestation. The dog detected the distinctive bed bug scent in one small area near the patient bed. Various control procedures were examined and steam cleaning of the room was selected.

**Lessons learned:** It is important to remind staff to act when they see something unusual. The external pest control company was very useful in assessing the extent of the infestation and the available control measures. Once established, bed bugs are very difficult and expensive to eradicate.

#### 07-P018

##### **ANTIBIOTIC RESISTANT ORGANISMS: DEVELOPING A REGIONAL SURVEILLANCE PROGRAM**

TJ Cretney, DT Heng, CM Edl

*York Region Health Services, Newmarket, Ontario, Canada*

**Issue:** Morbidity, mortality, and financial costs associated with antibiotic resistant organisms (AROs) create an increased burden in acute, long-term, and community care settings. Preventing the spread of AROs has been a focus for clinicians and researchers for many years, and is now a source of increasing concern for public health systems. Surveillance of AROs has application in providing early warning for emerging ARO problems, monitoring patterns of resistance, examining the flow of AROs transferred between facilities, and evaluating ARO prevention and control measures, geared toward reducing the spread of AROs.

**Project:** ARO surveillance efforts have been initiated by our health unit. Community partners include Regional hospitals and long-term care homes (LTCHs), and the Regional Infection Control Network. During Phase I (2005-2006), regional facilities were invited to voluntarily submit monthly reports to collect baseline incidence data on three AROs: MRSA, VRE, and ESBL. Respondents were asked to report numbers of both colonized and infected clients.

**Results:** Results from Phase I offer a preliminary look of ARO activity and indicate that this is an emerging issue for infection prevention and control designates across the continuum of care in our region. Many positive results of this program have been born from the greater communication and collaboration between different levels of our public health unit and community partners. Phase II (2007) efforts have redesigned the collection tool to improve data quality. It is anticipated that data collected in Phase II will demonstrate the importance of ARO surveillance and move forward the discussion of this issue at both local and provincial levels.

**Lessons learned:** Based on the feedback received from participants and the experiences of two years of ARO data collection, program objectives are: i) Continuing to improve and standardize the data collection process to produce a more complete and representative picture of ARO activity in our region; ii) Improving the flow of information between public health and community partners; iii) Increasing the number of facilities participating in this voluntary health monitoring program through the development of an effective communication strategy that will inform and educate stakeholders and policy makers.

#### 07-P019

##### **IMPLEMENTATION OF MULTI-PRONG STRATEGY FOR A PROVINCIAL HAND HYGIENE PROGRAM**

L McCreight, C Barry, A Harris

*Ministry of Health and Long-Term Care, Toronto, Ontario, Canada*

**Issue:** A recent study in Ontario indicated the hand hygiene compliance in health care settings is 32%. Funding has been provided for a provincial hand hygiene program in acute care facilities. **Project:** In March 2005, a two-day meeting in collaboration with Health Canada was held with national and global hand hygiene experts to share current knowl-

edge and practices. Workshop participants came from a broad range of backgrounds and disciplines including infection prevention and control, infectious diseases, human factors, social marketing, communications, administration and education. The goal was to learn about programs that result in sustainable change in hand hygiene practices, and how to adapt these for Ontario. The evidence, barriers, perception and possible drivers to improving hand hygiene were examined by participants. A Hand Hygiene Project Implementation Advisory Committee of stakeholders and experts was formed to collaborate on the development of the program. A logic model, ethics proposal and multi-prong strategy was developed. All acute care facilities were invited to apply to be one of the 10 sites to participate in a 9-month pilot (3 month preparation followed by 6 month testing phase). Roll-out was facilitated by an onsite coordinator. Orientation meetings and a tool kit were provided outlining timelines, actions and communications strategies. Program components include: on-site hand hygiene committee, local champions, point of care alcohol, communication prompts, an interactive education module, and patient engagement. An explanatory video of the program was used to engage the health care providers as part of the launch. The extensive evaluation component includes: health care provider surveys and focus groups, key informants surveys, patient surveys, review of coordinators log, collection of product usage, MRSA and VRE rates and observational audits. A one-day training program for the observers doing the observational audits and using the audit tool included the use of simulated situations and discussions to increase consistency and inter-rater reliability.

**Results:** Evaluation is done at baseline, 3 months into the testing phase and at the end of the pilot-testing phase and is overseen by an independent third party. The interim results will be presented at the conference.

**Lessons learned:** A minimum of 3 months is required to prepare the organization before launching a program. Placing alcohol at point of care requires careful analysis.

#### 07-P020

##### **IDENTIFYING PERCEIVED BARRIERS TO HAND HYGIENE COMPLIANCE IN ACUTE CARE**

NJ Goertz, ML Card, M John, K McGhie, R Reyes

*London Health Sciences, London, Ontario, Canada*

**Background/Objectives:** To identify healthcare workers' (HCW) perceived barriers to good hand hygiene compliance, attitudes to alcohol hand rubs and readiness or need for change.

**Methods:** An 8-question, anonymous, self-completed questionnaire was distributed to health care professionals and placed in staff lounges, bulletin boards and department offices in city-wide acute care hospitals in London, Ontario. Respondents were asked to identify which barriers they believed restricted compliance of health care workers of good hand hygiene practice, their preference between soap/water and alcohol, belief in each method's effectiveness and their willingness to change hand hygiene behaviour.

**Results:** 354 questionnaires were returned. Across healthcare professions the top three reasons for inadequate hand hygiene of HCW were: lack of time (57.4%), high workload (55.4%) and forgetfulness (36.7%). Over 78% preferred soap and water to alcohol. However, only 44.3% believed that soap and water was the better method. 79% of respondents were prepared to improve their hand hygiene practice.

**Conclusions:** Although lack of time was stated to be one of the highest barriers to performing hand hygiene, using alcohol based hand rub, a time saving and effective hand hygiene method, was not the preferred method. This indicates an opportunity for education on the value of alcohol based hand rubs and the potential for improved compliance.

#### 07-P021

##### **THE EFFECT OF PATIENT AND FAMILY EDUCATION ON STAFF HAND HYGIENE COMPLIANCE IN A DIALYSIS UNIT**

NJ Goertz, ML Card, M John, R Reyes

*London Health Sciences Centre, London, Ontario, Canada*

**Background/Objectives:** To investigate whether patient and family education results in an increase in hand hygiene compliance to health care workers (HCW).

**Methods:** An audit of hand hygiene compliance was completed of health care workers prior to patient and family education, in a dialysis unit in London, Ontario. Individual teaching to patients/families regarding indications for health care worker hand hygiene was accomplished within one month's time. Patients and families were asked to remind staff to perform hand hygiene if it did not take place. Following a second month where no intervention took place, a second audit was conducted to identify any changes in health care worker hand hygiene compliance.

**Results:** The first hand hygiene audit indicated a compliance of 40%. During the intervention month, patients and families expressed discomfort with reminding staff to perform hand hygiene, however, during the second month the patients began to remind staff. As a result, the health care worker hand hygiene compliance increased by 12% to a compliance rate of 52%.

**Conclusions:** Education of patients and families do increase health care worker hand hygiene compliance. However, whether it is due to patients/families reminding the staff or from simply creating heightened awareness of hand hygiene on the unit, is unclear.

#### 07-P022

##### **HAND HYGIENE COMPLIANCE IN A TEACHING HOSPITAL SETTING**

NJ Goertz, ML Card, M John, K McGhie, R Reyes

*London Health Sciences Centre, London, Ontario, Canada*

**Background/Objectives:** The purpose of this study was to measure hand hygiene compliance in our hospitals prior to introducing an antibiotic resistant organism (ARO) reduction campaign, which included hand hygiene education.

**Methods:** A prospective, observational, single-blinded study design was used. A nursing student observed health care professionals' hand hygiene practices in 29 wards, a neonatal ICU and 4 ICUs at our 3 hospitals. Hand hygiene compliance was considered to be use of soap and water or alcohol hand rub. Non-compliance included glove use instead of hand hygiene. Observations were conducted during mornings/evenings on multiple days of the week. Indications were considered to be pre/post patient contact and invasive procedures, and movement from dirty to clean areas. The observer recorded healthcare profession, unit, technique used and number of opportunities.

**Results:** Hand hygiene compliance rates were highest in the neonatal ICU (82%), intermediate in the other ICU's (32.5%) and lowest on the wards (20.4%).

**Conclusions:** Hand hygiene compliance by staff was 34.8% of opportunities, similar to reports in the literature. There was a higher use of soap than alcohol hand rub. NICU compliance was significantly higher than the ICUs or wards. We found no statistically significant differences between professions, however, MD compliance trended lower. Results of this study were presented to hospital senior leadership and initiated support for a citywide hand hygiene campaign.

#### 07-P023

##### METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS OUTBREAK IN A CHIROPODY CLINIC

V Nankooosingh, H Dedier, T Manning-Atwell, S Kenny, P Nielsen, K Stockton, Z Hirji, MA Gardam, *University Health Network- Toronto General Hospital, Toronto, Canada*

**Background:** The chiropody clinic is located at a 3-site university affiliated teaching hospital with a variety of priority programs, such as cardiology, transplantation, oncology and neurology. The clinic primarily treats patients with diabetic and vascular wounds of the lower leg and foot and is a referral centre for hospital patients with over 2000 outpatient visits a year.

**Objective:** In the fall of 2005, 11 patients with a chiropody outpatient appointment were identified with methicillin resistant *Staphylococcus aureus* (MRSA). All of these patients had MRSA isolated from wounds in areas consistent with treatment by the chiropody clinic. The hypothesis of healthcare associated transmission was investigated to determine if the patients had acquired MRSA in the chiropody clinic.

**Methods:** An audit of the chiropody clinic was completed by IPAC (Infection Prevention and Control). This included observations of patient flow, patient care practices, and an audit of medications, patient care items and other products used in the clinic. A sterilization audit was also done, in conjunction with the Central Processing Department (CPD). A microbiological investigation of the MRSA isolates was conducted using Pulsed-field Gel Electrophoresis (PFGE). Chiropody clinic staff was screened for MRSA through the Employee Communicable Disease Surveillance Unit, a division of the Occupational Health Department.

**Results:** There were 11 patients with MRSA identified. 6 patients had other risk factors for acquiring MRSA (5 of these patients had been inpatients in other hospitals within the past year and 1 patient had a history of MRSA prior to visiting the clinic). 5 patients had none of the traditional risk factors. PFGE revealed 2 separate clusters of patients. No chiropody staff members were identified with MRSA. The clinic audit revealed several areas for improvement including deficiencies in sterilization practices, unlabelled and expired patient care and cleaning products, and combined clean and dirty utility areas due to space constraints. Recommendations were made from IPAC and CPD including a cost analysis for internal or external equipment reprocessing, patient flow changes and separation of clean and dirty utility areas. IPAC provided extensive staff education on routine practices and additional precautions. The clinic now requires referring physicians to culture patient wounds for MRSA prior to appointments.

**Conclusions:** Two strains of MRSA were transmitted among patients in the chiropody clinic. Implementation of the recommended changes has improved patient care and no additional MRSA cases have been linked to the clinic. Although this outbreak was focused in an outpatient care setting, it highlights the need to re-examine our traditional definitions of nosocomial and community acquired.

#### 07-P025

##### A NOVEL HYDROGEN PEROXIDE-BASED ANTIMICROBIAL HANDWASH

Navid Omidbakhsh; *Virox Technologies, Oakville, ON, Canada*

**Background:** Nosocomial infection is a serious problem in healthcare facilities and poor hand hygiene has been determined to be a major factor in causing and spreading such infections. It has been determined that proper hand washing with an appropriate antimicrobial soap can significantly reduce the risk of infection. The current antimicrobial hand cleaning solutions are mainly based on alcohol, parachloro-meta-xylene (PCMX), chlorohexidine and Triclosan. These chemicals have shown limitations when applied on hands, notably short-term tolerability and/or efficacy. This is because it is not possible to formulate the necessary balance between their microbial efficacy and user safety. The objective of this study is to introduce a new handwash antimicrobial solution based on the accelerated hydrogen peroxide (AHP) technology.

**Methods:** European test methods have been used to evaluate the efficacy and skin sensitivity of the handwash antimicrobial solution.

**Results:** The product inactivates different bacteria and does not irritate skin upon extended exposure.

**Conclusions:** This new product addresses many of the concerns associated with the legacy handwash products.

#### 07-P026

##### A NEW PEROXIDE-BASED FAST ACTING SURFACE SPORICIDE

Navid Omidbakhsh; *Virox Technologies, Oakville, Ontario, Canada*

**Background:** *Clostridium difficile* (*C.diff*) is the main cause of hospital-acquired diarrhea. Environmental contamination is one of the major factors in hospital-acquired infections, and consequently proper cleaning and disinfection of environmental surfaces such as toilets and commodes can be of major help in reducing the risk of infection. However, since *C.diff* forms spores, it is resistant to most commercially available disinfectants. Applying ineffective cleaners/disinfectants can cause cross contamination. Today, the only choice to deal with *C.diff* on surfaces is to use high levels of chlorine. Although chlorine is effective in inactivating *C.diff* spores, it is very corrosive and an irritant. It also has an unpleasant and pungent smell at the effective sporicidal concentration. This results in over-diluting chlorine solutions which makes them ineffective against the spore form. The objective is to introduce a practical solution using a mild surface sterilant based on accelerated hydrogen peroxide.

**Methods:** The formulation was tested for its microbial activity against spores, bacteria and viruses using carrier test methods.

**Results:** The product inactivates the spores at 10 min contact time, and bacteria and viruses at 1 min. The formulation comes in both gel and liquid form. The gel can remain on inclined surfaces such as toilet bowls for a longer contact time, resulting in complete sporicidal activity.

**Conclusions:** This novel product significantly reduces the risk of infections, specifically spore infections such as *C.diff*.

#### 07-P027

##### INFECTION CONTROL E-LEARNING FOR HEALTHCARE WORKERS; ANALYSIS OF LEARNER DEMOGRAPHIC DATA

Gamage B<sup>#1</sup>, Choi P<sup>2</sup>, Landstrom M<sup>3</sup>, LoChang J<sup>4</sup>, Bryce E<sup>2</sup>

1. *British Columbia Centres for Disease Control* 2. *Vancouver Coastal Health* 3. *Children's and Women's Hospital* 4. *Occupational Health and Safety Association for Healthcare, Vancouver, British Columbia*

**Background:** E-learning is a tool for delivery of content and staff learning of infection control concepts and routine practices. However, relatively little is known regarding user demographics in health care settings or the perception by participating staff of the utility of this form of technology-enabled learning.

**Methods:** The on-line infection control module, which was developed by a multidisciplinary team, includes videos and animations, and uses the facility on-line course catalogue registration service for participants to register and for educators to track user demographics. The module consists of a pre-quiz; the infection control content organized as educational chapters; a post-quiz upon module completion; and a subjective survey regarding usability and user satisfaction with the module.

**Results:** From March 2006 to July 2006 (the promotional phase for the on-line module), 280 users registered for the course. Most of the participants (75%) were 40 years or younger and the majority reported from 1 to 10 years' experience in healthcare. Few participants accessed the course on weekends and the majority completed the course during the late morning and early afternoon of their shifts. Average time to take the course, survey and quizzes was 45 minutes. The average pre-test score was 18.2 and post-test score was 21.84 (p<0.0001). Learners rated the course highly for accessibility, ease of use, ability to maintain their interest and effectiveness in teaching the content.

**Conclusions:** The on-line infection control course is effective in transferring knowledge in a manner enjoyed by the learners. The demographic profile suggests that younger HCWs access the course more frequently than do older HCWs and that the course remains under-used proportionately by staff who work the weekend shift (one of the groups for whom traditional classroom courses are least accessible).

#### 07-P028

##### BUILDING AN ELEPHANT BY COMMITTEE – DEVELOPING AN INFECTION CONTROL PANDEMIC EDUCATION PACKAGE

S Winton, K Bertsch, R Ennis-Davis, N Gartner, S Lafferty, K Fluet, M Johnson *Capital Health - Regional Infection Prevention and Control, Edmonton, AB, Canada*

**Issue:** As the threat of pandemic influenza looms, there is a need for timely dissemination of infection prevention and control (IP&C) recommendations to health care workers (HCWs). Our health region consists of multiple sites employing 30,000 workers requiring knowledge of how to implement (IP&C) recommendations in a pandemic.

**Project:** A Capital Health document, "Infection Prevention and Control and Occupational Health and Safety Guidelines for Pandemic Influenza", developed as a collaborative effort between IP&C, Occupational Health and Emergency Preparedness, was the seed document for development of a PowerPoint education package for HCWs. Planning began in January, 2006 with consultation with a subcommittee of content experts followed by presentation of a draft education package to stakeholders. After several modifications, these groups approved a final draft in 2 possible modes: a generic, non-clinical staff presentation or a clinically specific presentation including details on patient care management. The package was presented to site and sector administrators to determine a successful "roll-out" strategy.

**Results:** The presentation was delivered by IP&C to 2000 HCWs from 19 administrative groups and 60 frontline HCW groups from 9 acute care facilities. Feedback from written evaluations is used for improvement. The delivery to HCW in acute care facilities continues, with delivery to HCW in other sectors to follow.

**Lessons learned:** Initially, the presentation, incorporating all details contained in the seed document, was too lengthy. The final draft provided the "need to know" information and required half the presentation time. Tailoring the presentation to meet the needs of diverse audiences is essential in ensuring that HCWs with varying backgrounds are able to

comprehend and apply the knowledge. Ensuring that administration clearly understands and values the education assists with buy-in and obtaining input and support to deliver education to their staff. Building an elephant by committee isn't easy. Soliciting and using the input of significant stakeholders and experts to assist in decision making is essential.

#### 07-P029

### THE OXIVIR<sub>TR</sub> FORMULATION OF ACCELERATED HYDROGEN PEROXIDE (AHP) IS EFFECTIVE FOR KILLING CLOSTRIDIUM DIFFICILE SPORES ON TOILET SEAT SURFACES

K Manickam<sup>2</sup>, N Olson<sup>1</sup>, M Alfa<sup>2</sup>, L Beulow-Smith<sup>1</sup>

<sup>1</sup>St. Boniface General Hospital & Research Centre, Winnipeg, Canada, <sup>2</sup>Diagnostic Services of Manitoba, Winnipeg, Canada

**Introduction:** *Clostridium difficile* associated diarrhea (CDAD) is a significant nosocomial problem in healthcare facilities world-wide. The presence of *C. difficile* spores in toilets of patients with CDAD is thought to be a reservoir for spread. Although bleach has been suggested as an efficient means of killing *C. difficile* spores it has a number of workplace safety concerns.

**Objective:** To determine if any AHP formulations could provide an alternative to bleach for killing *C. difficile* spores on toilet surfaces in the presence of Artificial Test Soil (ATS) to provide an organic challenge.

**Materials and methods:** The formulations tested included: Oxivir<sub>TR</sub>, PerDiem (1:64 use-dilution), Bleach at 500 ppm, 1000ppm, and 5000ppm (AHP formulations by Virox). Suspension testing as well as surface testing was done. For surface testing *C. difficile* spores were suspended in an organic challenge (ATS) at ~ 10<sup>6</sup> spores/mL and 0.1 mL was spread onto the toilet seat surface and allowed to dry overnight. Spritz alone and spritz plus wipe testing were performed for each disinfectant tested. Residual spores were detected using Rodac plates to sample the inoculated toilet surfaces.

**Results:** Of the AHP formulations tested, Oxivir<sub>TR</sub> produced the most rapid drop in spore viability after 1 minute of exposure in suspension testing (3 Log<sub>10</sub> reduction). Bleach at 1000 and 5000 ppm were the most effective in the shortest time. The spritz and wipe surface testing indicated that physical action plays a major role in removing surface spores. However, spritz testing without wiping showed that Oxivir<sub>TR</sub> was superior to all other formulations except bleach 5000 ppm at killing *C. difficile* spores on surfaces in the presence of an organic challenge. There were 14.4% of 21 replicate tests showing ≥ 300 cfu/site of *C. difficile* after Oxivir<sub>TR</sub> versus 100%, 95%, 57% and 9.5% for PerDiem, 500ppm, 1000ppm and 5000ppm bleach, respectively.

**Conclusions:** Oxivir<sub>TR</sub> provides a useful alternative to bleach for surface killing of *C. difficile* spores providing good physical cleaning is also used.

#### 07-P030

### SCREENING TO PREVENT NOSOCOMIAL SPREAD OF ANTIBIOTIC-RESISTANT ORGANISMS

RM Wiens<sup>1</sup>, LM Buchanan-Chell<sup>1</sup>, JC Durand<sup>2</sup>, TA Kirkland<sup>2</sup>, GD Taylor<sup>3</sup>

<sup>1</sup>University of Alberta Hospital, Edmonton, Alberta, Canada, <sup>2</sup>Stollery Children's Hospital, Edmonton, Alberta, Canada, <sup>3</sup>University of Alberta, Edmonton, Alberta, Canada

**Objective:** Success in controlling nosocomial transmission of antibiotic-resistant organisms (AROs) including Methicillin Resistant *Staphylococcus aureus* (MRSA) is dependent on the application of barrier precautions for patients infected or colonized with the organism and rigorous active surveillance cultures to identify colonized patients. The objective of our project was to determine a practical and cost-effective method to identify patients colonized with MRSA in order to minimize the potential reservoir of this microorganism within our facility.

**Methods:** A telephone survey of several tertiary care facilities in Canada and acute care facilities in Capital Health Region, Edmonton, was conducted in order to identify screening practices for AROs in similar facilities. In addition, cases of MRSA in our hospital from January to September, 2005 were identified. The percentage of community-acquired and nosocomial infections was calculated by admissions to different services, including transfers within our own facility. Using this information, we drafted three options for screening patients for MRSA. A cost analysis for each was also performed. This information was submitted to the Infection Control Committee for consideration.

**Results:** The Infection Control Committee approved the option to conduct routine prevalence screening for MRSA in services where nosocomial rates were highest. Prevalence screening will be performed for a 6-month period, then the percentage of cases of nosocomial MRSA by admission by service will be re-evaluated.

**Conclusion:** Identifying potential reservoirs for AROs within a health care facility is imperative to control nosocomial transmission. Achieving this goal in a practical and cost-effective method is important for both the facility and our patients.

#### 07-P031

### C. DIFFICILE IS NOT RELIABLY ERADICATED BY WARD BEDPAN WASHERS

M Alfa<sup>1</sup>, K Manickam<sup>1</sup>, N Olson<sup>2</sup>, L Beulow-Smith<sup>2</sup>

<sup>1</sup>Diagnostic Services of Manitoba, Winnipeg, Canada, <sup>2</sup>St. Boniface General Hospital & Research Centre, Winnipeg, Canada

**Objective:** Feces from patients with *C. difficile* associated diarrhea (CDAD) is known to contain spores and the efficacy of eradication of these spores by the thermal conditions in ward bedpan washers (Ward-BPW) is unknown. The objective of this study was to use simulated-use testing to evaluate the efficacy of *C. difficile* spore elimination by ward-BPW compared to Central Processing Dept. washers (CPD-BPW).

**Methods:** The effect of thermal killing of *C. difficile* spores at 80°C and 90°C and the efficacy of ward and CPD bedpan washers to eliminate *C. difficile* spores from bedpans were

evaluated. Briefly *C. difficile* spores were suspended in ATS (Artificial Test Soil) to give ~ 10<sup>6</sup> cfu/mL and 0.1 mL of this preparation was spread over a defined surface area of the bedpan and allowed to dry overnight. The inoculated bedpans were processed using the Ward-BPW or the CPD-BPW. Rodac plate containing CDMN media were used to detect residual *C. difficile* spores on bedpans.

**Results:** Our data on suspension testing showed that the *C. difficile* spore count was not reduced after 5 minutes at 90°C. Simulated-use testing demonstrated that the ward-BPW did not effectively eliminate *C. difficile* spores from inoculated bedpans while the CPD-BPW did. The thermal disinfection cycle in both the ward and CPD bedpan washers was 85°C for 1 minute. Exposure to these conditions resulted in ~1 Log<sub>10</sub> reduction in spores. However, the 85°C for 1 min combined with the 116°C drying cycle for 7 mins used by the CPD-BPW killed 6 Log<sub>10</sub> *C. difficile* spores.

**Conclusions:** The thermal conditions in the Ward-BPW tested were not effective in killing *C. difficile* spores (the ISO15883-3 guidance document recommends these thermal conditions as adequate for bedpans). Ward BPWs still provide an effective means of disposing of fecal waste from bedpans without generating aerosols. Manufacturers may be able to make adjustments to bedpan washers to achieve conditions that will effectively eliminate *C. difficile* spores.

#### 07-P032

### PEDIATRIC NOSOCOMIAL FEBRILE RESPIRATORY ILLNESS SURVEILLANCE IN CANADA 2005

Vayalunkal, JV\*, Public Health Agency of Canada, Canadian Field Epidemiology Program, Nosocomial and Occupational Infections Section, Ottawa, Canada, Moore, D, Montreal Children's Hospital, McGill University, Montreal, Canada, Gravel, D, Public Health Agency of Canada, Nosocomial and Occupational Infections Section, Ottawa, Canada

*The Canadian Nosocomial Infection Surveillance Program (CNISP)*

**Background/objectives:** Nosocomial febrile respiratory tract infections (FRI) contribute significant morbidity and mortality to hospitalized children in Canada. This surveillance project was initiated to: 1. document numbers and rates of nosocomial FRI in pediatric patients; 2. characterize this population; 3. determine the health impact of these infections; 4. determine whether patients with respiratory syncytial virus (RSV), influenza and pneumococcal infection were candidates for immunoprophylaxis prior to illness onset.

**Methods:** Surveillance from January to May 2005 at Canadian Nosocomial Infection Surveillance Program (CNISP), sites admitting pediatric patients; 8 out of 16 hospitals submitted data. Eligible patients included those less than 18 years of age admitted to pediatric hospitals or pediatric wards. Those patients in the normal newborn nurseries, psychiatry wards or chronic care wards were excluded. The case definition included patients who developed FRI at least 72 hours after admission and whose infections were either laboratory-confirmed or clinically diagnosed (fever, at least one respiratory abnormality and no other cause for illness identified).

**Results:** A total of 96 cases were identified. 52 (54%) were male and 48 (50%) were less than one year of age. 96 pathogens were isolated from 88 patients; 8 cases were clinically diagnosed. RSV was identified in 38 (40%) cases, other respiratory viruses were identified in 34 (35%) cases and bacterial pathogens isolated in 24 (25%). Only one of 13 children with influenza and with indications for influenza vaccine had been immunized, while 4 of 5 with RSV who were eligible for immunoprophylaxis had received it. Of the 3 patients with pneumococcal infection, none were candidates for the vaccine. Eight patients (8%) required transfer to ICU. There were 9 deaths with 4 of these related to the nosocomial respiratory illness.

**Conclusions:** Viral pathogens, particularly RSV, are primarily responsible for nosocomial FRI in pediatric patients. There are many missed opportunities for influenza vaccination and prevention of nosocomial influenza. Deaths related to FRI were reported in 4% of these patients, representing significant mortality from this cause.

#### 07-P033

### AUDITING HAND HYGIENE IN A TEACHING HOSPITAL: THE GAP BETWEEN PERCEPTION AND REALITY<sup>1</sup> SUNNYBROOK HEALTH SCIENCES CENTRE, TORONTO, ONTARIO, CANADA

J.A. Lourenco<sup>2</sup>, S. Callery<sup>1</sup>, M. Vearncombe<sup>1</sup>

<sup>1</sup>Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada, <sup>2</sup>University of Toronto, Toronto, Ontario, Canada <sup>3</sup>University of Toronto, Toronto, Ontario, Canada

**Issue:** Currently, there is no one standardized and validated method of auditing hand hygiene (HH) compliance among health-care workers (HCWs). Compliance is sub-optimal, but there are gaps in our understanding of factors associated with compliance and of HCW perceptions of personal adherence. The objectives of this study were to develop and test a HH audit tool to measure HH compliance and its covariates in four patient care units.

**Project:** A literature review on HH audits and factors associated with compliance was conducted. An audit tool and instruction manual were created and piloted. The inter-rater reliability was tested. HCW compliance and associated HH variables were measured during one week of auditing on four units. Differences in compliance rates across groups were compared using the Chi-square test statistic and logistic regression. Focus groups were held to assess self-reported adherence.

**Results:** Focus groups found that over 75% of HCW participants reported a compliance rate of over 70%. The audit tool had a good correlation coefficient for compliance per observation (kappa=0.87). 315 HH opportunities were observed during 37 auditing sessions. Overall compliance across all four units was 43.45%. There was no significant difference in compliance seen across units, HCW types, HCW gender, and the number of beds within the patient room. The patient being on additional precau-

tions ( $p=0.02$ ), having the alcohol-based hand rub within the patient room ( $p=0.04$ ), and having a dedicated handwash sink within the patient room ( $p=0.02$ ) were all associated with a significant increase in compliance. HCWs followed the health care centre's hand jewellery and nail enhancements policy during 45% of all HH opportunities. The most common violation was wearing a watch (29% of opportunities), followed by wearing a ring (18%), bracelets (8%), and artificial nails (1%). 34% of the missed opportunities were due to the misuse of gloves.

**Lessons learned:** Self-reported compliance rates differ drastically from those observed. There was no difference in compliance by HCW type, despite the perception among focus group participants that low audit scores were due to the low compliance of doctors. Regular auditing and feedback to HCWs may enhance their understanding of personal compliance and that of other professionals. Efforts to improve HH adherence, proper glove use, and adherence to the hand jewellery and nail enhancements policy are needed.

#### 07-P034

##### GETTING STARTED: A TOOLKIT FOR NOVICE LONG-TERM CARE INFECTION CONTROL PRACTITIONERS

RL Cashmore, R Collins, J Gaughan; *Peel Public Health, Region of Peel, Canada*

**Issue:** Turnover of the ICP position in long-term care facilities (LTCFs) is frequent, since the ICP role often leads to a director of care position (supervisory positions) or other opportunities for advancement; experienced ICPs are a scarce resource. This results in inexperienced ICPs being hired with little or no background in infection prevention and control (IPAC). Resources, practical tools and basic orientation about IPAC for the novice LTCF ICPs are essential.

**Project:** In consultation with certified ICPs in the local Public Health Unit (PHU), the novice ICPs identified the following knowledge deficits: surveillance, outbreak management, current resources, daily routine and prioritization of activities in their new role. A concise orientation package based on evidence-based literature and best practice guidelines was needed. The "Getting Started: A Guide for New Infection Prevention and Control Practitioners in Long Term Care Facilities" orientation package was developed by the PHU. Contents include: a list of recommended evidence-based resources (by subject), contact information regarding local IPAC partners, recommended daily, weekly, monthly and annual routines, daily surveillance and outbreak management tools, information about the role of Public Health and a tool to prioritize the strengths, weaknesses, opportunities and threats.

**Results:** A Public Health Nurse (PHN) meets and welcomes each novice ICP to IPAC in the region, and reviews the new "Getting Started" orientation package in a one-hour session. PHNs now have a standardized, evidence-based concrete tool to assist in supporting the new ICPs with whom they network regularly. Novice ICPs were informally surveyed; they are using the resources, know how to link with fellow, local ICPs, contact the PHU sooner than previously as needs and questions arise and are eager to continue to work collaboratively with the PHU.

**Lessons learned:** Some of the facilities have requested the assistance of the PHU in development and/or revision of IPAC policies and procedures, thus, further standardization of IPAC practices in the region is evolving. Future plans include expanding the orientation package contents, continuing topics (such as surveillance and outbreak) at regular meetings, posting the "Getting Started" package on the PHU website and a mentorship program for novice ICPs.

#### 07-P035

##### PRACTICAL TOOLS FOR LONG-TERM CARE OUTBREAK MANAGEMENT

RL Cashmore, R Collins, J Gaughan; *Peel Public Health, Region of Peel, Ontario, Canada*

**Issue:** Although long-term care facility (LTCF) ICPs have a comprehensive Public Health Unit (PHU) Infection Prevention and Control (IPAC) resource manual, LTCF ICPs identified the need for additional tools to assist the LTCF ICP in preventing, controlling and managing respiratory, gastrointestinal and other communicable disease outbreaks.

**Project:** Through networking, regular meetings and ongoing interaction between the PHU and the LTCF ICPs, the need for standardized, outbreak management checklists and practical tools to assist in outbreak planning, prioritizing and identifying tasks and roles were identified. Three checklists for outbreak management organized by phases (preparing and prevention, heightened surveillance and outbreak) were presented at a group meeting, discussed collaboratively by the group and edited for use. Practical tools for routine surveillance, including an outbreak algorithm, complete the toolkit.

**Results:** Feedback from the LTCF ICPs is positive; they feel supported and empowered by the evidence-based resources and practical tools. The LTCF ICPs claim more confidence in identifying outbreaks earlier by using routine surveillance tools, the heightened surveillance checklist and outbreak algorithm. The new tools are practical, quick and handy to use. The 5 regional LTCFs have been using the routine surveillance tools for 1.5 years, have established baseline rates of infection and are moving to targeted surveillance. Along with the outbreak management checklists, non-regional LTCFs will also begin to use the routine surveillance tools; benchmarking in the region of the PHU is in early phases.

**Lessons learned:** The PHU learned it is essential to provide not only the theory and principles of IPAC at regular meetings, but also concrete, practical tools for quick and easy reference by the LTCF ICP. Future goals are to reduce the duration and complexity of respiratory and gastrointestinal outbreaks. Collaboration between the PHU and the LTCF ICPs continues. The IPAC resource manual is in revision, includes the outbreak management checklists plus an expanded surveillance chapter, and will be posted on the PHU website as updates occur. As the Regional Infection Control Networks (RICN) are established in the PHU region, PHUs and RICNs will provide an even stronger support role to LTCF ICPs.

#### 07-P036

##### DEVELOPMENT OF A NATIONAL SURVEILLANCE SYSTEM FOR CENTRAL VENOUS CATHETER BLOODSTREAM INFECTIONS: THE FIRST SIX MONTHS FROM THE CANADIAN NOSOCOMIAL INFECTION SURVEILLANCE PROGRAM (CNISP)

J Stegenga<sup>1</sup>, D Moore<sup>2</sup>, L Johnston<sup>3</sup>, J Langley<sup>4</sup>, Z Hirji<sup>5</sup>, A Newman<sup>6</sup>, K Olekson<sup>7</sup>, M John<sup>8</sup>, K Suh<sup>9</sup>

<sup>1</sup>Public Health Agency of Canada, Ottawa, ON, Canada, <sup>2</sup>Montreal Children's Hospital, Montreal, QC, Canada, <sup>3</sup>Queen Elizabeth II HSC, Halifax, NS, Canada, <sup>4</sup>WK Health Centre, Halifax, NS, Canada, <sup>5</sup>University Hospital Network, Toronto, ON, Canada, <sup>6</sup>London Health Sciences Centre, London, ON, Canada, <sup>7</sup>Health Sciences Centre, Winnipeg, MB, Canada, <sup>8</sup>Children's Hospital of Eastern Ontario, Ottawa, ON, Canada

<sup>9</sup>Canadian Nosocomial Infection Surveillance Program (CNISP)

**Background:** Central venous catheter (CVC)-associated bloodstream infections (BSIs) are an important cause of morbidity and mortality, and are the most common nosocomial infection in neonates and the fourth most common in adults. Multi-centre benchmark rates are available for intensive care units (ICUs) in United States hospitals, but have not been consistently available in Canada.

**Objective:** To establish ongoing national surveillance of CVC-BSIs in Canada, and to determine the rate of CVC-BSIs in Canadian ICUs and hematopoietic stem cell transplant (HSCT) recipients.

**Methods:** An active prospective surveillance system for CVC-BSIs was developed. Definitions used were similar to those of NNIS. Denominators were patient- and CVC-days. Data collection began on January 1, 2006 in 49 units. Data was entered via a web-based data-entry portal and analyzed centrally.

**Results:** During the first 6 months of surveillance, 275 patients had a CVC-BSI, and 179 CVC-BSIs were reported from units with complete denominator data. Mean incidence of CVC-BSIs per 1000 CVC days was 2.5, 2.5, and 6.3 in adult, pediatric and neonatal ICUs, respectively. The overall CVC utilization rate was 0.75 CVC days/patient days. There were 49 deaths in patients with CVC-BSIs, for a mortality of 17.8%. Coagulase negative staphylococci (CONS) were responsible for 149 (42%) of the BSIs, and there were 9 BSIs due to methicillin-resistant *S. aureus* (MRSA), of 40 *S. aureus* isolated (23%). Surveillance is ongoing.

**Conclusions:** CVC-BSI rates were lower and the CVC utilization rate higher than those of NNIS. CVC-BSI rates in adult and pediatric ICUs were lower and in neonatal ICUs were higher than in a pilot project in 1997 (6.9, 6.8, 5.0 BSIs per /1000 CVC days respectively), but different definitions were used. A lower proportion of the CVC-BSIs were caused by CONS in 2006 (42%) compared to 1997 (73%). Online data entry has facilitated participation in this new surveillance system. The feasibility of national surveillance for CVC-BSIs in ICUs has been established.

#### 07-P037

##### EFFECTS OF AN ENVIRONMENTAL SERVICES PROFESSIONAL TRAINING COURSE AND CLEANING PRODUCTS ON THE RATES OF INFECTION SEEN AT SUBURBAN HOSPITAL

R Smith, R Dufault, C Harris

<sup>1</sup>Suburban Hospital, Bethesda, Md, United States, <sup>2</sup>Food and Drug Administration, Rockville, Md, United States

**Objective:** To study the effect of a formal, 8-hour training course for Environmental Services personnel, and the addition of a new disinfection product, on the overall healthcare associated infection rate.

**Setting:** Mid-sized suburban tertiary care hospital in Maryland.

**Study design:** Prospective and retrospective, controlled study. One hospital served as its own control, by measuring the data points both before and after implementation of the training and incorporation of the new cleaning product.

**Interventions:** Eight-hour training program for E.S. personnel; introduction of Oxivir TB (Accelerated Hydrogen Peroxide) as the hospital approved cleaning and disinfection agent 6 months after completion.

**Outcome measures:** The primary efficacy endpoints were the changes in overall monthly infection rates in the hospital, as measured by changes in antimicrobial use rates for a twelve month period before the study initiation as compared to the six months after implementation of the eight-hour training course, and the six months after implementation of the eight-hour training course combined with the use of Oxivir TB. Other endpoints that were evaluated were: Healthcare associated urinary tract infection rates; Length of stay for urinary tract infections; Central venous catheter related blood stream infection rates in the ICU; Length of stay for blood stream infections; Healthcare associated pneumonia rates; Length of stay for pneumonias; Ventilator associated pneumonia rates in the ICU.

**Results:** The overall effect on antibiotic use rates for the entire period before any change in ES training or products (August 2004-July 2005) were compared to the rates after the changes (August 2005-July 2006). There was an average decrease of 13.6%, and statistically significant reduction in antibiotic use rate for the post-training/Oxivir TB period ( $p=0.0065$ ).

**Conclusion:** The use of a structured, comprehensive training program for ES personnel in hospitals, in addition to a cleaning product that requires less contact time, can have a significant impact on the healthcare-acquired infection rate in hospitals.

#### 07-P038

##### POLYMER CONTAINING RESPIRATOR OFFERS ENHANCED PROTECTION FOR EXPOSURE TO AIRBORNE VIRAL THREATS

A. Staffa, M. Ferland, M.E. Sans Cartier, P.J. Messier, S. Bourget; *Triosyn Research, Mirabel, QC, Canada*

**Background:** Several airborne viral pathogens present a worldwide threat to the health of communities (SARS outbreak, avian influenza). These events have brought increas-

ing attention to the level of respiratory protection available against aerosolized viruses. Devices such as SCBAs or PAPRs provide the highest possible level of protection, but do not allow easy stockpiling and their use might not be realistic in all situations. Therefore, recommendations mostly aim at more practical and available solutions such as particulate respirators; typically, NIOSH-certified N95 respirators in situations suspected of involving an airborne infectious hazard. Such certification requires a filtration efficiency of 95% against an aerosol of inert particles with a mean particle size of 0.3 µm. As electrostatics enhance filtration efficiency, most respirators are manufactured using electrostatically charged filter media, and it was recently reported that the most penetrating particle size through such charged media shifts toward the nano-sized range. Most viruses of pathogenic concern are nano-sized particles.

An iodinated polymer was combined with the mechanical filtration equivalent of a standard respirator. A self-contained testing system was also designed to evaluate full-scale respiratory protection devices against live aerosolized viruses.

**Methods:** The Iodinated Polymer Containing (IPC) P95 respirator and other NIOSH-rated respirators were evaluated for their Viral Reduction Efficiency (VRE) using the Bio-Aerosol Test System (BATS). Suspensions of either a surrogate (MS2 coliphage) or an animal virus (influenza A H1N1) were aerosolized using Collison nebulizers. Full-sized respirators were attached to sampling ports and the bioaerosol was drawn through the test articles at 85.0 LPM. Testing was performed at ambient and various environmental conditions representing end-use situations.

**Results:** At ambient conditions, the IPC respirator reduced aerosolized concentrations of MS2 coliphage by 4–5 logs, translating into VRE results of 99.99%–99.999%. For comparison, standard P95 and N99 respirators showed VRE values averaging 99%. Similar results were obtained against influenza A.

**Conclusions:** The BATS apparatus has proven to be an efficient tool in assessing the VRE of respiratory protection devices against live aerosolized viruses. The inclusion of a biocidal polymer has been shown to improve the VRE performance of the IPC respirator.

### 07-P039

#### VENTILATOR-ASSOCIATED PNEUMONIA IN RESIDENTS CHRONICALLY VENTILATOR DEPENDENT

M.A. Noble, J.I. Ratzlaff; *Vancouver Coastal Health, Vancouver BC, Canada*

**Objectives:** 1) To determine the incidence of and risk factors for Ventilator Associated Pneumonia (VAP) in residents chronically ventilator dependent. 2) To examine ventilator care practices and change/modify as necessary.

**Method:** Prospective surveillance on a 22-bed specialized respiratory unit for a cohort of 20 residents chronically ventilator dependent, was followed over a period of four years, from Feb 03 to Feb 07. Residents have an average age of 53. The duration of years ventilated is three months to 50 years. Diagnosis of VAP was based on clinical, radiological and microbiological evidence. A flow sheet as a tool to document secretion assessment was initiated for one month to measure the tenaciousness, volume and required frequency of suctioning. This tool was designed to assist in the detection of people likely to become chronic aspirators.

**Results:** VAP incidence rate was 0.9 per 1000 ventilator days for the first two years and 1.03 per 1000 ventilated days for the entire four years. 29 cases of VAP were identified in 18 residents. Eight of the 18 residents had two or more episodes. Those residents with copious secretions and a tendency to aspirate had recurrent episodes of pneumonia. No single organism was predominant which was different than organisms found in the collective population. With the exception of one episode (likely pseudo-clustering), there was no evidence of clustering.

**Conclusions:** The prevalence of VAP can vary broadly based upon the definition, population and method of data collection. Developing diagnostic tools and criteria for diagnosis of VAP may be a challenge in individuals sustaining prolonged ventilation. The rate of 0.9–1.03 per 1000 ventilator days is similar to reported rates in prolonged ventilation (2.0 per 1000 ventilation days, Mulligan, 1991), but appears low when compared to adult intensive care unit (ICU) VAP rates. ICU rates vary depending on the method of calculation (22.8–42.8 per 1,000 ventilator days (Eggimann, 2003) and 18.8 per 1000 ventilator days (Wojkowska-Mach, 2006)). VAP is rare in Residents chronically ventilator dependent. Cases appear to be independent of care practices, equipment, duration of ventilation and season. The single most important factor appears to be an individual propensity for aspiration.

### 07-P040

#### VIRAL NOSOCOMIAL GASTROENTERITIS: A STUDY OF THE EPIDEMIOLOGY AT A LARGE TERTIARY PEDIATRIC CENTRE

*The Hospital for Sick Children, Toronto, Ontario, Canada*

A Al-Rezqi, JB Gubbay, M Hawkes, L White, SE Richardson, A Matlow

**Background/objectives:** To describe the viral etiology and clinical epidemiology of nosocomial viral gastroenteritis (NVG) at a tertiary pediatric hospital and identify any changes at this institution over the last 2 decades.

**Methods:** Retrospective review of all patients with laboratory confirmed NVG as identified through infection control surveillance, from January 1, 2004–December 31, 2005. Demographic data were collected by electronic health records review. Data were evaluated using descriptive statistics; parametric and non-parametric tests were performed using SPSS software.

**Results:** 142 episodes of NVG were found among 133 patients, occurring in 0.48/100 admissions and 0.67/1000 patient days. The most commonly detected pathogen was torovirus (66% of episodes), followed by rotavirus (18%), adenovirus (9%), norovirus (4%), and astrovirus (1%). The median age was 2 years; 42% of were under 1 year of age. 68% of patients were in diapers and 57% received enteral feeding. The median duration of diarrhea was 6 days, with a trend toward longer duration in immunocompromised

patients ( $p=0.090$ ). 56% of patients had undergone surgery and 41% were immunocompromised. 89% of patients received antibiotic therapy prior to their episode of diarrhea, and antibiotic use was associated with a surgical admission (odds ratio 4.0,  $p=0.042$ ). The age of children infected with rotavirus (median 6 months, range 3 months to 13 years) was significantly less than that for torovirus (median age 3 years, range 1 month to 17 years;  $p=0.013$ ). Among immunocompromised children there were fewer cases of rotavirus ( $p=0.013$ ), and a trend toward more torovirus ( $p=0.059$ ). 75 cases (53%) were epidemiologically linked in 32 separate clusters (median cluster size 2, range 2 to 4). Overall, the rate of nosocomial diarrhea decreased over the study interval ( $p<0.001$ ). The NVG rate was 0.63/100 admissions prior to March 2005, after which it fell to 0.22/100 admissions ( $p<0.001$ ) when enhanced infection control precautions were instituted in response to an outbreak of vancomycin resistant enterococcus (VRE).

**Discussion:** As documented in a 1993–1995 study at this hospital, torovirus is the most commonly identified virus in NVG at this hospital. Its absence from a 1985 study at this institution is due to the fact that it had not yet been reported as a human pathogen. Admission for a surgical procedure, enteral feeding, immunocompromised status and antibiotic use appear to be risk factors for NVG. Half of the NVG cases at this hospital were epidemiologically linked, and a significant reduction in NVG occurred after institution of enhanced infection control practices due to an outbreak of VRE. Improved education and surveillance for NVG will lead to a further reduction in this problem.

### 07-P041

#### DEVELOPMENT AND IMPLEMENTATION OF INFECTION PREVENTION & CONTROL CORE COMPETENCY CERTIFICATION IN A LARGE TERTIARY TEACHING HOSPITAL

Catt, B.\*; Callery, S., Middlehurst, J., Vearncombe, Dr. M., *Sunnybrook Health Sciences Centre, Toronto, Ontario*, Barry, C., *Ministry of Health and Long Term Care, Toronto, Ontario*

**Issue:** The Ontario Expert Panel on SARS (Severe Acute Respiratory Syndrome) and Infectious Disease Control (2004) indicated that healthcare providers must be educated in Infection Prevention & Control (IP&C) practices and that a system-wide culture change was required. Sunnybrook and Women's College Health Sciences Centre (SWCHSC) determined that an IP&C Core Competency training and certification program would meet the educational requirement. The curriculum needed to be applicable and practical for all 8,000 HCWs with different educational levels and job requirements for the 3 geographically different locations. Recertification would be done every 2 years.

**Project:** Administration support incorporated a policy requiring all SWCHSC HCWs who have direct patient contact including trainees and students to have mandatory core competency certification. A multidisciplinary committee was formed and included content experts and key stakeholders to plan and develop the curriculum. The core competency certification sessions began in April 2004 and were piloted for 8 weeks in a busy ICU. The two-hour information sessions included a pretest to evaluate existing knowledge; a video of IP&C practices; an interactive demonstration of personal protective equipment (PPE) (donning and removal); a discussion and a post-test. The information included hand hygiene, PPE, additional precautions, sharps injury prevention, and reinforcement of healthy workplace policy. The inclusion of pre- and post-test was to increase active learning and allow evaluation of the program. All staff must achieve 100% (post-test) and demonstrate proficiency in donning and removal of PPE to acquire their certification. The names of the HCWs and their scores were entered into a central database.

**Results:** In total, 205 sessions were offered between June 2004 and December 2006 with 6,955 staff certified in core competencies. Ten IP&C professionals were actively involved in the provision of these sessions. In 2004, 95 sessions were offered with 3,694 staff certified. In 2005, 64 sessions were held with 1,569 staff certified. In 2006, 46 sessions were provided with 1,692 staff certified. Results from the pre-test identified zero HCWs recorded a perfect score. Results from the post-test identified 6,954 HCWs achieved 100%. Based on the feedback the sessions were streamlined to 45-minute sessions.

**Conclusions:** The success of this project was a multidisciplinary team approach. We were faced with challenges to provide the most effective means to educate all staff. Pre-test results identified the need for education in IP&C core competency. The post-test results showed the certification programme met our objectives. Taking on the challenges of developing core competency certification program placed IP&C in an ideal situation to move forward with newer initiatives such as e-learning and engaging in partnerships with other academic centres and the Ontario Ministry of Health.

### 07-P042

#### SYNDROMIC SURVEILLANCE OF DIARRHEA AND FEVER IN A RADIATION/MEDICAL ONCOLOGY UNIT

Jinnah F\*, Callery, S, Vearncombe, M, Sunnybrook Health Sciences Centre, Toronto

**Background:** Diarrhea and fever are common symptoms among oncology patients. Therefore, radiation/medical oncology units often have difficulty recognizing the onset of unusual activity, such as an outbreak. To allow early outbreak recognition for timely implementation of control measures, Infection Prevention and Control (IP&C) requires a baseline rate for diarrhea and fever.

**Objective:** To determine the baseline rate of diarrhea and fever in a radiation/medical oncology unit and to establish a critical point at which an outbreak might be considered and additional investigation undertaken.

**Methods:** All patients admitted to a 36 bed radiation/medical oncology unit were prospectively followed for symptoms of diarrhea and fever for 2 months.

*Diarrhea Study Period:* June – July 2006

*Fever Study Period:* December 2006 – January 2007

*Case definition of diarrhea:* New onset of diarrhea (e.g.  $\geq 3$  loose stool/watery bowel

movements in a 24 hrs period) that is unusual or different for the patient; and no other recognized etiology for diarrhea such as laxative use, inflammatory bowel diseases or other etiology.

**Case definition of fever:** A single temperature of  $>38.3^{\circ}\text{C}$  or 2 consecutive temperature readings of  $>38^{\circ}\text{C}$  within 4 hrs

**Case finding:** IP&C performed daily surveillance of the patient unit. The unit also notified IP&C of any new onset of fever or diarrhea. All cases were reviewed to determine if an infectious process caused the symptoms and if additional precautions were required.

**Results: Diarrhea:** For the two month period the incidence rate was 20.29 cases/1000 patient days or 426.97 cases/1000 admissions. IP&C was notified and stool specimens were sent for *C difficile* toxin in 57.9% of the cases. *C difficile* toxin was detected in one case.

**Fever:** For the two-month period the incidence rate was 23.52 cases/1000 patient days or 455.45 cases/1000 admissions. Droplet precautions were required for 8 patients. The local Public Health Unit reported low influenza activity in the community for the first 6 weeks of the study period. However there was a marked increase in the last 2 weeks of the study period.

**Conclusion:** 42.7% and 45.5% of the patients admitted to a radiation/medical oncology unit developed diarrhea and/or fever respectively. On any given day there may be 3-4 patients symptomatic with diarrhea on this 36 bed unit. The average duration of diarrhea was 2-5 days with a range of 1-10 days. In any given day 3-4 patients may exhibit a fever. The average duration of fever was 2-3 days with a range of 1-5 days. If there are greater than four cases of either fever or diarrhea on the oncology unit on a particular day the possibility of an outbreak should be considered and additional investigation undertaken by Infection Prevention and Control.

#### 07-P043

##### GLOVE-INDUCED CONTACT DERMATITIS; A LITERATURE REVIEW

Luce Ouellet\*, B.Sc.N. D.E.S.S., National Clinical Consultant

**Issue:** Intact skin is the best barrier against microorganisms. The impact of glove-induced contact dermatitis is becoming a concern for occupational health professionals and ICPs. In the literature, many factors are responsible for contact dermatitis. This review will mainly focus on the role of gloves in provoking contact dermatitis.

**Literature review:** 23% of healthcare professionals suffer from glove intolerance. Skin irritations related to gloves are the most reported problems. The main factors related to this issue have been described as allergens contained in natural rubber latex and chemicals used during the manufacturing process, occlusion effect, mechanical irritation, glove Ph level and endotoxin contamination.

**Conclusion:** This review will provide participants with scientific and medical evidences in regard to glove induced contact dermatitis. It is intended to enhance understanding of healthcare personnel as it relates to glove-induced contact dermatitis as well as evolving glove technologies in preventing this occupational hazard and finally, to provide material in a non-commercial format that satisfies the needs of CHICA.

#### 07-P044

##### IMPLEMENTATION OF A MRSA-REDUCTION PROTOCOL LOWERS THE RATE OF MRSA COLONIZATION IN RESIDENTS IN A LONG-TERM CARE FACILITY

Deb Lesyk; *St. Ann's Home, Saskatoon, SK, Canada*

**Issue:** Methicillin-resistant *Staphylococcus aureus* (MRSA) infection costs nearly \$59 million annually (Canadian) [Kim]. Surveillance for MRSA reduces rates of MRSA bacteremia [Shitrit] and could reduce mortality [Cosgrove]. Isolation measures to prevent MRSA spread can lead to social isolation and depression and should be avoided [BC Centre for Disease Control].

**Project:** Two studies using this protocol were performed. Protocol education was provided to residents/family and the nursing staff prior to the intervention. The residents' rooms were disinfected each day with a germicidal detergent. Visitors/staff observed universal precautions. At bedtime residents were cleansed by trained aides with 6 rinse-free alcohol-free 2% CHG cloths. Each morning, clean clothing was provided and 2% mupirocin ointment was also applied to the nares BID. The residents' hair was washed on days 1 and 7. After 7 days, all residents were re-cultured. Three sets of MRSA-negative cultures tested roughly 1 week apart, suggested clearance of MRSA. Screening for recurrence was done monthly for 6 months.

**Results:** In the first study group, 4 of 6 residents were cleared of MRSA at 6 months. Two residents had MRSA clearance on the first 2 cultures, but had reverted by the 3rd culture. It is possible that the return of MRSA colonization in these 2 residents was due to intestinal colonization. In the second study group, 4 of 4 residents had no MRSA on all 3 cultures. The follow-up screening for this group of residents is currently under way.

**Outcomes:** It is possible to eliminate MRSA colonization using cleanings with a 2% CHG-no-rinse alcohol-free cleansing cloth, room sterilization, and nasal mupirocin ointment. No adverse events were reported related to the CHG cloth use. Routine use of the 2% CHG cloth may prevent colonization with MRSA. 2% CHG no-rinse cloths are easy to use.

#### 07-P045

##### A 5-YEAR RETROSPECTIVE REVIEW OF A 10-14 DAY COMBINED SYSTEMIC/TOPICAL TREATMENT REGIME FOR PATIENTS COLONIZED WITH MRSA

Burt, Jo-Anne\* and Murduff, Teri, Lakeridge Health Corporation, Oshawa, Ontario

**Background and objective:** Ministry of Health and Long Term Care (MOHLT) through Provincial Infectious Diseases Advisory Committee (PIDAC) states they cannot

recommend decolonization treatment for MRSA because there is little supporting literature. Simor et al in their randomized control trial concluded a 7-day systemic and topical treatment of colonized patients may successfully decolonized MRSA patients. Lakeridge Health Corporation a four site Community Acute Care Hospital with Complex Continuing Care since 1998, has been treating colonized patients with a 10-14 day combined systemic and topical regime. A 5-year retrospective review was done to assess how the 14-day treatment regime compares to the 7-day treatment regime.

**Method:** Every patient who completed treatment (in hospital- directly observed therapy) according to our regime was reviewed to assess effectiveness of the treatment. A 10-14 day treatment regime included Doxycycline 100mg po daily, Rifampin 600 mg po daily, Intranasal Mupirocin 2% to both nares TID and Chlorhexidine Gluconate 2 or 4% including hair wash. Patients were screened 48 hours post treatment and if negative screened weekly twice more and screening continues weekly for 3 months, biweekly for 3 months, and monthly for 6 months. Patients are not considered truly cleared until 1 year of negatives.

**Results:** A total of 55 patients met the directly observed treatment criteria. 20 patients were lost to follow up. Two patients failed to decolonize (1 after 3 weeks of negatives and one after 7 months) which is a failure rate of 6%. At three months 31(89%) of 35 patients were cleared, at nine months 22 (63%) of 35 patients cleared and at one year 20 (57%) of 35 treated.

**Conclusions:** The 5-year retrospective review of the 10-14 day regime not only concurs with Simor et al, it also shows slightly higher decolonization rate of MRSA at 3 months and 9 months post treatment.

#### 07-P046

##### MULTIDRUG RESISTANT GRAM NEGATIVE BACILLI: A SURVEY OF CANADIAN HOSPITALS PARTICIPATING IN THE CANADIAN NOSOCOMIAL INFECTION SURVEILLANCE PROGRAM (CNISP)

TL Stuart<sup>1</sup>, E Bryce<sup>2</sup>, JV Vayalunkal<sup>1</sup>, M Ofner<sup>3</sup>, A Simor<sup>4</sup>, M Mulvey<sup>5</sup>, G Taylor<sup>6</sup>, M Loebe<sup>7</sup>, J Langley<sup>8</sup>, D Gravel<sup>1</sup>, and CNISP<sup>9</sup>

<sup>1</sup>Public Health Agency of Canada, Canadian Field Epidemiology Program, Nosocomial and Occupational Infections Section, Ottawa, Canada, <sup>2</sup>Vancouver General Hospital, Vancouver, Canada, <sup>3</sup>Public Health Agency of Canada, Nosocomial and Occupational Infections Section, Ottawa, Canada, <sup>4</sup>Sunnybrook and Women's College Health Sciences Center, Toronto, Canada, <sup>5</sup>Public Health Agency of Canada, National Microbiology Laboratory, Winnipeg, Canada, <sup>6</sup>University of Alberta Hospital, Edmonton, Canada, <sup>7</sup>Hamilton Health Sciences Corporation and St. Joseph's Health Care, Hamilton, Canada, <sup>8</sup>IWK Health Centre, Halifax, Canada

**Background/objectives:** Multidrug resistant Gram negative bacilli are a growing concern for hospital infection control programs. The objective of this survey was to understand the burden of 3 different Gram negative bacilli, *Acinetobacter baumannii*, *Pseudomonas aeruginosa* and *Stenotrophomonas maltophilia* in Canadian hospitals participating in CNISP.

**Methods:** A survey with questions regarding routine surveillance, outbreaks, antibiotic susceptibility and the number of isolates reported in intensive care units (ICU) and hospital-wide for each organism was sent to 30 Canadian Hospital Epidemiology Committee (CHEC) members representing 50 CNISP hospitals on October 16, 2006. Data was requested for a 12-month period from April 2005 to March 2006 or the longest 12-month period for which data was available.

**Results:** 29 of 50 hospitals (58%) participated. No hospitals reported routine surveillance for any of these organisms. In total, the hospitals reported two outbreaks of *P. aeruginosa*, one in a bone marrow transplant ward and the other in a neonatal ICU. Two outbreaks of *A. baumannii* were also reported, one in a burn unit and the other in an outpatient dialysis unit. One outbreak of *S. maltophilia* in an outpatient dialysis unit was reported. Within ICUs, the average susceptibility of *P. aeruginosa* to imipenem was 72% (range: 50% - 100%, n=9) and 85% for meropenem (range: 48%-100%, n=6). In comparison, the average susceptibility of *A.baumannii* to imipenem and meropenem was 99% (range: 93%-100% n=6) and 100% (n= 6) respectively within the ICU setting.

**Conclusions:** *Acinetobacter baumannii*, *Pseudomonas aeruginosa* and *Stenotrophomonas maltophilia* have all been reported to be responsible for outbreaks within Canadian hospitals participating in CNISP. Resistance to carbapenems is a concern, particularly for *Pseudomonas aeruginosa*.

#### 07-P047

##### OUTBREAK OF COMMUNITY ASSOCIATED METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS (CA-MRSA) IN A LEVEL III NEONATAL INTENSIVE CARE UNIT (NICU)

MC Orvidas, C Gittens Webber, L Ramage, F Smail, M Loebe; *Hamilton Health Sciences, Hamilton, ON, Canada*

**Issue:** Contain a first-time outbreak of Methicillin Resistant *Staphylococcus aureus* (MRSA) in a Level III Neonatal Intensive Care Unit. The MRSA was determined to be a Pantone Valentine leukocidine (PVL) positive strain. Our Neonatal Intensive Care Unit (NICU) is a 43-bed unit that is physically separated into 5 pods.

**Project:** The index isolate grew in a mixed culture of *Escherichia coli*, *Enterobacter cloacae* and MRSA isolated from a nasopharyngeal aspirate. All babies in the affected pod were screened for MRSA (nares and rectum) and the mother of the index case was also screened (nares and rectum). Mom and baby started on Mupirocin. Extended the screen to include all babies in the unit. A week later a MRSA positive blood culture reported on second baby in the same pod. Parents and sibling of second baby screened for MRSA (nares and rectum). Interventions included designated nursing, skin and handwash audits, letter and MRSA fact sheets given to all parents, intensive cleaning including mobile equipment, mandatory staff in-services, restricted traffic and visitors, triclosan baths and an information letter sent to other hospitals to inform them of the outbreak. Screening for MRSA continued once per week for all babies in the unit and twice per week for those in



the affected pod until 3 weeks passed without further transmission. Screening continued once per week until all babies were discharged.

**Results:** Point prevalence screening identified a total of two more babies colonized with PVL+ MRSA. No further cases were identified.

**Lessons learned:** Compliance with strict hand hygiene is necessary for staff as well as parents. The MRSA in this outbreak was likely introduced to the unit on the hands of a parent who was non-compliant to hand washing. Designated nursing is difficult to maintain. HCWs have to be empowered to challenge anyone when they observed a breach in infection control practices. Communication with the right stakeholders is critical. Senior Administration, Risk Management, Customer Support Services, Infectious Diseases, NICU including front line staff, Neonatologists and the Laboratory came together to implement the interventions necessary to contain the outbreak. Decolonization results with mupirocin and triclosan baths were inconsistent.

## 07-P048

### PSEUDO HEALTHCARE TRANSMISSION OF HCV IN A RENAL TRANSPLANT PATIENT

D Hobbs<sup>1</sup>, A Andonov<sup>2</sup>, P Campbell<sup>1</sup>, K Doucette<sup>1</sup>, B Lee<sup>3</sup>, G Taylor<sup>1</sup>

<sup>1</sup>University of Alberta, Edmonton, Alberta, Canada, <sup>2</sup>National Microbiology Laboratory, Winnipeg, Manitoba, Canada, <sup>3</sup>Provincial Laboratory for Public Health, Edmonton, Alberta, Canada

**Background/objectives:** HCV acquisition in a previously HCV sero-negative renal transplant patient was investigated. A 58-year-old male originally from Vietnam developed ESRD due to membranous glomerulonephritis resulting in renal failure requiring hemodialysis. He had multiple medical interventions including a renal transplant in the 3 months preceding his conversion to a HCV antibody (Ab) seroconversion. The patient denied traditional risk factors for HCV. The objective of the investigation was to determine how and when he acquired HCV.

**Methods:** The infection control unit conducted an epidemiologic investigation surrounding the treatment of this patient. Infection control practices were reviewed on the units where he was treated. Patient contacts were traced and their HCV status was reviewed using the provincial laboratory data base. Patients who were known to be HCV positive had their HCV genotyped by sequencing of the 5' non coding region with the TRUGENE assay (Bayer Healthcare). Blood samples from the case patient and contacts who have the same genotype were referred to the National Microbiology Laboratory (NML) for further sequencing and phylogenetic analysis. In a separate investigation, Canadian Blood Services tested each of the patient's blood donors individually.

**Results:** The patient was HCV Ab and RNA (-) in the months preceding his transplantation. He developed acute hepatitis post-transplant and was found to be HCV RNA (+) with subsequent HCV seroconversion. A number of procedures linked to health care associated HCV transmission were performed pretransplant, including hemodialysis three times a week, two endoscopic procedures, a fistuloplasty, blood transfusions and the renal transplant with two inpatient admissions, and an operating theatre and a recovery room stay. There were 272 potential patient contacts identified. 12 of the contacts were HCV(+), and two had the same HCV genotype (1b) as the patient. While the HCV genotype of the two contacts were confirmed to be 1b at the NML, further sequencing of the core and NS5B regions of the HCV strain from the patient demonstrated that it was genotype 6 variant, which had been previously described in Vietnam.

**Conclusions:** Despite previous negative serology and RNA these results imply reactivation rather than acute health care related transmission of infection.

## 07-P049

### ENHANCED POPULATION-BASED SURVEILLANCE FOR CMRSA10 (USA300) IN A LARGE CANADIAN HEALTH REGION

M Charlebois<sup>1</sup>, W Lau<sup>1</sup>, J MacDonald<sup>1</sup>, J Conly<sup>2</sup>, D Gregson<sup>2</sup>, K Hope<sup>1</sup>, D Strong<sup>1</sup>, T Louie<sup>2</sup>, M Louie<sup>3</sup>

<sup>1</sup>Calgary Health Region, Calgary Alberta, Canada, <sup>2</sup>University of Calgary, Calgary Alberta, Canada, <sup>3</sup>Provincial Public Health Laboratory, Calgary Alberta, Canada

**Issue:** High numbers of cases of a community-associated MRSA strain, CMRSA10 (USA300) that was first investigated and reported as an outbreak in 2004, continue to occur in a large Regional Health Authority (RHA) in Alberta. When follow-up of CMRSA10 cases was discontinued provincially, public health officials in the RHA continued to carry out case follow-up, using a local enhanced surveillance questionnaire to identify and monitor possible risk factors for exposure, and to develop and implement public health MRSA prevention and control measures.

**Project:** An enhanced surveillance questionnaire was developed based on known risk factors for CMRSA10 infection: history of homelessness; incarceration and/or illicit drug use; participation in sports activities; use of personal services and other factors identified in the literature. Cases of CMRSA10 identified through routine strain typing of MRSA clinical isolates (carried out by the Provincial Public Health Laboratory) were contacted and administered the questionnaire, with direct data entry into a Microsoft Access 2000 database. A descriptive analysis of the data has been made and will be repeated at regular intervals to identify themes requiring outbreak and infection prevention and control measures.

**Results:** The mean number of cases per month of CMRSA10 was 46 (range 16 to 60) over the period from July 2006-January 2007. The majority of cases continued to have one or more of the risk factors initially identified in the regional 2004 outbreak investigation i.e. homelessness, incarceration or illicit drug use. Male cases were more common than female with the majority of cases reported in the 30-59 age group.

**Lessons learned:** Data entry at the time of the interview is useful in providing information that is more current at the time of a query. However, data collection in risk groups is a challenge especially for those who are incarcerated or homeless. With multiple individuals placing entries into a database with free text capacity it is highly important to have clear data dictionary terms to ensure consistency for reliable and valid analysis.

## 07-P050

### COMMUNITY-ASSOCIATED METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS (CA-MRSA) OUTBREAK IN YOUR HOSPITAL: NOT IF, BUT WHEN?

T Doyle, M Taylor, N Bruce, KN Suh, V Roth; *The Ottawa Hospital, Ottawa ON, Canada*

**Background:** The prevalence of MRSA, including community-associated strains such as CMRSA-10, continues to increase throughout Ontario. In 2006 CMRSA-10 was the second most frequently encountered strain in eastern Ontario, accounting for 28% of all new cases. There are no reported nosocomial outbreaks of CA-MRSA in Canada. The changing epidemiology of MRSA highlights the need for hospital screening processes to incorporate risk factors for both hospital-acquired and CA-MRSA.

**Objective:** To describe a nosocomial CA-MRSA outbreak on a combined 39-bed surgical and intermediate trauma unit.

**Methods:** An MRSA outbreak was detected in the surgical and trauma unit in July 2006, and persisted until October 2006. An investigation was undertaken. Point prevalence studies were conducted throughout the outbreak. Charts of all MRSA positive patients were reviewed. Molecular analysis of MRSA isolates was performed by pulsed-field gel electrophoresis (PFGE).

**Results:** A total of 20 MRSA positive patients were identified. Investigation revealed many factors contributed to this outbreak, including incomplete MRSA admission and surveillance screening, delay in contact screening, and lack of routine practices in a high acuity crowded patient care unit. PFGE results demonstrated 3 circulating strains of MRSA, one of which was CA-MRSA (CMRSA-10). CMRSA-10 was present in 5 patients; the index case was thought to have had at least one risk factor reported to be associated with CA-MRSA infection. The outbreak was terminated with enhanced education and rigorous attention to environmental disinfection. Admission screening policies were subsequently revised to include risk factors for CA-MRSA.

**Conclusion:** This outbreak, which included a CA-MRSA strain, highlights the need for admission screening policies which reflect the evolving epidemiology of MRSA. The fundamental principles of outbreak management such as staff education, proper screening, routine practices and environmental cleanliness remain essential.

## 07-P051

### TOOLS OF THE TRADE: CREATION OF A STANDARDIZED INFECTION CONTROL RISK ASSESSMENT TOOL

I Albert, C Doroshuk, M Kristel, T Pfeiffer, S Wilson, S Fauchon, D Hobbs

<sup>1</sup>Regional Infection Prevention and Control, Edmonton, Alberta, Canada, <sup>2</sup>Royal Alexandra Hospital, Edmonton, Alberta, Canada, <sup>3</sup>University of Alberta Hospital, Edmonton, Alberta, Canada, <sup>4</sup>Sturgeon Community Hospital, St. Albert, Alberta, Canada, <sup>5</sup>Misericordia Hospital, Edmonton, Alberta, Canada, <sup>6</sup>Grey Nuns Community Hospital, Edmonton, Alberta, Canada

**Issue:** Facilities Planning and Construction initiated a request to Regional Infection Prevention and Control for a standardized tool for Infection Control Risk Assessment (ICRA) and related hoarding practices. This was to gain a better understanding of the associated infection prevention pre-construction or renovation planning costs that must be taken into account before a project can be proposed. It is well understood that existing protocols and guidelines referred to when providing ICRA recommendations are crucial to patient, staff, and visitor safety. The difficulty in project planning is the variable degree of preventive measures required for each new project.

**Project:** A regional working group was formed with Infection Prevention and Control representation from all sites. A review of current ICRA practice within the region and associated (site specific) documents in use was performed. The group assessed available templates for risk analysis and analyzed them for utility. CSA guidelines were referenced and incorporated. The intent was to create a standardized tool for the assessment of ICRA within the region. The tool needed to be specific enough to appropriately guide Facilities Planning and Construction on each project, yet concise and generic to a degree that made implementation at each regional site feasible. The resulting tool would also serve as a record of the project, the stakeholders, and Infection Prevention and Controls recommendations.

**Results:** The tool is comprised of two parts. The first part is an Infection Control Risk Analysis page recording the project, timeline, stakeholders, and written preventative measures analysis. The second part of the form highlights CSA rationale for the determined preventive measures analysis, and a clear and concise listing of the required preventative measures for each ICRA.

**Lessons learned:** The creation of ICRA documents requires representation from all sites to be regionally acceptable. The CSA guidelines must be incorporated, but alone may not be sufficient to address site specific challenges. Standardizing the management of construction, renovation or repair projects should allow greater compliance to the spirit of the CSA guidelines that ultimately supports the work of IP&C.

## 07-P052

### SHOW OR TELL HAND HYGIENE CAMPAIGN

Pamela Siddall, JoAnn Kieller, Terri Rybacki-Anisko, Diane Weinwurm; *Trillium Health Centre, Mississauga, Canada*

**Issue:** *Show or Tell* is a unique program designed to place the accountability of hand hygiene on the health care provider. Health care providers, support services and volunteers are asked to *Show or Tell* patients they have performed hand hygiene before beginning care. The campaign is built on a dynamic concept intended to have a positive impact on patient care and change the culture of the healthcare environment.

**Project:** The campaign is a collaborative effort engaging frontline staff, senior

**MULTI-PURPOSE**

# EQUIPMENT WASHER

**NO OBLIGATION 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 A Time • Direct from Factory • Customized in the U.S.A.

OVER 1300 WASHERS NOW IN USE!

Washes Two Wheelchairs At A Time • Direct from Factory • Customized in the U.S.A. • Portable • All Stainless Steel • 5 Minutes Per Cycle • Washes Two Wheelchairs At A Time

CALL US TOLL FREE 800-717-3626

**FREE NO OBLIGATION TRIAL!**  
www.medcoequipment.com

**MEDCO EQUIPMENT, INC.**  
Made in U.S.A. Since 1976

administration, volunteers, public relations, project management and the infection control team. It is an interactive educational program. An on-line learning package is accessible on the infection prevention and control intranet site. Promotional material is available to support the campaign. Champions are identified to enable the delivery and sustainability of the program. Surveys for patients and staff are used to evaluate the program. A pilot was run for 6 weeks to test the campaign and allow for feedback from staff.

**Results:** The trial was successful. Patient surveys collected from the 6-week trial concluded patients did have a greater satisfaction with regard to their care in knowing the healthcare providers had just performed proper hand hygiene. 80% (49/61) patients surveyed always liked to hear/see their healthcare providers perform hand hygiene. Staff evaluations of the campaign concluded staff felt it did increase their awareness of hand hygiene and enhanced their job satisfaction in knowing patients felt safe. 100% of staff surveyed either strongly agreed or agreed the campaign was a positive experience.

**Lessons learned:** To achieve the desired outcomes a successful hand hygiene campaign must be a collaborative effort and have the support of senior administration. Staff involvement from the planning stages increases the likelihood of the acceptance of the program by other staff members. The planning phase of a comprehensive program is vital and the leadership provided by the experts in project management is essential. Timelines and accountabilities will ensure a project maintains its momentum. Cultural change takes time and the project requires continuous innovative ideas, feedback and input from staff members to achieve sustainability.

WATCH FOR ON-LINE  
**ABSTRACT SUBMISSIONS**

for the  
**2008 National Education Conference**

www.chica.org

## ABSTRACT AND PRESENTATION AWARDS

An award for the best abstract for a first-time presenter, as chosen by the 2007 Abstracts Committee, will be presented at the 2007 conference in Edmonton. Attendees will have a chance to vote for the Best Oral Presentation, and Best Poster Presentation. Awards to be presented at the Closing Ceremonies, Thursday, June 14.





# Évolutionnaire Evolutionary

**V-TIPS** **BIOSCRUB** **NEODERM** **STERIGEL+** **REVIVE**  
EVOLUTION EVOLUTION EVOLUTION EVOLUTION EVOLUTION

Solumed présente Évolution, la dernière révolution pour l'asepsie préopératoire des mains et des avant-bras. La gamme de produits Évolution vous permet d'obtenir, à meilleur prix, un effet antibactérien supérieur aux méthodes de brossage actuelles tout en améliorant la santé de votre épiderme.

Solumed presents Evolution, the latest revolution in preoperative hand and forearm asepsis. The Evolution line of products offers economical antibacterial action superior to current preoperative brushing methods while improving skin condition.



**EVOLUTION**  
SOLUMED

Source: Calgary Health Region, Infection Prevention and Control, Acute Care  
For additional information, please contact:

Debbie Lam-Li, Infection  
Prevention and Control,  
Foothills Hospital,  
(403) 944-2032  
debbie.lam-li@  
calgaryhealthregion.ca

Janice Stoesz, Infection  
Prevention and Control,  
Peter Lougheed Hospital,  
(403) 943-4026  
janice.stoesz@  
calgaryhealthregion.ca

Pamela Ritchie, Infection  
Prevention and Control,  
Rockyview General Hospital,  
(403) 943-3269  
Pamela.ritchie@  
calgaryhealthregion.ca

## Calgary Health Region infection prevention and control recommendations for rehabilitation services

### Introduction

Rehabilitation medicine professionals have extensive hands-on contact with their clients/patients, and have concerns regarding infection prevention and control practices within their scope of therapeutic activities. These recommendations evolved as an effort to address some of the infection prevention and control issues in the Calgary Health Region. Through sharing this working document, it is our intent to stimulate exchange of ideas and identify potential need for infection prevention and control guidelines in rehabilitation medicine.

### Basic principles

1. Each discipline must be aware of the specific infection control needs of the patient.
2. It is necessary to balance the individual patient's rehabilitation objective with the objective of protecting other patients and staff. This may require modification to part or all aspects of the individual patient's treatment plan.
3. Factors such as surgery, trauma, burns, medications, advanced age, and underlying co-morbidities (e.g., diabetes, AIDS) may lead to an increased risk of infection associated with immobility, incontinence and skin breakdown. Elderly

and immunodeficient patients often have recurrent, severe infections involving unusual organisms. Early recognition of signs and symptoms of infection leads to prompt investigation and treatment.

4. Regardless of diagnosis, perform routine practices for all patients at all times. Major aspects of routine practices are proper hand hygiene and the appropriate use of personal protective equipment (i.e., gloves, gowns, masks, face shields, goggles) to prevent contact with blood, body fluids, secretions, excretions and mucous membranes.
5. Typically patients are not routinely screened for epidemiologically important pathogens (e.g., MRSA, VRE), therefore, assessing patients' compliance to hand hygiene, respiratory etiquette and personal hygiene is essential. Protecting skin integrity and wound management are major considerations.
6. Prior to initiating each therapy session, assessment for additional precautions is required. Consider:
  - How much care (contact and duration of therapy) the patient needs
  - The amount of contact with body fluids and non-intact skin
  - The patient's ability to control secretions or excretions
7. Symptom-based evaluation allows appropriate triage. Transmission-based isolation precautions (airborne, droplet and contact isolation) can help decrease the potential for transmission of infection.
8. Patients often mingle in common waiting areas and move independently through therapy areas, thus increasing the potential for communicable disease exposures. Therefore, attempt to reduce waiting time, educate patients and staff about communicable diseases, provide mask, hand-washing sinks and alcohol hand rub, and immunize patients and staff for vaccine-preventable diseases.
9. Soiled environmental surfaces and equipment can act as reservoirs for the growth of pathogenic organisms. Transmission can occur via contaminated equipment or indirectly via the hands of health care workers who have come in contact with soiled surfaces. Regular and conscientious environmental cleaning and proper disinfection of all patient equipment

and office equipment (e.g., phones, keyboards etc.) is a key factor in reducing the potential contribution of the environment to the risk of nosocomial infection.

10. Improper storage of and handling of supplies could result in contamination from environmental factors, therefore, must adhere to established guidelines for proper care and storage of supplies.

## Guidelines and recommendations

### Hand hygiene

- Provide hand hygiene facility/product, i.e., a handwashing sink and/or alcohol hand rub.
- Staff, patients, family and caregivers assisting in rehabilitation should perform hand hygiene prior to entering and leaving the gym and therapy area.
- Post hand hygiene signage/instruction at the entrance to the rehab gym, therapy area, in waiting rooms, by hand-washing sinks and alcohol hand rub dispensers.
- If patients are unable to do hand hygiene (e.g., cast), then clean and disinfect surfaces and equipment immediately after use on that patient.

### Personal protection

- Make personal protective equipment (gloves, gown, mask, face shield, goggles) readily available for staff, with proper disposal measures such as garbage bins and laundry bags in place for used or soiled items.
- Use personal protective equipment as per routine practices, e.g., wear mask for personal respiratory protection when performing or assisting activities such as suctioning and cough induction; wear gloves and gowns when in direct contact with a patient who has uncontained blood, drainage, sputum, feces or urine; wear face shield or mask and goggles if splashing is anticipated.
- Use personal protective equipment as indicated on the isolation signs when doing in-room assessment or therapy.

- Wear clean uniform daily. Do not use soft cloth covers on stethoscope. Wipe diaphragm of stethoscope with an alcohol swab between patients.

### Patient education

- Instruct patient on proper hand hygiene and respiratory etiquette.
- Focus teaching of patient, family, caregivers on personal hygiene, skin care and recognition of signs and symptoms of infection.
- Ensure patients inform staff when they have finished using the equipment so proper cleaning and disinfection can be done in a timely manner.
- Include in patient teaching the proper cleaning and disinfection of take home adaptive devices and special equipment.
- Inform patient of the risk of multi-drug resistant organism (e.g., MRSA, VRE) and the measures needed to help in preventing transmission to others (i.e., frequent hand hygiene, maintaining cleanliness of equipment/wheelchairs etc, personal hygiene and respiratory etiquette).
- Inform patients of the designated parking area for assistive devices (e.g., wheelchairs, walkers), and to avoid touching other patients' assistive devices.

### Patient care

- Establish good communication with patient care areas, referring physician offices and clinics to ensure identification of patient isolation needs before patients are presented to rehabilitation services.
- For all inpatients, prior to exiting their room, present patient as a 'clean package', i.e., patient has clean hands and clean clothing. 'High touch' surfaces (e.g., wheelchair handles; arm rests) must be cleaned and disinfected with disinfectant (e.g. Quaternary ammonium compounds) wipes.
- Triage patients according to their risk of transmission of infection. As patients' health conditions may change, consider each therapy session individually and triage each patient prior to their therapy session.

- Follow infection prevention and control recommendations listed in Table 1.
- Permit patients belonging only to Group A to participate in group therapy. When conducting group therapy, adhere to the following:
  - Ensure participants do hand hygiene immediately before and after the session.
  - Clean and disinfect all equipment (e.g. walkers, wheelchairs) prior to, and after the session.
- Shared equipment that is a challenge to clean between use (wax bath, interferential machine), ensure patient is assessed thoroughly that they have intact healthy skin. Pre-wash area to be treated with soap and water prior to contact with the equipment.

### Wound care

- Adhere to wound care/dressing protocols when providing wound care, including using a clean pair of scissors for each dressing removal. When feasible, pre-cut pieces of tape to be placed on the tray prior to wound care.
- When using multi-use medication, do not dispense directly on the patient. First decant aseptically into a labelled small sterile container for dedicated patient use.

### Equipment cleaning and storage

- Clean and disinfect therapy devices, such as gym equipment and rehabilitation items, according to established cleaning/disinfection schedule and protocol. (Attachment 1, example)
- Clean and disinfect surfaces and items/equipments when visibly soiled.
- Clean and disinfect 'high touch' components of gym equipment, such as handles, foot pedals, and seats, in between patients with a disinfectant wipe.
- Clean and disinfect rehabilitation items, such as ambulation equipment, balls, and other devices with a disinfectant wipe in between patients.
- Devise a system to identify the clean and dirty (used) equipment/item. Store cleaned equipment and rehabilitation items in a clean designated storage area.

- Whenever applicable, designate devices and equipment for single patient use.
- Use clean towels and cushions/pillows for each patient, not to be shared.
- When purchasing new equipment and furniture for the department, ensure it is easily cleanable by the disinfectant products commonly used in the facility.
- If soils cannot be removed from the soft surfaces (e.g., Velcro pad), replace the soft surface or discard the equipment.
- Clean and disinfect pools and hydrotherapy tubs as per established cleaning and disinfection protocol. Adhere to recommended levels of disinfectant in pools to control organic load, schedule water testing as per public health regulation, and tub cleaning and disinfection as per in-house (Calgary Health Region) standards.<sup>5</sup>

### Environmental cleaning

- Ensure environmental cleaning of treatment areas as per in-house (Calgary Health Region) environmental cleaning standard, including annual cleaning of all surfaces and high dust areas, and changing privacy curtains semi-annually, and immediately if contaminated by dirty hands/gloves or if visibly soiled.<sup>6</sup>
- Use hospital-approved cleaning products.<sup>7</sup>

### Storage of sterile supplies

- Separate clean and dirty areas.
- Sterile supplies should not be stored in therapy areas.
- Clean and sterile supplies should be kept in a dry, clean designated area 8-10 inches from the floor and away from air vents.
- Do not use the item if packaging has been compromised.

### Our experience

We developed a good rapport with rehabilitation service during the process review of their patient care practices. This opportunity for enhanced communication between rehabilitation staff and infection prevention and control practitioners promoted an increased awareness by the rehabilitation staff on infection prevention and control issues, including proper preparation of patient for therapy, and cleaning/disinfection of equipment.

We identified various shared equipment within rehabilitation service that has the potential for infection transmission. It is our intention to establish cleaning/disinfection scheduled protocols performed by knowledgeable personnel. These protocols serve as a resource for training and it encourages compliance. It has been beneficial to areas that have implemented the protocols for over a year.

Table 1. Infection prevention and control recommendations

PATIENT STATUS (includes MRSA/VRE patients)	INFECTION PREVENTION AND CONTROL RECOMMENDATIONS
<b>GROUP A</b> <ul style="list-style-type: none"> <li>• Clean and contained (i.e. patient has clean hands, clothing and transport, all body fluids or secretions/excretions contained by dry intact dressings, drainage system, and diapers) <b>AND</b></li> <li>• Cognitive, cooperative and competent in hand hygiene, personal hygiene and respiratory etiquette <b>AND</b></li> <li>• Non-diarrhea</li> </ul>	<ul style="list-style-type: none"> <li>• No need to restrict patient to in-room assessment/therapy.</li> <li>• Present patient as a 'clean package' (i.e. clean and contained).</li> <li>• Ensure patient perform hand hygiene prior to entering, and leaving gym/therapy area.</li> <li>• <b>With known MRSA/VRE patients, wear gloves and gowns when in close body contact (e.g., lifting, positioning),</b> otherwise no additional precautions or personal protective equipment required.</li> </ul>
<b>GROUP B</b> <ul style="list-style-type: none"> <li>• <b>Uncontained</b> blood, drainage, sputum, feces and urine <b>OR</b></li> <li>• <b>Uncooperative</b> to hand hygiene and personal hygiene practices <b>OR</b></li> <li>• Active communicable disease <b>OR</b></li> <li>• Compromised skin integrity: uncovered rashes, open wounds (e.g., stasis ulcers, burn wound) <b>OR</b></li> <li>• Resolving <i>C. difficile</i> diarrhea or other gastroenteritis (e.g., Norovirus), while still on isolation</li> </ul>	<ul style="list-style-type: none"> <li>• Restrict patients to in-room assessment/therapy with appropriate precautions unless otherwise indicated. The therapy area must be properly prepared for the precautions.</li> <li>• Patients on airborne isolation (e.g., TB, disseminated shingles) must remain in negative pressure ventilation rooms for assessment/therapy.</li> <li>• For patients on airborne/droplet isolation, staff must wear appropriate mask (e.g., N95 mask) as indicated for airborne isolation, and procedure mask for droplet isolation.</li> <li>• Wear gloves and gowns when in close body contact with patient (e.g., lifting, positioning).</li> <li>• If in-room therapy is not possible, schedule appointment last to allow adequate cleaning and disinfection after therapy equipment.</li> <li>• For patients with active communicable diseases, if possible, reschedule appointment when communicable phase is over.</li> <li>• Provide patient dedicated equipment if available.</li> <li>• Identify when sterile equipment is needed.</li> <li>• Clean and disinfect the equipment after each patient use.</li> <li>• Restrict patient from hydrotherapy/aquatic pool use.</li> <li>• Restrict patient from group activity.</li> </ul>

Same Quality. Same Brands. Same People.



The only thing missing is the old name.

**We'd like to introduce you to someone you already know.**

It's official. Scott Paper Limited is changing our name to Kruger Products Limited. As for the exceptional quality, knowledgeable staff, and dedicated team committed to delivering you all the products you've come to know and trust - we decided to leave all of that just the way it was.

Learn more about Kruger Products by calling (800) 665-5610, or visit us at [www.KrugerProducts.ca/afh](http://www.KrugerProducts.ca/afh)

 **Kruger**  
Products

**EMBASSY**  
Supreme

**EMBASSY**

**White Swan**

**ESTEEM**

**Hygiene 2000**

**GreenQuality**

Recognizing rehabilitation service at each hospital serves a different mix of patient groups, thus is unique in its physical setting and workload variance, we anticipate the recommendations developed in this document will continue to evolve to become applicable to all regional healthcare institutions and ambulatory programs within the Calgary Health Region.

This document is a work in progress, and has been well received by both infection prevention and control and rehabilitation services as it serves as a reference for clear directives. We intend to use these recommendations as a basis for future review of infection prevention practices and cleaning/disinfection process in Calgary Health Region Rehabilitation Service.

## References

1. Felix K: Rehabilitation. In Kean LG, editor: APIC Text of Infection Control and Epidemiology. Vol II, Chapter 65; Washington, 2005.
2. CDC and Healthcare Infection Control Practices Advisory Committee (HIPAC). Guidelines for environmental infection control in health-care facilities. US department of Health and Human Services, CDC, 2003.
3. Health Canada, LCDC. Infection control guidelines: handwashing, cleaning, disinfection and sterilization in health care. CCDR supplement vol 24S, December 1998
4. Calgary Health Region Infection Prevention and Control Acute Care infection prevention and control manual, 2005.
5. Calgary Health Region Infection Prevention and Control Standards and recommendations for tub purchase, use, cleaning and disinfection. Mar/2003, revised Dec/2003.
6. Calgary Health Region Infection Prevention and Control Recommendations on environmental standard and frequency of ambulatory clinics and clinical diagnostic/treatment areas. Nov/2003, revised Oct/2004.
7. Calgary Health Region Infection Prevention and Control Guide to equipment and surface cleaning products. Nov/2003, revised Dec/03.
8. Calgary Health Region Infection Prevention and Control Recommendations for in-unit laundry management. Sep/2004, revised May/2005.
9. Vyhldal SK: Central Service. In Kean LG, editor: APIC Text of Infection Control and Epidemiology, Vol II, Chapter 56; Washington, 2005.

### Attachment 1. Example: Cleaning Protocols for Rehabilitation Services (geriatric assessment program)

ITEM EQUIPMENT	FREQUENCY	DISINFECTANT	COMMENTS	ACTION BY
<b>Hydrocolators</b> (hot pack machine)	<b>Exterior:</b> once weekly <b>Interior:</b> once weekly* <b>Maintenance:</b> every 3 months	<b>Exterior/Interior:</b> Quaternary ammonium compounds <b>Maintenance:</b> per manufacturers directions	<b>Exterior</b> <ul style="list-style-type: none"> <li>• scrub all surfaces</li> <li>• allow 10 minutes' contact with disinfectant</li> </ul> <b>Interior</b> <ul style="list-style-type: none"> <li>• drain old water, scrub clean, add disinfectant, drain disinfectant, rinse chest with fresh water after disinfecting</li> <li>• refill with fresh water</li> </ul>	<b>Exterior:</b> Housekeeping <b>Interior:</b> Therapist Assistant <b>Maintenance:</b> Engineering
<b>Ice machine</b>	<b>Exterior:</b> once weekly <b>Interior:</b> once monthly <b>Maintenance:</b> every 3 months	<b>Exterior/Interior:</b> Quaternary ammonium compounds <b>Maintenance:</b> Mechanism: 50-100ppm sodium hypochlorite	<b>Exterior</b> <ul style="list-style-type: none"> <li>• scrub all surfaces</li> <li>• allow 10 minutes' contact</li> <li>• sanitize (dishwasher) scoop daily</li> </ul> <b>Interior</b> <ul style="list-style-type: none"> <li>• empty chest, wipe with disinfect, rinse with fresh water</li> </ul> <b>Maintenance</b> <ul style="list-style-type: none"> <li>• let sodium hypochlorite stand in mechanism 2-4 hrs</li> <li>• drain sodium hypochlorite and flush with fresh water</li> <li>• allow all surfaces to dry before using</li> </ul>	<b>Exterior:</b> Housekeeping, Dietary (scoop) <b>Interior:</b> Therapist Assistant <b>Maintenance:</b> Engineering
<b>Warming cupboard</b>	<b>Exterior:</b> once weekly <b>Interior:</b> every 6 months	Quaternary ammonium compounds	<b>Exterior</b> <ul style="list-style-type: none"> <li>• scrub all surfaces including handles</li> </ul>	<b>Exterior:</b> Housekeeping <b>Interior:</b> Therapist Assistant
<b>Computers</b>	<b>Exterior:</b> once daily	Quaternary ammonium compounds	<b>Exterior</b> <ul style="list-style-type: none"> <li>• Key board and mouse plastic covers that can be cleaned daily</li> <li>• clean all surfaces with disinfectant wipes</li> <li>• allow contact time 10 minutes</li> </ul> <b>Screen</b> <ul style="list-style-type: none"> <li>• per manufacturer and information technology approved wipes</li> </ul>	<b>Work station:</b> Housekeeping <b>Mouse, keyboards (covers), wrist rest:</b> Therapist Assistant
<b>Custom Splinting area</b> <ul style="list-style-type: none"> <li>• splinting area</li> <li>• mould marker</li> <li>• Splints</li> <li>• Splint covers</li> </ul>	<b>All horizontal surfaces:</b> once daily <b>Mould marker and splints:</b> after each patient use <b>Splint covers:</b> wash between patients and when soiled	<b>Horizontal surfaces</b> Quaternary ammonium compounds <b>Splint covers:</b> laundry detergent	<b>Horizontal surfaces</b> <ul style="list-style-type: none"> <li>• allow 10 minutes' contact time</li> </ul> <b>Mould marker and splints</b> <ul style="list-style-type: none"> <li>• clean mould pens used to mark splint between patients with disinfectant wipes</li> </ul> <b>Splint covers</b> <ul style="list-style-type: none"> <li>• wash in washing machine per manufacturer and CHR standard<sup>8</sup></li> </ul>	<b>Treatment area:</b> Housekeeping <b>Equipment:</b> Therapist Assistant

ITEM EQUIPMENT	FREQUENCY	DISINFECTANT	COMMENTS	ACTION BY
<b>Wound care area</b>	<b>All horizontal surfaces:</b> once daily	Quaternary ammonium compounds	<ul style="list-style-type: none"> <li>clean all horizontal surfaces daily</li> <li>after each patient</li> <li>allow 10 minutes' contact time</li> </ul> <b>Scissors</b> <ul style="list-style-type: none"> <li>sterilize or dispose after use</li> </ul> <b>Dressing trays</b> <ul style="list-style-type: none"> <li>dispose or reprocess by Processing</li> </ul>	<b>Exam table, cart:</b> Unit Staff, between patients <b>Therapy area:</b> Housekeeping, once per day <b>Instruments:</b> reprocess by Processing
<b>Cardiovascular area</b> <ul style="list-style-type: none"> <li>Vibrators</li> <li>Stethoscopes</li> <li>Blood Pressure monitors</li> <li>Flutter</li> </ul>	<b>All horizontal surfaces:</b> once daily <b>Vibrator, stethoscope, blood pressure cuff:</b> after each patient use <b>Blood pressure monitor:</b> once weekly <b>Flutter:</b> reprocess by Processing after each patient use	Quaternary ammonium compounds <b>Stethoscope diaphragm</b> <ul style="list-style-type: none"> <li>70% alcohol</li> </ul>	<ul style="list-style-type: none"> <li>allow 10 minutes' contact time</li> </ul>	<b>Therapy area:</b> Housekeeping <b>Equipment:</b> Therapist Assistant <b>Exam table, cart:</b> Unit Staff, when soiled <b>Vibrator, stethoscope:</b> Unit Staff <b>Blood pressure cuff:</b> Unit Staff <b>Blood pressure monitor:</b> Therapist Assistant <b>Flutter:</b> reprocess by Processing
<b>Ortho gym</b> <ul style="list-style-type: none"> <li>Mats</li> <li>Slider boards</li> <li>Plynth beds</li> <li>Bars/rails</li> <li>Wheelchairs</li> <li>Walkers</li> </ul>	<b>All horizontal surfaces:</b> twice daily <b>Wheelchair, walker, slider board:</b> once weekly and between each patient use <b>Plynth bed:</b> between each patient use	Quaternary ammonium compounds	<ul style="list-style-type: none"> <li>allow 10 minutes' contact time</li> </ul>	<b>Gym area, including wheel chairs and walkers:</b> Housekeeping, weekly <b>Equipment:</b> Therapist Assistant and Unit Staff
<b>OT assessment</b> <ul style="list-style-type: none"> <li>Kitchen</li> <li>Bathroom</li> <li>Bedroom</li> </ul>	<b>All horizontal surfaces:</b> once daily <b>Fridge:</b> exterior surfaces once daily, interior once weekly, defrost once monthly. <b>Microwave:</b> interior once daily <b>Bathroom, bedroom:</b> once daily and high touch surfaces after each patient use	Quaternary ammonium compounds	<ul style="list-style-type: none"> <li>allow 10 minutes' contact time</li> </ul>	<b>Assessment area:</b> Housekeeping <b>Equipment:</b> Therapist Assistant and Unit Staff
<b>Interferential/Trans-cutaneous electrical nerve stimulator</b>	<b>Exterior:</b> after each patient use <b>Leads:</b> electrodes are disposed after each patient use. <b>Suction cups, sponges:</b> after each patient use	<b>Exterior and sponges</b> Quaternary ammonium compounds <b>Suction cups</b> 70% alcohol	<b>Exterior</b> <ul style="list-style-type: none"> <li>allow 10 minutes' contact time</li> </ul> <b>Sponges</b> <ul style="list-style-type: none"> <li>soak 10 minutes, rinse thoroughly, store dry, moisten with distilled water at point of use. (This is a trial procedure, note any skin reactions and/or problems with conductivity)</li> </ul>	<b>Equipment:</b> Therapist Assistant and Unit Staff
<b>Storage areas</b>	<b>High touch surfaces:</b> once daily <b>Ventilation vents:</b> every 6 months	Quaternary ammonium compounds	<ul style="list-style-type: none"> <li>allow 10 minutes' contact time</li> </ul>	<b>Storage area:</b> Housekeeping, Therapist Assistant and Unit Staff <b>Vents:</b> Engineering and Maintenance
<b>Ultrasound machine Laser device</b>	<b>Exterior:</b> once daily <b>Probe (optics):</b> before and after each use	<b>Exterior</b> Quaternary ammonium compounds <b>Probes</b> 70% alcohol	<ul style="list-style-type: none"> <li>per manufacturer's instruction</li> </ul>	
<b>Hydrotherapy Tanks/ Whirl Pools</b>	<b>Hydrotherapy Tanks:</b> once daily before first use and after each patient use	Quaternary ammonium compounds	<ul style="list-style-type: none"> <li>scrub all tub surfaces, lifting slings</li> <li>allow 10 minutes' contact time</li> <li>bleed jets before cleaning for 10 minutes (for future, only purchase non-jetted tubs)<sup>5</sup></li> </ul>	<b>Hydrotherapy Tanks:</b> Therapists and Therapist Assistants
<b>Wax bath</b>	<b>Exterior:</b> once weekly <b>Wax:</b> wipe remove debris/residuals with clean paper towel	<b>Exterior</b> Quaternary ammonium compounds	<ul style="list-style-type: none"> <li>use on intact healthy skin only, patient must pre-wash entire hand and arm before dipping into the wax bath</li> <li>do not re-use wax</li> </ul>	
<b>Handrails</b>	<b>All surfaces:</b> once daily	Quaternary ammonium compounds	<ul style="list-style-type: none"> <li>allow 10 minutes' contact time</li> </ul>	<b>Handrails:</b> Housekeeping
<b>Transfer belts</b>	<b>Transfer Belt:</b> laundered once weekly and when soiled	Laundry detergent	<ul style="list-style-type: none"> <li>full wash cycle</li> <li>allow to thoroughly dry before use</li> </ul>	<b>Transfer Belts:</b> Therapist Assistants
<b>Cushion covers</b>	<b>Cushion Covers:</b> after each patient use	Manufacturer's recommendations	<ul style="list-style-type: none"> <li>per manufacturer's instruction</li> </ul>	<b>Cushion Covers:</b> Therapist Assistants

ITEM EQUIPMENT	FREQUENCY	DISINFECTANT	COMMENTS	ACTION BY
Workstations	All surfaces: once daily	Quaternary ammonium compounds		Workstation surfaces: Housekeeping
Telephone	All surfaces: once daily and as needed	Quaternary ammonium compounds		Telephone: Housekeeping
Public washrooms	All surfaces: three times daily	Quaternary ammonium compounds		Washroom: Housekeeping
Waiting room chairs, furniture	All surfaces: once daily and as needed	Quaternary ammonium compounds		Chairs, Furniture: Housekeeping
Exercise equipment <ul style="list-style-type: none"> <li>• Toys for children</li> <li>• hand equipment</li> </ul>	All surfaces: after each use	Pasteurize/reprocess by Processing or wipe with disinfectant wipes		Equipment: Processing Staff or Therapists Assistant
Hand-washing sinks	All surfaces: twice daily	Quaternary ammonium compounds		Sinks: Housekeeping
Monitoring equipment <ul style="list-style-type: none"> <li>• Pulse oximetry</li> </ul>	All surfaces: after each use	Quaternary ammonium compounds		Equipment: Unit staff

Note: All surfaces and items/equipment should always be cleaned and disinfected when visibly soiled.  
 \* The cleaning frequency of the machine is dependent on the volume of usage.

## 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







# Good To The Last Wipe

The very best just keeps getting better. With CaviWipes™ your last wipe will always be as wet as the first.

The new lid design enables easy-snap opening and tight closure between wipes. That means every time you reach for a CaviWipe, you'll get a fully saturated wipe with a 7-layer design that drenches the surface with solution, killing TB in 5 minutes. To learn more about CaviWipes, visit us online at [metrex.com](http://metrex.com) or call 800.841.1428 for more information.

*"It is recommended to clean between patients using a one-step process and a hospital grade intermediate level disinfectant"*

— Dr. Sheila Dunn, Publisher, OSHA Watch

## New Lid Design



*New lid has an easy access tab and deeper well, enabling quick opening and tight closure between wipes.*



*Available in two sizes, regular and extra-large (XL), for any size cleanup.*



**Metrex**  
Protecting People  
[metrex.com](http://metrex.com)



# STERIS introduces Secure™ HLD

## High Level Disinfectant & Chemosterilant

STERIS Corporation announced the commercial release of Secure™ HLD High Level Disinfectant and Chemosterilant for GI and OR markets in Canada only. The release is the result of a long-term global technology licensing agreement between STERIS and Virox Technologies, Inc. of Oakville, Ontario. Health Canada has approved the Secure HLD formulation as a high-level disinfectant and sterilant for medical devices and other instrumentation.

Secure™ HLD High Level Disinfectant and Chemosterilant is a broad-based microbicide made from Accelerated Hydrogen Peroxide™ (AHP™), a proprietary formulation

that combines a low concentration of hydrogen peroxide with other inert ingredients for accelerated efficacy. It is designed for the high-level disinfection of heat-sensitive critical and semi-critical devices and surgical instruments, and can be used for manual disinfection and in non-dedicated automated endoscope reprocessors (AERs).

This ready-to-use oxidative chemistry offers a safe alternative to the exposure hazards related to aldehyde disinfectants. It requires no special venting or disposal measures and no measuring or mixing. It is non-staining, virtually odorless, and leaves no toxic residues on devices.

In addition to providing a safe high-level disinfection choice, Secure HLD High Level Disinfectant and Chemosterilant accelerates disinfection throughput by processing devices in only five minutes at 68° F (20° C). At this temperature, Secure HLD solution is tuberculocidal, fungicidal, bactericidal and virucidal, and is sporicidal at longer exposure times. Secure HLD solution can be reused for up to 14 days, making it an economical option as well, and a chemical indicator test strip is available to verify the correct minimum effective hydrogen peroxide concentration.

## FLUSHER DISINFECTORS

A FULL RANGE TO SUIT YOUR NEEDS

ARJO



### WASH AWAY YOUR WORRIES...

All ARJO bedpan flusher disinfectors **EMPTY, CLEAN** and **DISINFECT** bedpans, bedpan supports, urinals, bowls and basins, so you don't have to.

Choose from a range of products to suit your budget, your space, your receptacles, your needs.

- Spend more time on quality patient care
- Spend less time on housekeeping duties
- Reduce splatter
- Reduce risk of outbreaks
- Reduce risk of infection
- Reduce costs

#### Ask ARJO about:

- Thermal Disinfection
- ISO Standards
- Bed-side Protocols
- Processing Protocols
- Bedpans with Lids
- Hands-Free options
- PSD & TSI
- Staff Efficiency
- Staff Safety
- Patient Protection



...with people in mind.

**ARJO Canada Inc.**  
 Phone: 800-665-4831  
 Fax: 800-309-1116  
 Email: info@arjo.ca  
 Web: [www.arjo.com](http://www.arjo.com)

MEMBER OF THE GETINGE GROUP

# Two New Formulas

from a **Brand You Can Trust.**



## **PURELL® Instant Hand Sanitizer with DERMAGLYCERIN SYSTEM™**

*Hand lotion with hand sanitizer efficacy.*

## **PURELL® Instant Hand Sanitizer FOAM**

*Non-aerosol, alcohol-based foaming formula.*

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. Intended for external use only. Avoid contact with the eyes. Should this occur, the eyes should be flushed with water. If irritation develops or increases, use of the product should be discontinued. If irritation persists for more than 5 days, consult a doctor. Keep out of reach of children. If swallowed, call a doctor.



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](http://www.GOJO.com).



©2007. GOJO Industries, Inc. All rights reserved.  
PURELL is a trademark of Johnson & Johnson and is used under license

When it's a question of  
Healthcare worker safety,  
we have the right answers.



## The Introcan Safety® IV Catheter and Surecan® Safety Huber Needle. All you have to do is use them.

The Introcan Safety® IV Catheter and Surecan® Safety Huber Needle have passive safety features that automatically activate by simply using them.

Here's how they work. Each product features a patented Safety Clip that shields the needle tip as it is withdrawn to minimize needlestick injuries. It's that simple.

And unlike active safety devices, there's no chance of forgetting to deploy the safety mechanism. No chance of inadvertent activation. So you'll improve healthcare worker safety while reducing risk and increasing compliance.

So Take Action. Be Passive.

Schedule a demo today!  
Call 1-877-949-9529, or visit us  
at [www.bpassive.bbraunusa.com](http://www.bpassive.bbraunusa.com)



B. Safe.

**B | BRAUN**  
SHARING EXPERTISE

[www.bbraunusa.com](http://www.bbraunusa.com)

# User Alert

## Notice to CHICA members: CJIC Fall 2006

In the Fall 2006 issue of the *CJIC* an article was published entitled: **User Alert: problems with process monitors for extended steam sterilization cycles** (lead author Dr Michelle Alfa, pp122-128 <http://www.chica.org/Members/pdf/vol21no3.pdf>)

This article was written by Dr. Alfa on behalf of the CSA, Sterilization Committee of which all the authors are members. This article highlights what is becoming an increasingly difficult problem in Canadian hospitals: monitoring and assessing all medical devices (and their accompanying instrument sets) used in the facility for safety. The article reviews why some equipment, particularly if manufactured in Europe, now has sterilization recommendations that are different from the standard processes used in Canadian facilities. Several issues arise from this discussion:

1. Infection prevention and control (IPC) should be aware of all devices and equipment used in the facility and should work with sterilization services to ensure that correct manufacturer-recommended procedures are used.
2. In facilities where this type of oversight has not been in place it may be prudent for IPC to work with central processing to audit the devices and instruments being used in the facility to ensure that they are being processed appropriately.
3. It is recommended that all facilities, groups of facilities or regions have a committee that includes IPC to review any new equipment and instruments prior to approval for use. Risk management and senior management should also be key players in this committee.
4. The committee should review the manufacturer-approved processes for sterilization and ensure that the sterilization equipment available in the facility is appropriate

for the process recommended. In some regions committees have rejected equipment that cannot be appropriately processed with the sterilization equipment available in the facility or requested the manufacturer to provide in writing alternate recommended processes that can be carried out by the sterilization equipment available.

In addition, CHICA-Canada has identified this as an issue that requires national advocacy on behalf of IPC programs to ensure manufacturers are aware of the difficulties that non-standard sterilization recommendations cause and the need for biological indicators that are appropriate for the longer processes if they are required.

CHICA-Canada sees this issue as a key risk management issue in infection prevention and control and will formally request that the Therapeutic Products Directorate (Medical Devices) at Health Canada make establishing a common standard for Canada a priority. In addition that they work to ensure:

- a) That all devices approved for use, including devices deemed equivalent to an existing marketed medical device, provide the user with instructions regarding the appropriate sterilization cycles that can be used to sterilize the device safely. This includes devices that were marketed prior to the requirement for manufacturers to provide validated sterilization cycles.
- b) That the manufacturers of the chemical and biological indicators provide validated data to confirm that the BI or CI functions can perform for the specified conditions they are intended to monitor, that these conditions are provided in written format for the users to clearly reference and that the indicators meet CSA standards.



The **SurGuard2™** Needle Protection System and **Surshield™** line of Safety Winged Needle Sets from **Terumo®** – snap them into place; when you hear the click, you know you're safe.

## SNAP. CLICK. NO STICK.

The **SurGuard2™** Needle Protection System comes as a Safety Syringe or Safety Needle alone, which has a standard hub to fit all luer lock and luer slip syringes. Other features include:

- One-handed activation for safety and ease of use
- Low-profile sheath reduces interference with procedure
- Available in large selection of sizes to suit your specific application (18 needle sizes and 18 syringe sizes)

The Terumo **Surshield™** Safety Winged Needle Sets can be used for infusion and blood collection procedures. They offer a number of tremendous advantages including:

- Simple, built-in safety design
- One-handed activation for ease of use
- An audible click indicates shield is locked into place



To learn more about SurGuard2™ or Surshield™, or to acquire samples for evaluation, please call 1-800-283-7866, extension 4950, or visit [www.terumomedical.com](http://www.terumomedical.com).

 **TERUMO®**

**T**he mandate of the *Canadian Journal of Infection Control (CJIC)* is to provide readers with access to published scientific research and expertise, as well as updates on information relating to infection prevention and control to assist Infection Control Professionals in their practice. *CJIC* is an opportunity for members to discover what is occurring in their association and how member benefits are being enhanced.

Because of the increase in submissions of articles of a scientific nature, the editor and publisher have revamped the organization of *CJIC* to allow more room for the publication of scientific information. This new *Association News* section will provide readers with first announcements of CHICA-Canada initiatives and opportunities. Readers are invited to visit the CHICA-Canada website for follow-up information and updates.

## Meet the new Certification Board of Infection Control President **Sheila MacDonald,** RN, BN, CIC



Sheila MacDonald is the Manager of the Capital Health Infection Control Program, Queen Elizabeth II Health Sciences Centre, in Halifax, Nova Scotia. She has been an infection control professional for more than 20 years, and has been a manager since 1998. She has served on the Certification Board of Infection Control as the Canadian representative for the past three years, and this year she will be the first Canadian president of the CBIC. The CBIC develops and administers the certification exams for infection prevention and control professionals. She is a past president of CHICA-Canada and a current member of CHICA-Nova Scotia.

Certification is supported by CHICA-Canada, and MacDonald encourages ICPs to pursue the CIC designation. "Certification is a win-win situation because it advances the patient-safety agenda, demonstrates infection control knowledge competency, and enhances infection control quality," says MacDonald.

The CBIC works diligently to ensure the CIC exam is based on North American infection control practice standards, and has made a concerted effort to remove anything uniquely American from the exam; terms such as JCAHO, or OSHA. The exam is revised regularly to keep pace with changes in current standards and guidelines. A Practice Analysis survey is done every five years, to determine the appropriate tasks and content reflected in today's practice. The survey is distributed to all ICPs who are members of CHICA-Canada, and APIC.

"Practices and guidelines do change, standards change, so the exam has to be congruent with current practice, and the most significant tasks in the ICP model," says MacDonald.

The initial exam is a proctored computer-based exam, and is designed for the ICP with a minimum of two years' experience. The SARE (Self Assessment Recertification Exam) is an option only for ICPs recertifying (recertification is required every five years). It is an open book exam designed to be a learning exercise as well as an exam. Recertifiers also have the option of taking the computer-based exam again rather than the SARE.

Interest in certification is on the rise, and local and national IC organizations can help by making certification a regular agenda item, highlighting the advantages to ICPs, their employers, and patients, and making regulatory and accrediting bodies more aware of the certification process.

It is possible that certification will become mandatory one day. Some states, such as New Jersey, have already made certification mandatory, a trend MacDonald views as beneficial. "Eventually certification could become a requirement, and should be – for the safety of clients, and for setting high professional standards in our field."

MacDonald believes demonstrating competence is an ongoing process. "It's our responsibility to be accountable to our organizations and patients, and provide a demonstrated measure of knowledge competency."

**Information on the qualifications for challenging the CIC exam and exam locations can be found on the CBIC website – [www.cbic.org](http://www.cbic.org).** ●



# An innovative breakthrough in foam. Sanitizes hands, controls infection.



It's an industry first from Deb Canada - an innovative non-aerosol foaming alcohol hand rub. With its unique antimicrobial formula, Microsan Foaming Alcohol Hand Rub is dye free, fragrance free and dermatologist tested.

Microsan Foaming Alcohol Hand Rub contains excellent moisturizing properties which leave the skin feeling silky, soft and supple. With 70% Ethyl Alcohol, Microsan kills most bacteria in 15 seconds, making it ideal for situations where the highest level of personal hygiene is required.

The fast breaking foam is non sticky and non clogging which eliminates wall "splatter" during application. Microsan Foaming Alcohol Hand Rub is available in a personal size 50mL bottle with foaming pump, a 400 mL bottle with foaming pump, and in a one litre foaming cartridge.



## Handi Brackets

Bed ends, lockers, carts, walls...the potential for infection is everywhere. The Handi Bracket is an innovative device that allows 400 mL packs of Microsan Alcohol Foams and Gels to be sited at the point where care is delivered. The brackets can be stuck, screwed, hooked or clamped onto a variety of fixtures and fittings.



Deb Canada  
42 Thompson Road,  
Waterford, ON N0E 1Y0  
1-888-DEB-SCAP  
[www.debcanada.com](http://www.debcanada.com)



## CBIC President's Message

Sheila MacDonald, RN, BSN, CIC

As I begin my term as president of the Certification Board of Infection Control and Epidemiology (CBIC), I am profoundly honored. First of all, CBIC is celebrating its 25th anniversary this year, and secondly, I am most honored to be the first Canadian president.

I became acquainted with the certification board in 2002 when I was the CHICA-Canada CBIC liaison. From the outset, I was impressed with the professionalism, the strict adherence to the highest standard of examination development, and the obvious commitment of the directors in advancing the profession of infection control through the certification process. In 2004 I once again joined the CBIC as the official Canadian representative, and my initial opinions and perceptions of the board have not wavered. Although CBIC was established by APIC in 1982 with a mandate to develop and administer a certification examination for infection control professionals, it remains a completely separate and autonomous organization.

I would like to acknowledge all the former CBIC board members for their contribution in making CBIC the solid organization it has become. Without these dedicated individuals there would be no certifying examination for IPCPs. Please take a moment to review the names of the individuals whose dedication and volunteerism have helped to shape the organization. We have used available historical records, so please forgive us if we have missed anyone or your name does not appear as you currently listed.

### Accomplishments

*Expanded the reach of its certification*  
CBIC has accomplished much since its inception. Although the U.S. and Canada continue to have the largest

number of infection prevention and control professionals (IPCPs) writing the certification exam, we have certificants in approximately 20 other countries.

### *Maintained accreditation and gold standards of exam development*

The organization has also achieved NCCA certification, (National Commission of Certifying Agencies), which means we have achieved the highest possible standard granted to certifying agencies. The exam development process adheres to NCCA standards, under the guidance of a test development specialist from Applied Measurement Professionals (AMP). This helps to ensure that our exams are statistically sound and legally defensible. The board works continuously to improve the examination process and to ensure that the candidate has a positive experience. CBIC is a charter member of the National Organization for Competency Assurance (NOCA) and its exam program has been continuously accredited since 1985. In part, because every five years a practice analysis is completed to ensure that the examination is based on current practice, and a valid examination that reflects core practices common to the majority of IPCPs regardless of the practice setting. The newest practice analysis was completed in 2006 with new content to be implemented in mid-2007. Look for the new examination content outline and effective date on our website (cbic.org).

### *Computerized test administration*

CBIC has progressed from administering the examination in paper format several times per year to administering only computer-based

## New examination content set to go online July 2007

CBIC will implement its new examination content based on the 2006 practice analysis report. The candidate handbook currently on the website lists only the examination content in effect until June 30, 2007. There will be a link placed on the home page to the updated detailed content outline **scheduled for implementation July 1, 2007**. However, the major content areas changed very little. **The major content areas effective July 1, 2007 are:**

- I. Identification of Infection Disease Processes
- II. Surveillance and Epidemiologic Investigation
- III. Infection Prevention and Control
- IV. Program Management and Communication
- V. Education
- VI. Infection Control Aspects of Employee Health

Visit the website to download the complete detailed content outline for July 2007 and beyond at [cbic.org](http://cbic.org).

## Want to know more on CIC examination development?

CBIC submitted a manuscript to AJIC that has been accepted for publication regarding the most recent practice analysis project. A more in-depth review of the examination development and processes included in a professional credentialing examination measuring competency is included in this article.

CBIC will also be presenting this process for continuing education units at the 2007 APIC Annual Conference in San Jose, California. Do not miss this opportunity to demystify the examination.

*continued on page 72*

*continued from page 71*

testing, with secure testing sites throughout North America, and other countries.

### **Expanded services**

In the last two years, a practice exam has been developed to assist IPCPs to acclimatize themselves to the computer-based test arena. The practice exam is set up in exactly the same way as the actual certification examination using the same software. The practice exam provides feedback by examination content area on how well an individual performed on the practice exam, allowing better preparation.

Where we are today is the culmination of all the efforts of those who have served on previous boards, those who currently serve, as well as the contributions of the management company, AMP. To all who have contributed, past and present, the current board wishes you a sincere and grateful thank you!

The CBIC held its first board meeting of 2007 in January. On behalf of the board, I would like to extend a warm welcome to our newest directors: Joanne Laalo, the CHICA liaison, Paul Field, the consumer director, and to directors Terrie Lee, and Rick Wray. I also welcome back Pat Rosenbaum, as APIC liaison again this year, as well as returning members Rita Tjoelker and Sharon Krystofiak. It also gives me great pleasure to acknowledge our outgoing president, Linda Laxson. Linda worked relentlessly last year to begin to plan for the possibility of an international credential, and was instrumental in the development of a survey to assess international IPCP interest in such a venture. Surveys were distributed to international attendees at several conferences including IFIC in South Africa, the Hospital Infections

Society (HIS) in Amsterdam, and the Middle East Conference in Dubai. We will continue to display at some of the international conferences this year, to garner interest, network with our colleagues around the world, and promote the value of certification.

Domestically, CBIC attended the NAHQ, AONE, CBIC and APIC conferences to continue to promote the certification exam here in our own part of the world. In the U.S. and Canada, we still have a long way to go to encourage and promote certification for all eligible IPCPs who are not yet certified. Certification elevates the profession, the professional, and the quality of infection control.

I look forward to a full and productive 25th anniversary Year. Our board members, in concert with our marketing committee, are planning some activities to celebrate the occasion of the silver anniversary of the CBIC. Stay tuned. ●

## **CBIC wishes to acknowledge the following individuals for their past service**

### **Founding board members**

Patricia Lynch	N McGuire	Patricia Schlegel	Trish Barrett
Steve Weinstein	B. McArthur	Gina Pugliese	

### **Additional board members throughout the years since 1982**

Marguerite Jackson	Carolyne Langewisch	Brenda Bouvier	Shirley Brandt	Julie Garner
Rodney Kusumi	Elaine Larson	Claire Lipschultz	Jerrie Kennicott Bryant	Margot Charles
Gretchen Dahlen	Candance Friedman	Barbara Soule	Carol Williams	Walter Hierholzer
Hala Fawal	Annette Godsey	Teresa Horan	Lee Illing	Shirley Pitts
Carol O'Boyle Williams	Laura Ashton	Patricia Flynt	Julie Jacobson	Karen Moellering
Jerri Bryant	Tina Baker	Brian Cooper	Georgia Phelps Dash	Ann Jaeger
Jole Mowrey-Hanley	Betsy Palmer	Tina Baker	Brian Cooper	Kathleen Eisenach
Pamela Newsome	Jack Berens	Nancy Haberstich	R. Belongie	S. Slavish
Jane Stephens	Sandy Pirwitz	Becky Horan	Genevieve Thompson	Janice Treston-
Aurand	Carol Whyman	Patricia Miller	Nancy Bjerke	Janice Fetter
Bruce Hamory	Patricia Miller	Maria Ninivaggi	Helen O'Brien	Robert Sharbaugh
Susan Smythe	Janice Treston-Aurand	Carol Whyman	Lisa Docken	Patricia Hinson
Patrick Joseph	Anne Maher	Harriet Pitt	Terri Kirkland	Anna Mills Wagoner
Paula Bullock	Mary "Dee" Miller	Joan Turner	Frances M. Slater	Linda McDonald
Carolyn Sanders	Vicky Zelenka	Frank Montgomery	Ona Baker	Clare Barry
Gayle Gilmore	Angella Goetz	H. Bradford Hawley	Patricia Piaskowski	Marge Gallagher
Don King	Mary LeBlanc	Nancy Alfieri	Darnell Dingle	Barbara Cochrane
Ginette Herbert	Kathleen Roye Horn	Joseph Marzouk	Keith St. John	Barbara Goldrick
Patricia Kulich	Sandra Callery	Betty Dunaway	Ruth Curchoe	Nora Boyd
Jeanette Daniel	Robert Hotchkiss	Sheila MacDonald	Pat Rosenbaum	Ziad Memish
Linda Laxson	Mary McNaughton	Sharon Krystofiak	Rita Tjoelker	Kathy Arias
Adrienne Brown	Jacqueline Butler	Deanie Lancaster	Pam Vaccaro	Matthew Wallace
Jeanne Pfeiffer	Richard Wray			



# It's all connected.

At ARAMARK Healthcare we understand the extraordinary impact everyone within a healthcare environment has on the patient care process. That's why our Environmental Services teams support safety, caring and healing in everything they do.

**ARAMARK Healthcare Environmental Services offers:**

- Routine Practices and Transmission Based Protocols
- Hand Hygiene Programs
- Environmental Cleaning Systems
- Waste & Pest Management Tools
- Training & Development Programs

ARAMARK Healthcare offers a full-range of services delivering operational efficiency and service excellence. Our clinical support services are at the core of quality care. Because – its all connected.



For more information, please call 1.877.4ARAMARK  
or visit us online at [www.ARAMARK.ca](http://www.ARAMARK.ca)



## CHICA-Canada is seeking an E-Learning Education Coordinator

The E-Learning Education Coordinator is responsible for managing Infection Control Courses, E-learning programs, Education Advisory Committee meetings, provider unit evaluation, and liaison with accrediting organizations. This position has high visibility with Course Chairpersons, Lecturers and Mentors for courses, Chapter Education Committee representatives, and the Education Advisory Committee.

### Education and experience

1. Advanced degree or equivalent training and three to five (3-5) years of experience in education with experience developing and/or teaching educational programs; or a commensurate combination of education and experience.

### Knowledge, skills and abilities

1. Knowledge of distance learning programs.
2. Advanced computer skills are required (i.e. Excel, Access, Internet and website monitoring).

3. Strong interpersonal, oral and written communication skills.
4. Financial management – knowledge of financial management and budgeting principles and practices, and the analysis and reporting of financial data.

### Working environment

This position reports to the Director of Education of CHICA-Canada. This is a .5 position. Office duties may be performed in a home environment or other general office environment. Travel may constitute 10-20% of time. Remuneration is \$30,000 per annum, inclusive of all taxes and overhead costs. Other reasonable and approved expenses will be reimbursed. The contract will be for a one-year renewable position.

The relationship can be terminated by CHICA-Canada at any time during its term for just cause, without notice and without any further obligation to you, subject

to any obligation that CHICA-Canada may have under relevant employment statutes.

You understand that either CHICA-Canada or you may otherwise terminate this relationship at any time during its term or any renewal, upon providing not less than 30 days' written notice (or pay in lieu of notice in the case of termination by CHICA-Canada) without further obligation. ●

Interested applicants must submit a detailed curriculum vitae, including a description of relevant work history and/or projects, and references to:

**Elizabeth Henderson, PhD**  
 Director of Education,  
 CHICA-Canada  
 PO Box 46125 RPO Westdale  
 Winnipeg MB R3R 3S3

By courier to:

67 Bergman Crescent,  
 Winnipeg MB R3R 1Y9

*Deadline date for receipt of applications: June 1, 2007*



## In Memoriam Diane Phippen

CHICA Manitoba was saddened by the death of Diane Phippen on March 12, 2007. Diane was a long-standing member of CHICA Manitoba and CHICA-Canada. Diane began her career in infection prevention and control in 1981 when she was hired by Cadham Provincial Laboratory to be their epidemiologist nurse coordinator. Diane was integral in providing infection prevention and control education as well as the development of infection

prevention and control programs in personal care homes and rural hospitals throughout Manitoba. Diane also provided infection prevention and control expertise to many provincial and national committees and was a long-standing member of Health Canada's Steering Committee for Infection Control Guidelines. She has been a well respected member of our profession and will be greatly missed by everyone who knew her. ●

## 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, June 14, 2007 at the Shaw Conference Centre, 0715 hrs. A Town Hall meeting will be held immediately following the Annual General Meeting. CHICA-Canada members must register and pick up a voting card before entering the AGM. ●

We Have a Point Here.



It's Safely Inside.

### Introducing the InviroSNAP!<sup>®</sup> Safety Syringe

The new *InviroSNAP! Safety Syringe* takes sharps safety to the next level with a new category of safety syringe that bridges the gap between bulky retro-fitted models and more expensive automatic retractable syringes. The simple PUSH-PULL-SNAP! process makes this manually retractable syringe as easy to use as a traditional syringe, but with powerful next generation advantages. Introducing the *InviroSNAP! Safety Syringe*, the next generation in safety.

Call Inviro Medical at 770.291.2165 to order a free sample or to schedule an evaluation at your facility.

**See us at CHICA Booth 413**

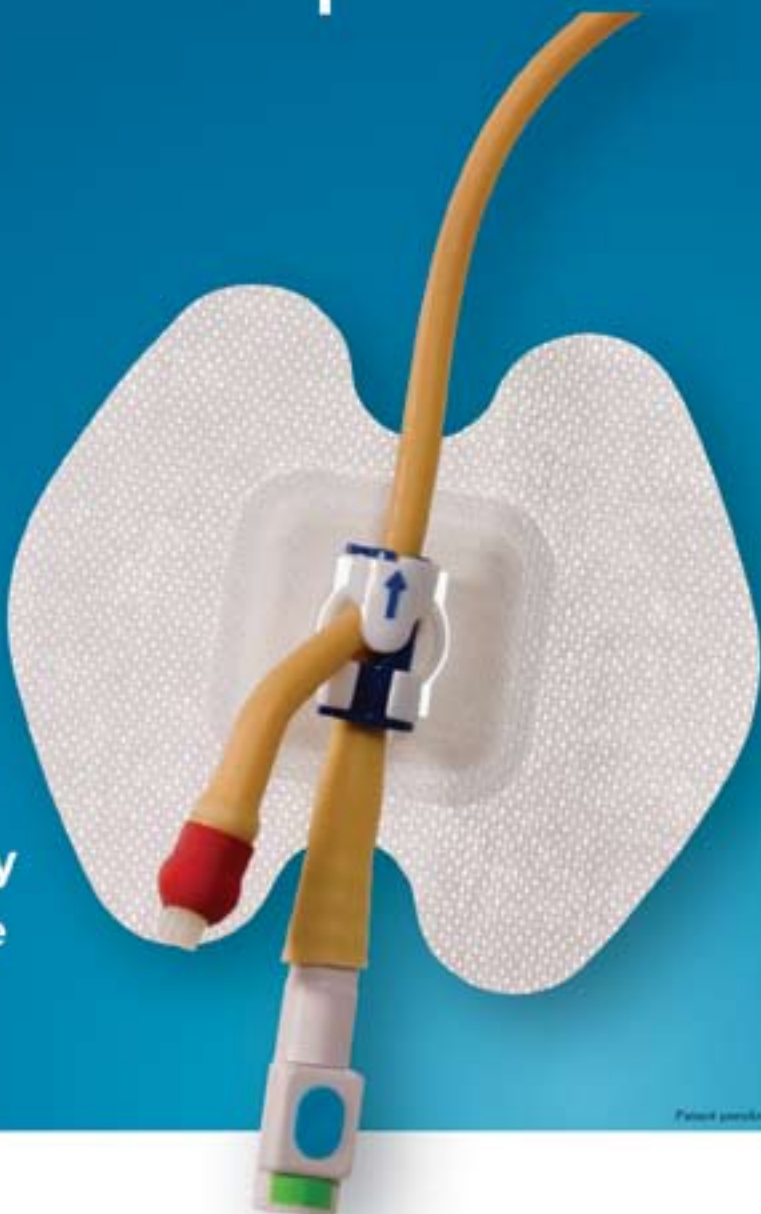


[www.inviromedical.com](http://www.inviromedical.com)

# Save time and minimize complications.

Many clinicians struggle with ineffective tape and leg-strap securement. As a result, they have grown accustomed to accidental dislodgments, multiple re-insertions, and increased risk of Foley catheter complications, such as CAUTI, urethral irritation, and meatal erosion. The Stable-Line® Foley catheter stabilization device minimizes inadvertent movement and reduces the risk of Foley complications. Improve patient comfort and save clinician time with the Stable-Line® Foley catheter stabilization device.

## stable-LINE® | Foley Catheter Stabilization Device



Extend patient's leg fully and identify the target site.



Prepare site, remove center paper tab, and apply.



Remove side tabs and gently press down to stabilize.



[www.iapyx.com](http://www.iapyx.com)

**information. innovation. infection control.**

Iapyx Medical™ uses innovation and experience to develop products that protect clinicians and patients from hospital-acquired infections.

1-888-575-6341

Exclusive Canadian Distributor



758 Third Street, London, Ontario  
Canada N6V 5J7  
1-800-265-5494 [www.trudell.com](http://www.trudell.com)

## VIROX Technologies Partners 2007 Scholarship Winners Announced

Through the financial support of the Virox Technologies Partnerships, 10 CHICA-Canada members were awarded scholarships to attend the 2007 National Education Conference in Edmonton. CHICA-Canada and its members thank Virox Technologies and their partners Deb Canada, JohnsonDiversey, Steris Corporation, Virox Technologies, and Webber Training for their initiative to make the national education conference accessible to those who may not have otherwise been able to attend.

### 2007 Scholarship Winners

- Nora Boyd, RN, Med, CIC (*Sarnia, ON*)
- Laurie Boyer, RN, BScN, CIC, CPN (C) (*North Bay, ON*)
- Nancy Brown, MLT, BSc, CHE (*Wingham, ON*)
- Judi Linden, RN, BN, COHN(C), CIC (*Portage la Prairie, MB*)
- Suzanne Rhodenizer Rose, RN, BScN, CIC (*Bridgewater NS*)
- Donna Ronayne, RN, BN, CIC (*Clareville, NL*)
- Allyson Shephard, RN, MScN (*Ottawa, ON*)
- Merlee Steele-Rodway, RN (*St. John's, NL*)
- Virginia Tirilis, MLT, CIC (*Hamilton, ON*)
- Elizabeth Watson, RN, BScN, CIC (*Bridgewater, NS*)



prIME is a leading designer, manufacturer and marketer of single-use medical products for hospitals, clinics and long term care facilities. We carry a wide range of personal protective equipment (PPE) for infection prevention and control. prIME products are available nationwide through medical distribution centers.

- + face masks
- + examination gloves
- + isolation & surgical gowns
- + headwear
- + footwear
- + basic woundcare
- + bandages
- + drapes and towels

For more information on prIME products, call 1-877-877-4633 or visit us at [www.primed.ca](http://www.primed.ca)



MANUFACTURE + DELIVER + PROTECT



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](http://www.woodwyant.com)  
or call 1-800-361-7691



*1922 - 2007 85 Years of Partnership with our Clients*



## Membership fee formula changed

As of renewals for 2007, the annual CHICA-Canada Membership Fee will change to:

<b>Individual</b>	\$125.00
<b>Institutional</b>	\$175.00 for the first representative; \$75.00 for each representative thereafter
<b>Silver/Student</b>	\$75.00

All fees include membership in one chapter of CHICA-Canada. The choice of chapter will be designated at time of renewal or new membership. Additional chapters may be added for \$25.00 each. ●

## Jim Gauthier loses it for the United Way!



Jim Gauthier, CHICA-Canada member from Kingston, Ontario, sacrificed his signature goatee for the sake of a worthy cause. This was a generous and brave gesture, Jim!

## CHICA now has 20 Chapters!

We are pleased to announce the formation of CHICA Northeastern Ontario, our newest chapter. Chapter President Isabelle Langman will accept the charter at the opening ceremonies of the 2007 National Education Conference, Sunday, June 10, Edmonton. Congratulations and welcome to CHICA-Canada! ●

## Can Your Hospital Isolate Large Numbers of People During a Public Health Emergency...

Quickly, Conveniently and Without Building Modifications?



The ECU product line are clinically tested, collapsible and portable containment units that control harmful contaminants during a wide range of applications. All ECU products provide regulatory compliance, assurance of patient safety, ease of use and a significant return on investment within a single containment device.



ECU2



ECU2 Bundle



ECU2 Corridor Flange

When planning for isolation/surge capacity emergencies, healthcare organizations need to consider how to isolate larger areas in addition to smaller, individual rooms. The ECU2 Corridor Flange Accessory can be used to create mass isolation by enabling any facility to use existing corridors, wings or floors allowing the area to expand as demand increases.



1114 San Fernando Road | Los Angeles, CA 90065  
Tel: 1-800-9MINTIE | 323-225-4111 | Fax: 323-222-7853  
www.mintie.com

## THE STRENGTH OF A *GROUP OF GLOBAL ASSET MANAGEMENT COMPANIES...* TO PREVENT AND CONTROL NOSOCOMIAL INFECTIONS

As demonstrated by Dr. Richard Marchand, Medical Microbiologist and Specialist in Infectious Diseases, during the San-Tech conference in Montreal this year on the impacts of nosocomial infections on assets, **"AN ASSET MUST FIRST BE DESIGNED, CONSTRUCTED, MADE SECURE AND INTEGRATED IN ITS ENVIRONMENT, MAINTAINED, UPDATED AND OPERATED IN AN EFFECTIVE AND ECONOMICAL MANNER, AND FINALLY DISMANTLED WHEN IT IS NO LONGER REQUIRED."**

From this perspective, only a holding company composed of a group of professionals from different disciplines, can offer integrated solutions for the global management of assets including their design, construction and operation.

Nosocomial infections (NI) have developed at an alarming pace over the past few years. In fact, it is a significant and costly problem for Canada's population and health system in terms of its human, clinical and financial impacts. NIs are now an unavoidable priority for health institutions, firstly because of the direct costs they generate and, secondly, due to the large range of activities they affect in the health network: care, housekeeping management, maintenance and rehabilitation of facilities, as well as construction.

In managing the risk of infection, we must act on the environment which depends mainly on technical services. The elements on which we must focus in our global asset management approach are as follows:

### GLOBAL ASSET MANAGEMENT:

- » Layout and functional and technical program (design, rehabilitation and construction);
- » Asset management (forecast, maintenance and capital renewal costs);
- » Status and life cycle cost;
- » Housekeeping management;
- » Preventive and corrective maintenance;
- » Energy efficiency and environmental quality (air, water,...)

Since the cost of NIs is far more prohibitive than that of investing in prevention, global asset management must be an integral part of a structured program to prevent and control infections. It is therefore vital for health institutions to invest in the transformation, rehabilitation and construction of compliant facilities, as well as in integrated solutions employing real-time decision-making based on risks and resources. These solutions must be part of the support offered to institutions to harmonize and standardize their ways of doing things in order to consolidate their programs.

At the moment, the impacts of assets on NIs are mainly due to the following factors: obsolete facilities, the often inappropriate physical organization of facilities, including cramped waiting rooms and small care areas, the need for more storage space and other deficiencies, particularly the lack of private and isolation rooms and adequate sanitary facilities.

In view of these impacts and cost projections concerning NIs, we must better plan, design, construct, maintain, update and operate effective reliable and safe assets. As part of global asset management, we must also **DEVELOP A "USER APPROACH" AND NOT ONLY A "DESIGN APPROACH"**. With its expertise, a group such as the BBFM can help decision-makers and managers implement activities and concepts that are best adapted to put this **"USER APPROACH"** into practice. ■

**HOLDING BBFM INC. entities are:**  
(Best Building Facility Management)



### GES TECHNOLOGIES INC.



- » Asset performance and management (life cycle cost and key performance indicators);
- » Integrated global asset management solutions;
- » Systems software and consulting services;
- » Updating and rehabilitation;
- » Housekeeping management;
- » Efficient energy management.

### SCHEMA INC.



- » Asset conservation plans;
- » Functional and technical programs;
- » Cost estimates and control;
- » Biomedical and hospital engineering;
- » Functional organization studies and layout re-engineering;
- » Project conformity, monitoring, quality, scheduling and costs.

### SGDL TECHNOLOGY



- » 3D modelling and volume design;
- » Virtual and dynamic design allowing simulations;
- » Artificial intelligence with parameterization;
- » Textures and characteristics of materials;
- » Global and integrated cost of construction.

**SEEKING PARTNERS IN ONTARIO AND WESTERN CANADA TO IMPLEMENT BBFM INC.**

## 2008 board positions available for nomination

The board of directors of CHICA-Canada is seeking nominations for board positions in 2008. 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 (one-year term)
- Secretary/Membership Director (three-year term)

- Director, Education (three-year term)  
These terms commence January 1, 2008. 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](http://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:

**Pearl Orenstein RN, BA, DIA, CIC**  
CHICA-Canada Secretary/  
Membership Director  
c/o Membership Service office  
PO Box 46125 RPO Westdale  
Winnipeg MB R3R 3S3

Or by courier to:  
**Pearl Orenstein RN, BA, DIA, CIC**  
CHICA-Canada Secretary  
/Membership Director  
c/o Membership Service office  
67 Bergman Crescent  
Winnipeg MB R3R 1Y9

*Deadline for nominations:  
August 15, 2007.*

**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.

**THE BENEFITS OF THE VERNACARE SYSTEM:**

- An extensive line of single use utensils prevent cross-contamination
- Closed, complete method of disposal
- Contributes to the reduction of hospital acquired infections (*data available upon request*)
- Reduces Nursing time spent on manual cleaning
- Cost-effective, reliable and simple to use
- Endorsed throughout Canada and the world
- Biodegradable Products 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](http://www.vernacare.com)**

Norwalk Nightmare!

**STRONG ENOUGH**  
*to fight an* **OUTBREAK!**

**SAFE ENOUGH** *for*  
**EVERY DAY USE!**

Germicide Maker Winning



**ACCELERATED™**  
HYDROGEN PEROXIDE

*Norovirus*

*Influenza*

*Rhinovirus*

*MRSA*

*VRE*

*Clostridium  
difficile*

*and more>*

**Infection control's prescription  
for outbreaks can be used daily  
for prevention.**

To learn more about Accelerated Hydrogen Peroxide (AHP) such as peer reviewed articles, efficacy reports, protocols, technical documents and endorsements or to find a product to suit your needs please visit [www.virox.com](http://www.virox.com) or call 1-800-387-7578.

*DIN and EPA  
Registered*

*Green Guard  
Certification*

*EPA Inerts Listing*

*Canadian Food  
Inspection Agency  
(CFIA) Approvals*

*FDA Generally  
Regarded as Safe  
(GRAS) Listing*



Engineering Revolutionary Disinfectants for the War Against Microbes.

[www.virox.com](http://www.virox.com)

# REACH OUR ADVERTISERS

COMPANY	PAGE	PHONE	E-MAIL ADDRESS	WEB SITE
3M CANADA HEALTH CARE	30	800-265-1840	killico@mmm.com	www.3M.ca
AIR TECHNOLOGY SOLUTIONS	26	866-735-1480	airtechnology@bellnet.ca	www.airtechnologysolutions.com
AMG MEDICAL INC.	IBC	800-361-2381	medprodefense@amgmedical.com	www.amgmedical.com
ANGUS MEDICAL, INC.	1	866-418-1689	Bruce@angusmedical.com	www.angusmedical.com
ARAMARK CANADA	73	416-255-1331	mark_heller@aramark.ca	www.aramark.ca
ARJO CANADA INC.	64	800-665-4831	info@arjo.ca	www.arjo.com
B. BRAUN MEDICAL INC.	66	877-949-9529	Chris.Trauger@bbraun.com	www.bbraun.com
BBFM INC.	80	514-257-5899	bbfm@ges-int.com	www.ges-int.com
CAPITAL HEALTH AUTHORITY	36	780-413-5147	olivia.marcotte@capitalhealth.ca	www.capitalhealth.ca
CARDINAL HEALTH CANADA INC.	27	888-871-5950	Carol.Bentley@cardinal.com	www.cardinal.com/mps
COLOPLAST CANADA CORPORATION	2	877-820-7008	canp@coloplast.com	www.coloplast.ca
CONVATEC CANADA	20	514-333-2927	caroline.cyr@bms.com	www.convatec.ca
DEB CANADA	70	888-332-7627	debcanada@debcanada.com	www.debcanada.com
ECOLAB HEALTHCARE	OBC	800-352-5326	Angie.jeske@ecolab.com	www.ecolab.com
ENTURIA, INC.	5	800-268-2848	shartley@enturia.com	www.chloroprep.com
GLO GERM COMPANY	8, 9	800-842-6622	info@glogerm.com	www.glogerm.com
GOJO INDUSTRIES, INC.	65	800-321-9647	customerservice@GOJO.com	healthcare.GOJO.com
INVIRO MEDICAL DEVICES, INC.	75	770-291-2165	BBialek@inviromedical.com	www.inviromedical.com
KRUGER PRODUCTS	59	905-812-6964	Mark.Ray@krugerproducts.ca	www.krugerproducts.ca/afh
LAURA LINE SKIN CARE PRODUCTS	35	800-257-5592	jgorloff@lauralineskincare.com	www.lauralineskincare.com
LES ENTREPRISES SOLUMED INC.	55	450-682-6669	schartier@solumed.biz	www.solumed.net
MAXILL INC.	19	800-268-8633	lawrencem@maxill.com	www.maxill.com
MEDCO EQUIPMENT, INC.	54	800-717-3626	medcoequipment@email.msn.com	www.medcoequipment.com
MEDLINE CANADA CORPORATION	7	800-396-6996	medlinecanada@medline.com	www.medline.com
METREX CORP.	63	800-841-1428	Rossana.Fernandez@metrex.com	www.metrex.com
MINTIE TECHNOLOGIES, INC.	79	800-964-6843	info@mintie.com	www.mintietechnologies.com
MOLNLYCKE HEALTH CARE US, LLC	18	800-516-9236	customer.orders@molnlyckeus.com	www.molnlycke.com
PALL MEDICAL PRODUCTS	28	800-465-8555	matthew_antoine@pall.com	www.pall.com
PDI - PROFESSIONAL				
DISPOSABLES INTERNATIONAL	23	800-263-7067	info@pdipdi.com	www.pdipdi.com
prIMED	77	877-877-4633	Judy.Morgan@primed.ca	www.primed.ca
RETRACTABLE TECHNOLOGIES, INC.	84	972-221-6644	rtimsl@vanishpoint.com	www.vanishpoint.com
RUBBERMAID CANADA	11	905-281-7324	tim.spence@rubbermaid.com	www.rubbermaid.com
SPARTAN DISTRIBUTION	26	800-941-2060	bwall@spartandistribution.com	www.spartandistribution.com
STEALTH COMPUTER CORPORATION	13	888-783-2584	ed@stealthcomputer.com	www.stealthcomputer.com
STERICYCLE CANADA	41	204-697-4463	dwesa@stericycle.com	www.stericycle.com/canada
STERIS CANADA INC.	15	800-661-3937	ian_pequegnat@steris.com	www.steris.com
TERSANO (CANADA) INC.	42	905-688-5134	steveh@tersano.com	www.tersano.com
TERUMO MEDICAL CORPORATION	68	800-283-7866	Clermont.Goyette@terumomedical.com	www.terumomedical.com
THE STEVENS COMPANY LIMITED	14	800-268-0184	Brian.Godwin@stevens.ca	www.stevens.ca
TRUDELL MEDICAL MARKETING LIMITED	76	800-757-4881	JLeppard@tmml.com	www.tmml.com
VERNACARE	81	800-268-2422	glenn_duncan@vernacare.com	www.vernacare.com
VIROX TECHNOLOGIES INC.	IFC, 82	800-387-7578	nkenny@virox.com	www.viroxtech.com
WOOD WYANT INC.	78	450-680-9733	Rhumphrey@woodwyant.com	www.woodwyant.com

# the VANISHPOINT<sup>®</sup>

## 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<sup>®</sup> Syringes require  
less disposal space than other syringes  
and prevent disposal-related injuries.



VanishPoint<sup>®</sup> syringes  
are available in a variety  
of needle sizes and gauges.

VanishPoint<sup>®</sup> tube holders  
are used with standard  
blood collection needles  
and vacuum tubes for  
safe blood collection.



RETRACTABLE  
TECHNOLOGIES, INC.  
[www.vanishpoint.com](http://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](mailto:rtisales@vanishpoint.com) • [rti.intl@vanishpoint.com](mailto:rti.intl@vanishpoint.com)

  
**VANISHpoint**<sup>®</sup>  
The New Standard for Safety<sup>™</sup>

# My face expresses many emotions...

discomfort from illness  
should not be one of them.

Use the right respirators and face shields to  
protect your eyes, nose and mouth, and  
guard against the spread of infection.

My choice for infection prevention:

**MedPro**  
**Defense**



AMG MEDICAL INC. 1-800-363-2381

medprodefense@amgmedical.com • www.amgmedical.com

**The balancing act has never been easier.**



Waterless Antimicrobial Hand Rinses.  
Available in multiple sizes and dispensing options.  
CHG, latex glove and lotion compatible.

Strike the perfect balance with Endure 320 Advanced Care. This new alcohol-based hand rinse is fast and effective at killing germs, plus contains advanced moisturizers and conditioners to protect and leave the skin feeling soft and smooth.

In fact, our proven antimicrobial hand rinses, along with our "Go Ahead, Rub It In" in-service training and on-line CEU program, are all part of a system that works together to improve hand-washing compliance and utilization.

Learn more today. Call your Ecolab representative at 1-800-352-5326.

***Serious care for caring hands.***

© 2004 Ecolab, Inc.

**ECOLAB®**