# The Canadian Journal of INFECTION CONTROL

# Revue canadienne de PRÉVENTION DES INFECTIONS

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

#### INSIDE:

Outbreak investigation of *Stenotrophomonas maltophilia* in a rural community healthcare facility

Feedback and antibiotic prescribing

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

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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. Subscriptions do not include online access to the journal.

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# The **Canadian Journal** of **INFECTION CONTROL**

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The official journal of the Community and Hospital Infection Control Association — Canada • Association pour la prévention des infections à l'hôpital et dans la communauté — Canada Vol. 27 No. 4 Winter 2012

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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.

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ISSN - 1183 - 5702

Indexed/abstracted by the Cumulative Index to Nursing and Allied Health Literature, SilverPlatter Information Inc. and EBSCO.

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.



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Let's not forget ... 10 years later

Clinical Editor, Canadian Journal of Infection Control

en years ago in early 2003, the world of infection prevention and control IPAC) in Canada and in many parts of the world changed dramatically after the appearance of Severe Acute Respiratory syndrome, more familiarly known as SARS. Although it is thought that SARS will not likely reappear, the World Health Organization recently issued an alert over the appearance of a new coronavirus in Saudi Arabia and Qatar. http://www.who.int/csr/ don/2012 11 23/en/index.html (accessed November 27, 2012).

As we approach the tenth anniversary of this event, it is important to reflect on and remember the sacrifices made by so many of our colleagues in IPAC and in healthcare who cared for SARS patients, led and supported the IPAC efforts, contracted SARS or were guarantined due to exposures. A few paid the ultimate price: their lives.

In Ontario, three healthcare workers contracted SARS during the course of caring for SARS patients.

Their names are Nelia Laroza, Tecla Lin, and Dr. Nestor Yanga.

Their backgrounds and sacrifices were outlined in Spring of Fear Vol 3, The SARS Commission Final Report authored by The Honourable Mr. Justice Archie Campbell in December, 2006 which was dedicated to "those who died from SARS, those who suffered from it, those who fought the disease, and all those affected by it."1

Nelia Laroza was the first of two nurses to die during the SARS outbreak. She worked at North York General Hospital in Ontario. She contracted SARS after the outbreak had been prematurely declared over. She was 52 years old and died on June 29, 2003.

"The lessons of SARS should not be forgotten, nor can we forget those who gave their lives on the front lines of healthcare. The work we do in IPAC and in public health is critical to the health and safety of our patients, clients, residents and fellow workers"

She was known for her skills and was well respected by doctors and colleagues. She was known to practice meticulous IPAC measures.

Nelia was born in the Philippines on October 10, 1951. She worked as a nurse for more than 20 years, 13 of them at North York General. She lived with her husband, daughter, and son. All were guarantined but only her son was infected. He recovered. More than 1.500 members of his school were also quarantined. 1

The second nurse to die during SARS was Tecla Lin. She volunteered to take care of SARS patients. She worked at the West Park Healthcare Centre, where ill staff from another Toronto area were brought into a newly developed SARS unit. She died on July 19, 2003 at the age of 59.

Her husband died later after quarantine due to his wife's exposure to SARS. He was 77 years old. She was born in Hong Kong on December 18, 1944. She had over 35 years' experience as a registered nurse in Hong Kong and Canada. She worked at West Park parttime and also had another part-time job, at the Toronto Rehabilitation Institute. 1

Dr. Nestor Yanga was a 55-year-old

family physician who worked at a clinic in Toronto. He was the only North American physician to die of SARS. Dr. Yanga was one of four doctors at the clinic. Two other doctors at the clinic also contracted SARS but survived.

Many of Dr. Yanga's patients were members of Toronto's Filipino community. Some members who started to show symptoms came to the clinic to be treated. Because information on SARS had not yet reached community physicians he had not worn personal protective equipment when he examined his patients. He became symptomatic on April 4, was admitted to hospital on April 8, and passed away on August 14, 2033.1

The lessons of SARS should not be forgotten, nor can we forget those who gave their lives on the front lines of healthcare. The work we do in IPAC and in public health is critical to the health and safety of our patients, clients, residents and fellow workers. 34

1. SARS Commission, Campbell A. SARS Commission final report: Spring of Fear. Toronto, Ont.: Ministry of Health and Long-Term Care; 2007.



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# **Outbreak investigation** of Stenotrophomonas maltophilia

# in a rural community healthcare facility

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#### **ABSTRACT**

A cluster of cases of Stenotrophomonas maltophilia was identified at a rural community hospital in Sechelt, British Columbia. This organism is associated with hospital-acquired infections. An investigation was initiated with the objectives of determining whether the cases were hospital-acquired, healthcare-associated or community-associated, whether a common source could be identified and whether any interventions would be possible to prevent recurrence. Surveillance over the course of the investigation revealed 10 cases in total. It was concluded that these cases were not hospital-acquired but were healthcare-associated, no common source was identified and that selective antibiotic pressure was a determining factor for nine of the 10 cases. Education on antimicrobial stewardship may be considered as an intervention.

#### **KEY WORDS:**

Outbreak; Stenotrophomonas maltophilia; Hospital-acquired; Healthcare-associated; Communityassociated; Selective Antibiotic Pressure

#### **INTRODUCTION**

In October 2010, two cases of laboratory-confirmed Stenotrophomonas maltophilia were identified amongst the inpatient population of St. Mary's Hospital, a rural community hospital which serves the Gibsons-Sechelt area of the lower Sunshine Coast of British Columbia. This was unusual and prompted an investigation by the infection control practitioner. Over the course of the investigation active surveillance identified a total of 10 cases between August 4, 2010 and January 5, 2011.

#### BACKGROUND

#### Stenotrophomomas maltophilia

Stenotrophomonas maltophilia is a bacterium which is ubiquitous to aquatic and soil environments. It is a non-fermentative gram-negative bacilli and an obligate aerobe which does not grow at temperatures below 5°C or higher than 40°C (1). Optimal growth occurs at 35° C. It was previously known as Xanthomonas maltophilia and prior to that as Pseudomonas maltophilia, but its current nomenclature is Stenotrophomonas maltophilia. To date, it is the only species within this genus. Stenotrophomonas has minimal growth requirements making it adaptable to survival in biofilms and to inert surfaces such as medical implants and catheters (2-4). This organism is highly resistant to many commonly used broad spectrum antimicrobial agents, including beta-lactams, extended spectrum cephalosporins, quinolones, aminoglycosides and it is not susceptible to beta-lactam inhibitors such as clavulanate. Stenotrophomonas maltophilia is inherently resistant to carbapenems (5,6).

Stenotrophomonas is not considered to be part of the normal flora of healthy human hosts (3). It is an opportunistic pathogen and the single most important predisposing risk factor for infection with this organism is the presence of a compromised immune system (3,5,6). Altered host responses can favour conditions for biofilm formation making the organism difficult to eradicate once it is established. Typically, infections are recurring until the population of bacteria is surgically removed from the host (6). Other significant risk factors are previous broad-spectrum antibiotic treatment, as well as prolonged hospitalization and instrumentation (1,5,6). Diabetics are an example of patients with an underlying disease, prone to chronic ulcers of the

feet and lower extremities and for which prolonged and frequent antimicrobial therapy is given (6-7). As a result of antibiotic selective pressure, these patients may develop multi-resistant Stenotrophomonas maltophilia infection for which the only remaining therapeutic measure is limb amputation (6).

By virtue of its ubiquitous presence in moist environments and due to modern day advances in medical technology, Stenotrophomonas maltophilia has become increasingly associated with hospital-acquired infections. In hospital settings, outbreaks of Stenotrophomonas have been associated with deionized water dispensers, ice-making machines, inhalation therapy equipment, faucet aerators, dialysis machines, contaminated intravenous solutions, and contaminated disinfectants (2).

In the past, it was possible to attribute sources of infection to either the hospital setting or the community setting. Now, however, the boundaries between the two are not so clear. Although the majority of Stenotrophomonas maltophilia infections reported in the literature are hospital-acquired there is growing evidence that infections can also be healthcare- or community-associated. This seems reasonable given that many immunocompromised patients are now treated in the community through the availability of ambulatory care within a hospital facility and support services such as home care in the community.

In a review of the literature on community-acquired cases of Stenotrophomonas by Falagas et al (4), the presence of comorbidity and prior broad spectrum antimicrobial therapy were common. However, a lack of clarity regarding standardized definitions for categorizing the source was noted as a limitation (4). Time periods used to describe the length of admission prior to culture were varied and this affected how cases were categorized.

#### **INVESTIGATION**

#### **Objectives**

The investigation had the following objectives:

To determine whether the cases were hospital-acquired, healthcareassociated or community-associated.

- ii) To identify or rule-out whether a common source for the cluster of cases could be identified.
- iii) To identify potential interventions based on the results of the investigation.

#### Methodology

A multi-faceted, collaborative investigation was undertaken. A thorough chart review was performed to identify any risks for potential hospital acquisition of the organism. A comprehensive computer search of electronic healthcare data provided information on association to healthcare and included laboratory results, prior hospitalizations and other healthcare encounters, including home care visits and the names of the attending home care nurses. To further assess potential sources and to differentiate between healthcare- and community association, a survey was developed and subsequent telephone interviews were conducted on available cases. As well, key informant interviews with multiple healthcare providers were carried out.

#### **Case definition**

For the purposes of the investigation, a case was defined as a laboratory-confirmed Stenotrophomonas maltophilia identified in an individual from the Sechelt-Gibson's geographical area between February 4, 2010 and January 5, 2011. Positive cases were categorized in terms of where they were most likely acquired using the following criteria:

Hospital acquired: a newly identified case with a positive culture for Stenotrophomonas after 48 hours of hospital admission and is due to a point-source of infection within the hospital facility.

Healthcare-associated: a positive culture for a case living in the community for which there is evidence of a healthcare encounter in the two week period prior to the isolation of the organism and for which there is no evidence of community-associated risks.

Community-associated: a positive culture for a case living in the community for which there is evidence of community-based risks (exposure to recreational water, municipal water supply) and for which there is no evidence of hospital-acquired or healthcare-associated risks.

#### **Case finding**

The cases were detected on the Significant Finding Report which originates from the Vancouver Coastal Health (VCH) Microbiology Laboratory. The VCH Microbiology Laboratory processes samples submitted from St. Mary's Hospital (SMH), a rural community hospital serving residents of the Sechelt and Gibsons communities. Specimens originating from the SMH Laboratory include SMH acute care inpatient samples as well as outpatient samples from SMH Emergency and SMH ambulatory care, which is situated within the hospital facility. Samples from community-based physician clinics are also received at the SMH Laboratory. Additional cases were identified through the private, community-based outpatient laboratory serving the Gibsons-Sechelt area.

Retrospective review of the VCH Significant Finding Report showed that there were no cases of Stenotrophomonas maltophilia in the six-month period prior to the first case (February 4-August 4, 2010). However, in the period between August 4, 2010 and January 5, 2011 10 cases were identified. Two of these cases had a previous positive culture report; one from a private community laboratory and one from another tertiary care hospital laboratory from within the region. Specimen sites from the 10 cases included one joint fluid, one catheter urine and eight wounds which included one axilla, one groin rash, and six lower extremity wounds. The patients ranged from 51 to 97 years of age with a median of 73.5. The cases were evenly divided by gender; five were male and five were female. Four cases were identified as inpatients and six as outpatients.

#### **Epidemiological curve**

An epidemiologic curve was plotted with cases assigned on the basis of the earliest known positive culture date. Although the information is limited to a relatively small number of cases, the distribution of cases over time does not suggest a point source of infection.

#### Medical chart review

Hospital medical chart review was possible for nine of the 10 cases. One case had no previous encounters at SMH. No chart reviews were conducted for

**TABLE 1:** Antibiogram

| Case         | 1 | 2   | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|--------------|---|-----|---|---|---|---|---|---|---|----|
| Ceftazidime  | I | R   | S | S | R | S | S | R | S | R  |
| Levofloxacin | S | 1   | I | I | S | S | S | S | ı | S  |
| SXT*         | S | S   | S | S | S | S | S | S | S | S  |
| Timentin     | S | - 1 | S | S | S | S | S | S | S | R  |

<sup>\*</sup>SXT noted to be the drug of choice if this organism is susceptible

community cases. Of the 10 cases, five resided in Gibsons and were patients of the same medical clinic in Gibsons. The other five cases resided in Sechelt and were patients of various medical clinics in Sechelt. In nine out of 10 cases, underlying comorbidities were identified. Chronic abscesses of the lower extremities due to diabetes or hypertension was cited for five of the 10 cases. Of the other four cases, two had cancer. one had an auto-immune disorder and one had an indwelling urine catheter.

Treatment with multiple antibiotics and prolonged, multiple courses of antibiotic treatment were identified in eight out of nine cases. Although Trimethoprim/Sulphamethoxazole (SXT) is noted on the microbiology report provided with the positive test results as being the drug of choice (if the organism is susceptible), only two of the four inpatient cases had this prescribed during their admission and none of the five outpatient cases had this prescribed. Treatment with Imipenem, which Stenotrophomonas is intrinsically resistant to, was noted in four of the nine cases. These findings support the evidence that compromised immunity and multiple antibiotic treatments are significant risk factors for acquisition of Stenotrophomonas.

#### Electronic healthcare data review

Laboratory data

Healthcare data was also collected through Care Connect which is a comprehensive electronic database for many, but not all, of the healthcare facilities in the Vancouver area. Laboratory data was available for the hospitals which patients from St. Mary's Hospital are referred to for tertiary care.

Upon detailed review of the electronic laboratory results, it was discovered that two of the 10 cases had previous foot cultures positive for Stenotrophomonas maltophilia reported at facilities other than SMH. One had a previous positive culture on December 3, 2010 (private community lab) as an outpatient and the other had a positive culture October 29, 2010 as an inpatient (tertiary care hospital).

Antibiogram comparison

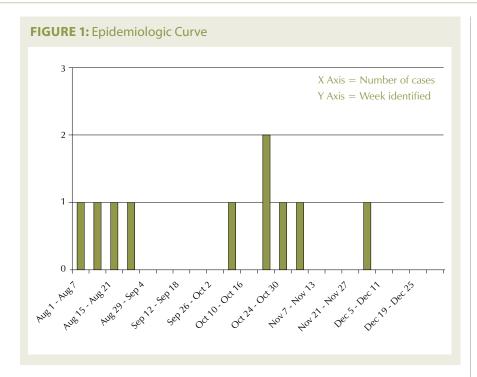
For many years, antimicrobial susceptibility testing of Stenotrophomonas maltophilia was controversial because standardized, reproducible methods for performing susceptibility testing were lacking (8). However, current documents from the Clinical and Laboratory Standards Institute (CLSI), which laboratories are mandated to follow, now include methodology for standardized testing and reporting for Stenotrophomonas maltophilia (9). This permits comparison of antimicrobial susceptibility results (antibiogram) between isolates. An antibiogram of the cases in this investigation was prepared to establish whether or not phenotypic patterns could be observed which may indicate possible strain relatedness and therefore a possible common source of infection. See Table 1.

A phenotypic pattern was observed for Cases 3, 4 and 9. A different phenotypic pattern was observed for Cases 5 and 8 and another for Cases 6 and 7. Results from the electronic data and chart review did not support an epidemiological link between each of these case subsets.

Home care information Also available through Care Connect was information regarding home care visits. The date, purpose and geographic location as well as the names of attending caregivers are available from this database. Of the four cases which had home care visits in the two-week period preceding their positive culture report, two received care from the Gibsons Home Support office and two received care from the Sechelt Home Support office. Nursing care was documented as being delivered by various staff and no staff member common to all four cases was identified.

#### Survey

A telephone survey was developed for the investigation based on a US Centers for Disease Control and Prevention (CDC) survey for outbreak investigations associated with recreational water use (10). Questions were added to capture information related to community- and healthcare-associated risk factors. At the beginning of the investigation, consultation with the Environmental Health Officer in Sechelt revealed that Gibsons does not have a chlorinated water supply so questions related to community water supply were included. Specifically, questions related to community-associated sources of potential biofilms such as recreational water exposure, foot baths used for pedicures, and water filtration systems were included because of the known association of Stenotrophomonas with biofilms. To gather information regarding association with healthcare, the CDC tool was further modified to include questions concerning medical visits. The exposure period was considered to be the two-week period prior to the first known positive culture date based on the incubation period for non-fastidious bacterial organisms. The complete survey may be found in Appendix 1.



The telephone survey was completed for eight of the 10 cases. Two of the cases were not available. In seven of the eight cases surveyed, a healthcare encounter in the two-week period preceding the positive Stenotrophomonas culture was identified. Four of the eight cases were seen at St. Mary's Hospital Ambulatory Care Unit (SMH-ACU). Three of the eight cases had Home Care visits; one in Sechelt and two in Gibsons. Municipal water source was identified as Gibsons for five of the eight cases, and Sechelt for the other three cases. Only two of the eight cases reported exposure to recreational water and each exposure was a different source.

Key informant interviews Results from the chart review and the survey identified home or ambulatory care services as potential sources requiring further investigation. Key informant interviews were conducted with home and ambulatory care staff to review wound care practices and to identify staff common to the cases in our investigation. Key informant interviews were also conducted with VCH Supply Chain staff to review potential sources of common supplies which are obtained through a regional central supply warehouse.

#### 1. Home care

A full time Home Care Nurse from the Gibsons office was interviewed regarding staffing and current practice for wound care. A variety of staff cared for the patients which were referred to their catchment area for home care. The staff at both Gibsons and Sechelt are dedicated to that site; there is no cross-site coverage between the two areas. Wound care generally involved flushing with sterile saline and dressing changes. Flushing was done with individual 30ml sterile saline bottles and each was disposed of following one-time use.

#### 2. Ambulatory care unit (ACU)

The patient care coordinator and the wound care RN were interviewed regarding staffing and current practice for wound care. A variety of staff cared for the patients seen in the department. Wound care generally involved flushing with sterile saline, dressing changes and IV therapy with antibiotics. Flushing was done with sterile saline which was obtained in smaller quantities from a master stock of 1L sterile saline. The master stock was used to completion which usually occurred within the day or to a maximum of 1-2 days. It was noted that three of the four cases seen in ACU were diabetics with chronic foot or leg ulcers who had refused amputation and

were being maintained on prolonged antibiotic therapy including Imipenem.

#### 3. VCH supply chain

The materials manager on site at SMH informed that home care and ACU may obtain common supplies through the VCH Central Warehouse. Items not available through Central Warehouse are obtained directly from a vendor. The 30ml sterile saline used by home care is obtained directly from the vendor. The sterile saline which is used in ACU-SMH is obtained from the VCH Central Warehouse and is available from either of two manufacturers. Based on this information, a common source of product was ruled out.

#### Community comparison

In an effort to determine whether there was a corresponding increase of Stenotrophomonas cases in the community, the community-based, private laboratory (LifeLabs) in Sechelt was consulted. The retrospective baseline data (August 1, 2009 to July 31, 2010) identified two cases of Stenotrophomonas isolated in the Sechelt-Gibsons outpatient population. One case was a wound specimen and the other was a urine specimen. In the time frame supplied (August 4, 2010 to December 24, 2010), which closely approximates the time frame for the cluster of cases in the VCH investigation (August 4, 2010 to January 5, 2011), there were two cases of Stenotrophomonas identified. One case was sputum from a patient with no visit history at SMH and the other was a foot wound from one of the cases in our investigation. This data indicates that an increased incidence of Stenotrophomonas was not observed in the community and suggests that the source is not associated with the community water supply or recreational water exposure.

#### **DISCUSSION**

Following a detailed and comprehensive investigation, the source of these cases cannot be attributed to hospital-acquisition or community-association. Chart review did not identify potential hospital-acquired risks or commonalities. There was no parallel increase in

community cases and no common source for community-based risks due to water supply or recreational water exposure.

The epidemiologic curve did not suggest a point source for the cases and no common source could be established from the key informant interviews or from the antibiogram. There was no cross-site coverage by staff, wound care products were from differing suppliers and best practice was observed in the use of the products and in the nursing care provided.

Underlying comorbidity and prolonged, multiple courses of antibiotic therapy, which are documented as significant risk factors for acquisition of Stenotrophomonas, were common to nine of the 10 cases. It is noteworthy that the drug of choice, SXT, was listed for all cases as susceptible but was prescribed in only two of nine cases. Use of Imipenem was noted in four of nine cases. Because Stenotrophomonas maltophilia is inherently resistant to Imipenem this is a clear demonstration of the selective pressure of antibiotic therapy. However, it should also be noted that in the three cases of diabetics with chronic lower extremity ulcers who had refused amputation as the recommended treatment, the use of Imipenem to maintain their quality of life may not be optional.

#### CONCLUSION

In conclusion, this cluster of Stenotrophomonas maltophilia cases is not hospital-acquired but is healthcare-associated. A point source for these cases was not identified, however, multiple and prolonged use of antibiotics was identified as a commonality. Provision of education to physicians on the judicious use of antibiotics may be considered as a useful intervention, this would include review of the appropriate selection of antimicrobials for treating Stenotrophomonas such as the recommended drug of choice (SXT) versus use of carbapenems to which the organism is inherently resistant. However, it should be noted that treatment options may be limited by the clinical condition of the patient such as diabetics who have refused amputation as the recommended treatment. ::

#### **APPENDIX 1**

#### Survey Questionnaire

(Exposure period is the two-week period prior to the first known positive culture)

#### **Section A.** Recreational water exposure during exposure period

| 1. Did you swim in, wade in, or enter any recreational water? | <ul><li>Lake</li><li>Pond</li><li>River or stream</li><li>Swimming pool</li></ul>   | Where? | When? |
|---|---|--------|-------|
| 2. Did you use or have contact with:                          | <ul> <li>Hot Tub</li> <li>Spa or footbath i.e. pedicure/manicure</li> <li>Whirlpool</li> <li>Jacuzzi</li> <li>Water from garden hose</li> </ul> | Where? | When? |
| 3. Did you use ice<br>for cold packs?<br>Y/N                  | <ul><li>Commercial supplier?</li><li>Ice dispenser on fridge?</li><li>Ice cube trays</li></ul>  |        |       |

#### Section B. Source of water during exposure period

| 1. What is your water source?   | Municipal<br>Private Well<br>Other? | Where? |
|---|-------------------------------------|--------|
| 2. Did you have/use a water purification system? i.e. filter/ultra violet | If yes what kind?                   |        |
| 3. Did you use a refrigerator with a built-in water or ice dispenser?     | Yes / No                            |        |

#### Section C. Healthcare information during exposure period

|  |        | 1     |              |
|--|--------|-------|--------------|
| 1. Did you have<br>any kind of medical<br>office visit?<br>I.e. FamilyDoctor/<br>Chiropractor/Physio | Where? | When? | Type of Care |
| 2. Did you have<br>Home Care?  | Where? | When? | Type of Care |

#### Section D. Respiratory equipment during exposure period

| 1. Did you use puffers for asthma or allergy?           | Yes / No | When? |
|---|----------|-------|
| 2. Did you use an apparatus for sleep apnea? Cpap/BiPap | Yes / No | When? |

#### **ACKNOWLEDGEMENT**

The authors wish to thank LifeLabs for their important contribution to this investigation.

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# The impact of feedback on the antibiotic prescribing of family physicians for respiratory tract infections

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#### **ABSTRACT**

#### Objective

Antibiotics are often prescribed inappropriately in primary practice for respiratory tract infections (RTIs) and first-line choices are underutilized. Feedback has been shown to improve prescribing. The effect of feedback on family physician antibiotic prescribing for RTIs was examined.

#### Methods

The study was conducted in southeastern Ontario during the winter months of 2008 and 2009. Family physicians recorded up to 35 consecutive patient encounters a month for patients with colds, laryngitis, croup, acute bronchitis, influenza, acute sinusitis, acute otitis media, pharyngitis, community-acquired pneumonia, or acute exacerbations of chronic obstructive pulmonary disease. Physicians in the feedback condition received monthly feedback regarding their antibiotic prescribing. Antibiotic prescribing practices during baseline were examined by univariate logistic regression and ANOVA analyses tested the effect of feedback on antibiotic prescribing.

Thirty-six physicians recorded a total of 5,032 eligible patient encounters. Patients received antibiotics in 47.1 % of encounters and 52.1 % of prescriptions were first line choices. When physicians provided over-the-counter drug recommendations patients were less likely to be prescribed antibiotics for acute bronchitis (OR, 0.43; 95% CI, 0.24-0.76; P=0.004), pharyngitis (OR, 0.38; 95% CI, 0.23-0.63; P=0.0002), and acute sinusitis (OR, 0.09; 95% CI, 0.04-0.20; P<0.0001). Monthly feedback increased first line antibiotic choices compared to baseline and the group who received

delayed feedback (F = 8.1, P = .005) and decreased the use of extended spectrum macrolides (F = 7.4, P = .007).

#### Conclusions

Physicians who received antibiotic prescribing feedback increased their use of first-line choices. The feedback intervention was viewed positively and physicians reported feedback helped them prescribe antibiotics more appropriately.

#### INTRODUCTION

Antibiotics are too often prescribed inappropriately in primary practice for respiratory tract infections (RTIs) in Canada and around the globe (1-6). First-line choices are underutilized when antibiotics are recommended treatments (2-4). The injudicious use of antibiotics contributes to increased individual and population antimicrobial resistance (7). Reduced antibiotic prescribing can lead to decreased antimicrobial resistance levels (8). Feedback of physician antibiotic prescribing has been shown to improve prescribing habits and is a cost effective intervention (2, 4, 9). The effect of feedback on family physician antibiotic prescribing for RTIs was examined.

#### **METHOD**

The study was conducted in southeastern Ontario from February 2008 to April 2009 during the winter months. Family physicians were eligible if not involved in another treatment study of RTIs, saw at least 50 patients per week, and worked three or more days a week in a community setting. Physicians recorded patient encounter data for up to 35 consecutive encounters a month for patients who presented with: colds, laryngitis, croup, acute bronchitis, influenza, acute sinusitis, acute otitis media (AOM), pharyngitis, pertussis, community-acquired

TABLE 1: Family physician reported prescribing of antibiotics for common upper respiratory tract infections in adults

| Antibiotic<br>Prescribed                  | Acute<br>Bronchitis<br>n=229 (%) | Pharyngitis<br>n=161 (%) | Acute Sinusitis<br>n=197 (%) | Community- acquired<br>Pneumonia<br>n=82 (%) | Acute Exacerbations of<br>COPD<br>n=98 (%) |
|---|----------------------------------|--------------------------|------------------------------|--|--|
| Patient Prescribed Antibiotic             | 50†                              | 37                       | 84                           | 90   | 90   |
| Amoxicillin                               | 16‡                              | 22                       | 33 <sup>1</sup>              | 4  | 31   |
| Amoxicillin -clavulanate                  | 6                                | 2                        | 13                           | 5 <sup>1</sup>                               | 10 <sup>1</sup>                            |
| Penicillin V                              | 0                                | 48¹                      | 0                            | 0  | 0  |
| Cephalexin                                | 2                                | 3                        | 1                            | 0  | 0  |
| 2nd and 3rd Generation<br>Cephalosporins* | 4                                | 0                        | 5                            | 3  | 91   |
| Fluoroquinolones                          | 9                                | 0                        | 4                            | 15 <sup>1</sup>                              | 33 <sup>1</sup>                            |
| Erythromycin                              | 0                                | 3                        | 0                            | O <sup>1</sup>                               | 0  |
| Extended Spectrum Macrolides**            | 58                               | 20                       | 38                           | 77 <sup>1</sup>                              | 42 <sup>1</sup>                            |
| Tetracycline                              | 5                                | 0                        | 2                            | 0  | 01   |
| Co-trimoxazole                            | 0                                | 0                        | 4                            | 0  | 21   |
| Other Antibiotics                         | 0                                | 2                        | 1                            | 0  | 0  |

**NOTE:** \* Cefaclor, Cefuroxime, Cefprozil, Cefixime; \*\* Clarithromycin and Azithromycin;

† First line recommendation is no antibiotic; ‡ % of antibiotic prescriptions received for indication; 1 First line recommendation

pneumonia, or acute exacerbations of chronic obstructive pulmonary disease (AECOPD). Physicians recorded their prescriptions for antibiotics and other drugs and over-the-counter (OTC) recommendations on prescription size pads with 35 identical pages. Physicians recorded date, patient age and sex, whether a repeat visit within two weeks for the same illness, co-morbidity, and diagnosis on a checklist. No patient identifying information was collected. Co-morbidity was defined as clinically evident immune suppression, active lung disease, or congestive heart failure. Encounter pads were returned monthly by mail. A program evaluation survey was sent to all participants, including those that did not provide sufficient patient encounters to be included in the primary analysis. Physicians were questioned about attitudes towards feedback received and feedback preferences.

#### **Feedback intervention**

Physicians were randomly assigned to monthly or delayed feedback conditions. Along with a new patient encounter pad, all physicians received a letter that discussed various issues of interest such as diagnostic distribution and influenza rates in the study region on a monthly basis. Following two months of baseline data collection, physicians in the monthly feedback condition also received monthly feedback regarding their antibiotic prescribing compared to their peer group and the Ontario anti-infective guidelines (10). The appropriateness of physicians' decisions to prescribe antibiotics and antibiotic drug choices were judged against the recommendations of the Ontario guidelines. All physicians received a copy of the guidelines from the researchers in May 2008. Feedback reports included discussion of identified problem areas accompanied by summaries of relevant sections of the guidelines. The delayed feedback group received comprehensive feedback at the end of the study.

#### **Statistical analysis**

Physician antibiotic prescribing practices were examined using baseline data. The associations of OTC recommendations, non-antibiotic prescriptions, patient sex and age, co-morbidity, and repeat visits were tested by univariate logistic regression with antibiotic prescribing for acute bronchitis, pharyngitis, acute sinusitis, and AOM. ANOVA analyses were used to test the influence of the dissemination of the Ontario anti-infective guidelines and the effect of feedback condition on antibiotic prescribing.

#### **RESULTS**

Thirty-six of 53 physician volunteers recorded at least 50 eligible patient encounters and were included in the analysis for a total of 5,032 eligible encounters with a mean of 140 encounters per physician and a range of 50 to 243 encounters. The mean age of patients was 35.0 years (SD 25.5), ranging from newborns to 102 years.

Two-thirds (65.8%) of patients were adults (≥ 16) and 59.4% were female. For 10.0% of patients it was a repeat visit for the same illness and 8.1% of patients had related co-morbidity. The most frequent RTIs were common cold (27%), acute bronchitis (19%), pharyngitis (19%), acute sinusitis (14%), and AOM (10%).

#### **Prescribing practices**

Patients received antibiotics in 47.1% of encounters and 52.1% of prescriptions were first-line choices. When patients with community-acquired pneumonia and AECOPD were excluded, 40.8% of patients were prescribed antibiotics and 42.3% of prescriptions were first-line choices. Only 1.5% of patients with colds, croup, laryngitis, or influenza were prescribed antibiotics. Antibiotic prescriptions by diagnosis during the baseline phase for adults are presented in Table 1 and for children in Table 2. Half (50%) of adults and a third (31%) of children with acute bronchitis were prescribed antibiotics even though antibiotics are not recommended for this indication for otherwise healthy adults or children (10). Over half (58%) of adults with acute bronchitis who received antibiotics, received extended spectrum macrolides (azithromycin or clarithromycin). Antibiotics were prescribed for 37% of adults with pharyngitis and the first line recommendation penicillin V was received by 48% who were prescribed antibiotics. Antibiotics were prescribed for half (48%) of children with pharyngitis and children prescribed

**TABLE 2:** Family physician reported prescribing of antibiotics for common upper respiratory tract infections in children

| Antibiotic Prescribed                  | Acute Bronchitis<br>n=49 (%) | Pharyngitis<br>n=112 (%) | Acute Otitis Media<br>n=172 (%) |
|--|------------------------------|--------------------------|---------------------------------|
| Patient Prescribed Antibiotic          | 31†                          | 48                       | 87                              |
| Amoxicillin                            | 47‡                          | 57 <sup>1</sup>          | 51 <sup>1</sup>                 |
| Amoxicillin-clavulanate                | 0                            | 4                        | 5                               |
| Penicillin V                           | 0                            | 11 <sup>1</sup>          | 0                               |
| Cephalexin                             | 0                            | 0                        | 0                               |
| 2nd and 3rd Generation Cephalosporins* | 13                           | 2                        | 7                               |
| Fluoroquinolones                       | 0                            | 0                        | 0                               |
| Erythromycin                           | 13                           | 0                        | 0                               |
| Extended Spectrum Macrolides**         | 27                           | 26                       | 35                              |
| Tetracycline                           | 0                            | 0                        | 0                               |
| Co-trimoxazole                         | 0                            | 0                        | 2                               |
| Other Antibiotics                      | 0                            | 0                        | 0                               |

**NOTE:** \* Cefaclor, Cefuroxime, Cefprozil, Cefixime; \*\* Clarithromycin and Azithromycin;

† First line recommendation is no antibiotic; ‡ % of antibiotic prescriptions received for indication; 1 First line recommendation

antibiotics received first-line recommendations two-thirds (68%) of the time for this indication. 84% of adults with acute sinusitis were prescribed antibiotics and only a third of these patients received amoxicillin, the first-line recommendation. 88% of children with AOM were prescribed antibiotics and half (51%) of these children received the first-line recommendation amoxicillin. A fifth of patients (18%) received non-antibiotic prescriptions; the most common were inhaled corticosteroids and bronchodilators. OTC recommendations were made for 29% of patients; the most common were analgesics/antipyretics and cough remedies.

#### **Factors affecting antibiotic decisions**

OTC recommendations (OR, 0.43; 95% CI, 0.24-0.76; P=0.004), non-antibiotic prescriptions (OR, 0.36; 95% CI, 0.22-0.60; P<0.0001), and childhood (OR, 0.44; 95% CI, 0.23-0.85; P=0.01) were associated with fewer antibiotic prescriptions for acute bronchitis. When physicians provided OTC recommendations patients were less likely to be prescribed antibiotics for pharyngitis (OR, 0.38; 95% CI, 0.23-0.63; P=0.0002) and acute sinusitis (OR, 0.09; 95% CI, 0.04-0.20; P<0.0001). When patients made repeat visits for AOM they were less likely to be prescribed antibiotics (OR, 0.10; 95% CI, 0.04-0.26; P<0.0001), possibly because they had previously been prescribed antibiotics. Whether a patient received a first-line antibiotic choice for pharyngitis, acute sinusitis, AOM, community-acquired pneumonia,

or AECOPD was not associated with OTC recommendations, non-antibiotic prescriptions, sex, age, co-morbidity, or repeat visit.

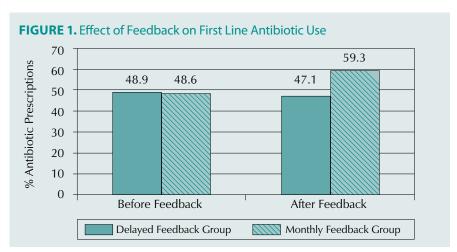
#### **EFFECTS OF FEEDBACK**

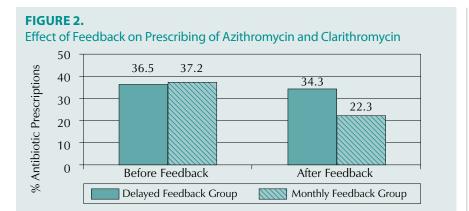
The rate of antibiotic prescribing (F = 1.1, p = .3) and first-line antibiotic choices (F = 0.8, p = .4) in the delayed feedback group were not influenced by receipt of the anti-infective guidelines alone. Feedback did not influence the rate of prescribing of physicians in the monthly feedback condition when compared to baseline prescribing and the delayed feedback group (F = .01, p = .9); however, monthly feedback increased first-line antibiotic choices when compared to baseline prescribing and the delayed feedback group (F = 8.1, P = .005) (Figure 1). One foci of feedback was the overuse of extended spectrum macrolides. Physicians receiving monthly

feedback prescribed fewer extended spectrum macrolides when compared to baseline prescribing and the delayed feedback group for indications where azithromycin and clarithromycin were not first-line choices (F = 7.4, P = .007) (Figure 2).

#### PROGRAM EVALUATION

Three-quarters (75.5%, 40 of 53) of physicians completed the program evaluation survey. Physicians found feedback on antibiotic use to be interesting (3.4 out of 4), useful (3.4), and influential (3.2). Physicians were interested in prescribing feedback for most common indications, not just for RTIs (3.3). The preferred frequency for feedback was quarterly (53%). Medical associations were overwhelmingly (87%) the preferred feedback source. Not a single physician indicated feedback supplied by pharmaceutical companies was a good idea.





#### **DISCUSSION**

Feedback improved the antibiotic prescribing practices of family physicians for RTIs. Physicians who received monthly feedback increased their prescribing of first-line antibiotic choices by approximately 10%. The over prescribing of extended spectrum macrolides was one foci of monthly feedback reports and feedback greatly reduced the inappropriate prescribing of these agents. Feedback on antibiotic prescribing could reduce costs due to increased use of less expensive first-line choices (9-10). Bacterial resistance would be also be impacted as first line antibiotic choices are frequently narrow spectrum (7-8).

The overall rate of antibiotic prescribing was not affected by feedback in this study and antibiotics were over-prescribed for predominately viral indications. When patients received OTC recommendations they were less likely to be prescribed antibiotics for acute bronchitis, pharyngitis, and acute sinusitis and when patients received non-antibiotic drug prescriptions they were less likely to be prescribed antibiotics for acute bronchitis. Reduced antibiotic prescribing when drugs for symptomatic treatment are recommended has been found in other studies of antibiotic prescribing (2). Recommending drugs other than antibiotics may have satisfied some physicians' need to treat and some patients' desire to receive treatment. The efficacy of non-antibiotic prescription drugs and OTCs as well as non-drug treatments for RTIs needs to be evaluated.

A limitation of the study was that physicians self-reported their treatment of RTIs. Physicians' identities were known to the researchers and physicians' reports

could have a social desirability bias. The effect of any such bias is that the inappropriate prescribing practices presented can be viewed as conservative estimates.

The program evaluation survey results demonstrated that physicians think feedback helped them to prescribe antibiotics more appropriately and the preferred source of feedback was medical associations. Physician-linked prescription data is used by the pharmaceutical industry to target market individual physicians and could be better used to provide physicians feedback from more trustworthy sources (11).

#### **CONCLUSIONS**

Family physicians inappropriately prescribed antibiotics for RTIs, overusing antibiotics for viral indications and underutilizing first-line choices when antibiotics were warranted. Physicians who received antibiotic prescribing feedback increased their use of first-line choices. The feedback intervention was viewed positively and physicians reported feedback helped them prescribe antibiotics more appropriately. &

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#### **ACKNOWLEDGEMENTS**

Alison Burns is thanked for her work as a research assistant on the project. The project was funded by the Ontario Ministry of Health and Long-Term Care.

# Measuring thoroughness of cleaning is key to improving cleaning outcomes

#### **Authors** Linda Homan, RN, CIC **Ecolab Healthcare**

#### **ABSTRACT**

Thorough cleaning is becoming widely recognized as a critical component to preventing the spread of infectious pathogens in healthcare facilities. There are several tools available for hospitals and other healthcare facilities to monitor the thoroughness of their cleaning programs. This article looks at the strengths and weaknesses of the available cleanliness monitoring tools available today. New advances in technology have made our ability to monitor the thoroughness of cleaning easier, but it is also important to recognize the importance of a complete environmental hygiene program that combines a systematic approach to cleaning with the right tools, processes, training and best practices.

#### **BACKGROUND**

Though it seems intuitive that vigilant environmental hygiene can reduce the spread of infection-causing pathogens, a growing body of research now supports the role that proper cleaning has in infection prevention. By their very nature, hospitals are a destination for pathogens such as Clostridium difficile, Methicillin-resistant Staphylococcus aureus (MRSA), and Vancomycin-resistant enterococci (VRE) - pathogens that can be easily transmitted and which are persistent on environmental surfaces.

Compounding the challenge of the long survival rates of some microbes on hard surfaces, healthcare facilities struggle with the thoroughness of cleaning – many patient rooms are not well cleaned (1-3).

For example, one study that evaluated the thoroughness of environmental cleaning in three hospitals, found that only 48 per cent of high-touch objects were properly cleaned (4). The value of investing time in improving cleaning

becomes clearer when one considers this and another study that found patients admitted to rooms previously occupied by someone colonized or infected with MRSA and other pathogens, are more likely to acquire these pathogens (5,6).

Environmental hygiene and monitoring has been recognized by several regulatory agencies and authoritative bodies, including Ontario's Provincial Infectious Disease Advisory Committee (PIDAC) (7), who have added specific language in their guidelines outlining the need to monitor environmental services to evaluate cleaning and to maintain a sanitary environment (7-12).

Improving environmental cleanliness seems like an obvious solution, but many facilities struggle to achieve and maintain a consistently high level of hygiene. Dayto-day operational challenges like staffing levels, training, language and cultural barriers, and even attitudes among other healthcare workers about the role of the environmental services staff, can and do impact how well a facility is able to meet its cleanliness goals.

Despite these challenges, improved environmental cleanliness is both attainable and sustainable.

#### **BUILDING A PROGRAM**

Building an effective environmental hygiene program can be done through a combination of training and education, standardized processes, the right products and tools, and most importantly, objective monitoring and measurement of the thoroughness of cleaning to understand and improve performance.

Though sometimes an afterthought, measurement should be considered from the start of any environmental hygiene improvement initiative. Whether a program is being implemented across an entire healthcare

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|   |   |    |    |   |

| Method                      | Ease<br>of use | Identifies<br>pathogens | Useful for individual<br>teaching | Directly evaluates<br>cleaning | Published use in programmatic improvement |
|-----------------------------|----------------|-------------------------|-----------------------------------|--------------------------------|---|
| Direct practice observation | Low            | No                      | Yes                               | Yes                            | 1 Hospital                                |
| Swab cultures               | High           | Yes                     | Not studied                       | Potentially                    | 1 Hospital                                |
| Agar slide cultures         | Good           | Limited                 | Not studied                       | Potentially                    | 1 Hospital                                |
| Fluorescent gel             | High           | No                      | Yes                               | Yes                            | 49 Hospitals                              |
| ATP system                  | High           | No                      | Yes                               | Potentially                    | 2 Hospitals                               |

facility, or just in selected units, performing a baseline audit provides the benchmark against which to show continuous improvement. Though it is very difficult to determine the specific source of a healthcare-acquired infection, monitoring and tracking environmental cleanliness, hand hygiene compliance and other infection prevention metrics can provide valuable insight that facilities can use to improve care.

#### **CURRENT MONITORING METHODS**

Recommendations from PIDAC on Measuring Cleanliness and Environmental Marking include the following:

- There should be a process in place to measure the quality of cleaning in the healthcare setting (7).
- Methods of auditing should include both visual assessment and at least one of the following tools: residual bioburden or environmental marking (7).
- Results of cleaning audits should be collated and analyzed with feedback to staff, and an action plan developed to identify and correct deficiencies (7).

Measurement and tracking has become easier and faster with new testing methods and mobile computing, including mobile device applications for gathering room cleanliness data. In the case of improving room cleanliness, measurement can and should be as granular as

determining which high-touch surfaces are being cleaned effectively.

Current methods for monitoring for cleanliness include visual observation, use of a fluorescing marker, ATP bioluminescence, or environmental cultures using swabs or dipslides.

Historically, visual observation, either overt or covert, has commonly been used to evaluate cleaning. Direct observation has the advantage of allowing immediate feedback to staff. However, it has limitations, including the Hawthorne Effect – staff performance improves when they know they are being observed. Also, observation may be subjective based on the observer's biases.

In recent years fluorescent gel marking has become a reliable measurement tool. A fluorescent marking tool leaves a mark that is invisible in natural light but fluoresces under a black light. Before cleaning a patient room, high-touch objects are marked with the fluorescent gel. After cleaning, each of the high-touch objects is inspected with a black light to see if the marks were removed, which provides an objective measure of the thoroughness of cleaning. In several studies focused on ways to improve environmental hygiene practices, it was found that using a fluorescent marker as a training and quality improvement tool is an effective method to continuously improve cleanliness as measured by the number of high-touch objects cleaned (4,13-15).

ATP (adenosine triphosphate) bioluminescence, a technology widely used in the food processing industry, is also being used to perform environmental monitoring in healthcare. ATP is present in all organisms. ATP bioluminescense measures cellular material via an enzyme reaction that emits light and is measured in relative light units (RLU). The advantage of ATP testing is that it provides an immediate reading. Though ATP can show that a surface is contaminated, it does not indicate what the contaminant is, as it measures both microbial and non-microbial debris including both live and dead bacteria. In addition, some disinfectants, fabric treatments, and other chemicals specific to healthcare settings have been found to interfere with ATP, causing false negative and false positive tests (16).

Another method of testing, environmental culturing uses swabs or dipslides to measure the number of aerobic bacteria present on a surface. Environmental cultures are useful to identify specific pathogens in outbreak situations. However, using culturing as an ongoing environmental monitoring method is not ideal because at least two days of incubation are needed before results are available. Because of the lag time between obtaining the culture and receiving the result, this method is not as effective as an educational tool for immediate performance feedback. Environmental culturing can also be resource-intensive for the microbiology laboratory.

The Centers for Disease Control and Prevention Toolkit: Options for Monitoring the Environment includes a table comparing the various methods of environmental monitoring (see Figure 1) (17).

#### DISCUSSION

Though monitoring methods all have their strengths and limitations, ultimately improvement depends on how consistently the information is measured and how well the staff is trained on proper cleaning processes. Environmental services staff must be engaged and understand their role in infection prevention as well as best practices in environmental hygiene to prevent cross contamination of rooms. Well-designed carts and cleaning products such as chemicals effective against anitibotic-resistant organisms (AROs), microfiber mops and cloths can also have a big impact on the efficiency, thoroughness and speed with which environmental services staff are able to clean rooms (18).

It's important to note that studies using other methods of measuring improvement in environmental cleaning noted similar improvements with a programmatic approach. In the observational study by Hayden, thoroughness of environmental cleaning improved from 48 per cent to 87 per cent following interventions (19). Eckstein found a decrease in VRE environmental contamination from 71 per cent to zero and C. difficile environmental contamination from 78 per cent to 11 per cent when routine cleaning was replaced with trained research staff cleaning in a culture-based study (20).

#### CONCLUSION

New advances in technology have made our ability to monitor cleanliness very easy, but the success of any environmental hygiene program must include a systematic approach with the right processes, tools, education, and best practices. &

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<sup>\*</sup> Frequency of outbreak investigations in US hospitals: Results of a national survey of infection preventionists, American Journal of Infection Control, February 2012, Vol. 40, No. 1, Page 2

<sup>\*\*</sup>Based on Health Canada Drug Product Database and product labels of leading non-hydrogen peroxide disinfecting wipes as of April 1st 2012







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Jim Gauthier, MLT, CIC

#### President, CHICA-Canada

## **IFIC Conference**

had the unbelievable opportunity to attend the International Federation of Infection Control's (IFIC) conference in Zagreb, Croatia this past October, representing CHICA-Canada as your president. The mission of IFIC is "to facilitate international networking in order to improve the prevention and control of healthcare associated infections worldwide." 2012 was IFIC's 25th anniversary, and a wonderful presentation was done on the history of this very important organization.

The conference was a real eyeopener for me. I was asked to help grade some of the abstracts submitted for poster consideration. I was asked to moderate one of the parallel symposia with topics on infection prevention in intensive care. Carol Goldman and I presented a one-hour

"The mission of IFIC is 'to facilitate international networking in order to improve the prevention and control of healthcare associated infections worldwide.' 2012 was IFIC's 25th anniversary, and a wonderful presentation was done on the history of this very important organization."

workshop on outbreaks and their management. Delegates were soaking up information at all sessions, and learning from each other.

Some infection prevention and control issues presented indicated that there are no boundaries for things such as antibiotic resistance, infections and workload problems. Some of

the issues rattled me, as I do not run into situations as those described. One of the oral poster presentations was on trying to define the patient environment (for implementations of the World Health Organization's five moments for hand hygiene) when there are multiple patients and family members in the same bed and beds crammed so close together that in essence there is just one large platform of patients! Innovation and resourcefulness filled many of the presentations.

There was representation from 45 countries with many participants from the countries around Croatia. Translation was done only from English to Croatian, as the language of the conference was English. I learned very quickly to speak a little slower (hard for me) so I could be better understood by the new friends I made, and many times I had to ask other participants to slow down a bit so I could understand their accented English.

Then there were the flashes of insight that we are not as far along as some countries. I thought we were well off here in Canada with our CHICA course and CHICA endorsed courses



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providing 90 hours of education for novice and new practitioners. Did you know that Egypt has standards for infection control practitioners that have been around since 2000? Did you know that a practitioner in Chile will receive 250 hours of training in infection control, and if you are a supervisor in infection control you will receive a further 80 hours? Chile has Master Level courses. Thailand has a master's degree program in infection control and training courses are held all through the country, being run five times per year. Terri Lee, one of the board members of IFIC, will be collating, coordinating, and sharing what educational resources are in place around the world. We really can learn from each other.

At the IFIC president's meeting, we discussed making information a twoway flow: share our knowledge and learn from under-resourced countries. I think this is a fabulous idea.

So, what can we do to help? CHICA-Canada holds the annual Run for IFIC at our national conference. We raise funds for scholarships for fellow ICPs

from under-resourced countries to attend the IFIC conference. If each member of CHICA sponsored a runner or walker for \$10, we would raise almost \$17,000 to help ICPs around the world. I am sure you remember last year Braveheart, Slayer of Germs challenging all members to sponsor him if you did not have a fellow chapter member running or walking for IFIC. I had asked that donations be sent to CHICA-Canada's office in Winnipeg. and I was disappointed to find out that no money came through this channel. We did raise in the \$5000 range, but this dollar amount needs to be much higher to help more and more ICPs get needed education.

So, Braveheart will be in Ottawa, running at 0630h in kilt and makeup (and hoping that the makeup comes off this year!). He will once again be looking for sponsorship for the run, so if you are not sponsoring a local chapter member, or not out there yourself, please find a few dollars to help the world be a cleaner, safer place for patients. 📩

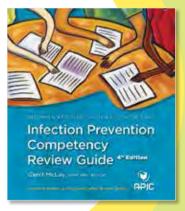


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# Congrès de l'IFIC

n octobre dernier, j'ai eu la chance d'assister au congrès de l'IFIC (International Federation of Infection Control), qui a eu lieu à Zagreb, en Croatie. À titre de président, j'y représentais CHICA-Canada. La mission de l'IFIC consiste à « stimuler le réseautage international afin d'améliorer la prévention et le contrôle des infections associées aux soins de santé dans le monde entier. » Puisque l'année 2012 marquait le 25e anniversaire de l'IFIC, une présentation magnifique était incluse au programme pour recenser les jalons de cet important organisme.

Le congrès m'a ouvert les yeux sur de nouvelles réalités. On m'a demandé de participer à l'évaluation de certains résumés proposés en vue d'une présentation sur affiche. On m'a aussi demandé d'animer l'une des séances parallèles portant sur la prévention des infections dans les unités de soins intensifs. Carol Goldman et moi-même avons présenté un atelier d'une heure sur les épidémies et la gestion de celles-ci. Les congressistes absorbaient l'information diffusée aux diverses séances, apprenant les uns des autres.

Certains enjeux liés à la prévention et au contrôle des infections exposés au cours des séances illustraient qu'il n'y a pas de frontières pour des phénomènes comme la résistance aux antibiotiques, les infections et les problèmes de surcharge de travail. Certains enjeux m'ont déconcerté, car dans le cadre de mon travail je ne vis pas les situations décrites. Dans l'une des présentations sur affiche, on tentait de définir l'environnement du patient (afin de mettre en application les cinq étapes de l'hygiène des mains définies par l'Organisation mondiale de la Santé) dans un contexte où de multiples patients et membres d'une famille partagent le même lit et où les lits sont si rapprochés les uns des autres qu'ils forment en fait une

grande plateforme remplie de patients! De nombreuses présentations étaient empreintes d'innovation et d'ingéniosité.

En tout, 45 pays étaient représentés; bon nombre des participants provenaient de pays voisins de la Croatie. L'interprétation simultanée n'était offerte que de l'anglais au croate, puisque le congrès se déroulait en anglais. J'ai rapidement appris à parler plus lentement (ce qui est difficile pour moi) pour bien me faire comprendre de mes nouveaux amis. À plusieurs reprises, j'ai dû à mon tour demander à d'autres congressistes de ralentir un peu pour que j'arrive à décoder leur anglais teinté d'une autre langue.

Par ailleurs, il y a eu des moments où l'on découvrait que la profession n'est pas aussi évoluée au Canada que dans d'autres pays. Je croyais que nous étions en bonne posture au Canada, avec notre cours offert par CHICA et les cours reconnus par CHICA, qui fournissent 90 heures de formation aux novices et aux nouveaux professionnels en exercice. Saviezvous que c'est en 2000 que l'Égypte a instauré des normes à l'intention des professionnels en contrôle des infections? Saviez-vous qu'au Chili, un praticien suit 250 heures de formation en contrôle des infections et qu'un superviseur en contrôle des infections en suit 80 de plus? Le Chili offre des cours à la maîtrise. La Thaïlande s'est dotée d'un programme de maîtrise en contrôle des infections et des formations sont données dans tout le pays, à cinq reprises chaque année. Terri Lee, l'un des membres du conseil d'administration de l'IFIC, est chargé de colliger, de coordonner et de diffuser les ressources pédagogiques en usage partout dans le monde. Vraiment, nous pouvons apprendre les uns des autres.

À la réunion tenue par le président de l'IFIC, nous avons discuté de la possibilité



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de faire circuler l'information de façon bidirectionnelle : diffuser l'information que nous avons et apprendre des pays disposant de moins de ressources. Je trouve que c'est une idée formidable.

Concrètement, comment pouvonsnous apporter notre aide? CHICA-Canada organise chaque année une course annuelle au bénéfice de l'IFIC dans le cadre de son congrès national. Nous recueillons des fonds afin d'offrir des bourses à des professionnels en contrôle des infections de pays moins nantis afin qu'ils puissent assister au congrès de l'IFIC. Si chaque membre de CHICA donnait une commandite de 10 \$ à un coureur ou à un

marcheur, nous pourrions amasser près de 17 000 \$ pour aider nos confrères d'autres régions du monde. Je suis persuadé que vous vous souvenez de Cœur Vaillant, le destructeur de microbes, qui, l'année dernière, exhortait tous les membres qu'il rencontrait afin qu'ils le commanditent s'ils n'encourageaient pas déjà un confrère ou une consœur de leur section régionale marchant ou courant pour l'IFIC. J'avais donné des instructions pour que les dons ainsi recueillis soient acheminés au bureau de CHICA-Canada à Winnipeg, mais j'ai eu la déception de constater qu'aucune somme ne nous est parvenue par cette voie. Nous avons réussi à recueillir environ

5 000 \$, mais il en faut beaucoup plus si nous voulons aider un nombre accru de professionnels en contrôle des infections à obtenir les formations dont ils ont besoin.

Donc, Cœur Vaillant sera à Ottawa, prêt à courir dès 6 h 30, affublé de son kilt et maquillé (espérons que le maquillage s'enlèvera l'an prochain!). De nouveau, il sollicitera des commandites pour la course, alors si vous ne commanditez pas déjà un confrère ou une consœur de votre section, si vous n'êtes pas vousmême marcheur ou coureur, trouvez quelques dollars pour faire de ce monde un endroit plus propre et plus sûr pour les patients. 🍰

# **CHICA-PANA**September field trip

On September 13, CHICA-PANA members went on a field trip for the educational part of their chapter meeting. We had fun with our dress-up for the tour of SteriPro-Canada, a newly located reprocessing plant in Mississauga, Ontario.

Chapter members were interested in exploring the new plant, since some local hospitals, physician and dental offices, and public health clinics have started using SteriPro's services. Instruments are decontaminated at the hospital, clinic or office setting, bar coded, then safely transported to the Mississauga plant for reprocessing, and returned to the originating site. Chapter members were impressed by the quality control and attention to detail in all reprocessing steps. To learn more about SteriPro, see www.steriprocanada.com.



CHICA-PANA members dress up for a tour of the SteriPro Canada reprocessing plant in Mississauga, Ontario.

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Executive Director, CHICA-Canada

## **CHICA** Chat

HICA Chat, the discussion board hosted at www.chica.org, was designed to be a vehicle for members to ask questions and gather information from their colleagues on practice issues. Unfortunately, the platform has not been well utilized. The program barriers arise from complications in accessing the site, including the requirement of an additional password once one gets into the Members Area. As a result of discussions with CHICA-Canada Interest Group chairs, chapter presidents and the webmaster, a new platform for questions and answers will be launched on January 1, 2013.

Still called CHICA Chat, the new format will enable individual members or interest groups to ask questions and have collated responses posted to the new CHICA Chat page. We ask that the person posing the question take on some responsibility by compiling the answers received to be shared with all members through the CHICA-Canada website. This serves two purposes: you receive rapid responses to your question, directly to you, and all CHICA members can learn from the responses.

Instructions for asking questions and collating the responses will be in the Instructions area of CHICA Chat. Basically, after the inquirer has checked CHICA Chat to see if the question has already been asked, new questions would be emailed to chicachat@chica.org.

"As a result of discussions with CHICA-Canada Interest Group chairs, chapter presidents and the webmaster, a new platform for questions and answers will be launched on January 1, 2013."

The guestion would be sent out by the Membership Services Office via email to the relevant sector of CHICA-Canada, e.g., to a specific interest group, to a specific discipline, or to all members when appropriate. The email will indicate that responses should be sent to the email address of the person asking the question. That person would be responsible for collating responses and returning the collated file to chicachat@ chica.org for posting to CHICA Chat. The new CHICA Chat page will contain a pictorial with instructions for collating guestion/answers. If the guestion/answer is pertinent to one of CHICA-Canada's interest groups, it will also be posted on that interest group's web space (e.g., a question about dialysis catheters will be posted on CHICA Chat as well as the Dialysis Interest Group's web space).

The new CHICA Chat format does not preclude Interest Group chairs from sending questions directly to their members and posting responses to their Interest Group web space. Again, we will ask that, when appropriate, this

information also be sent to chicachat@ chica.org for posting to CHICA Chat for the information of all members.

#### Information disclaimer

The information found in CHICA-Chat reflects the practice of CHICA-Canada members in their own work environments, for the purpose of information sharing. Information presented on CHICA Chat may be used to support one's own practice and to stimulate discussion, but should not be construed as being in any way authoritative or necessarily correct. CHICA-Canada is not responsible for the content in CHICA-Chat.

#### **Industry disclaimer**

We welcome industry expertise on items of scientific interest. Industry members are asked to limit their comments and discussion to non-commercial dialogue. Promotion of specific products on this forum will not be permitted.

Watch for the announcement of the CHICA Chat re-launch. ::





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## Bring in a **New Member**

## Win a complimentary 2013-2014 membership

Membership has its benefits. The CHICA-Canada website (www.chica.org) has so much information on the benefits of being a member. The member resource guide for finding other CHICA-Canada members, links to infection control sites, audit tools ... the list is extensive. Tell another infection prevention and control professional (ICP), tell an ID physician, tell your medical laboratory technologist, tell

environmental services, tell EMS, tell your designate, and tell your director about the benefits of joining our national organization.

If that person joins CHICA by May 1, 2013, both you and the new CHICA-Canada member will be eligible to win a complimentary 2013-2014 membership (value \$195). You are eligible for the draw with every new CHICA-Canada member that you get to sign up. Should the winning members have already paid their 2013-2014 membership, a refund will be made to the person or the institution which has paid the fee.

Send in this form no later than May 1, 2013. An announcement of the winners of this offer will be made at the 2013 conference. Membership applications can be found at http://www.chica.org/ aobut join.php 📩

| New member name  |
|--|
| Email address  |
| Sponsoring member  |
| Email address  |
| Send this form by fax or email to:  Marilyn Weinmaster, CHICA-Canada Membership Director c/o CHICA-Canada Membership Services Office   chicacanada@mts.net   Fax: 204-895-9595 |

## 2013 Virox Technologies **Scholarship**

Through the financial support of Virox Technologies, 19 CHICA-Canada members were awarded scholarships to attend the 2012 CHICA National Education conference in Saskatoon. CHICA-Canada and its members thank Virox Technologies for their initiative to make the national education conference accessible to those who may

not have otherwise been able to attend.

In partnership with CHICA-Canada, Virox Technologies will again provide scholarships to assist CHICA-Canada members with attending the 2013 National Education conference in Ottawa (June 1-5, 2013). The 2013 Virox Technologies Scholarship online application will be launched

in November 2012. The deadline for applications is January 31, 2013. &





## **2013 Champions**

## of Infection Prevention and Control

In collaboration with 3M Canada, CHICA-Canada has developed the prestigious Champions of Infection Prevention and Control Award. The 2012 recipient was Dr. Allan Ronald who received his award at the 2012 conference. Applications are being accepted for the 2013 Champions of Infection Prevention and Control award. This award will acknowledge the extraordin-

ary accomplishments of the frontline Champions of Infection Prevention and Control. The award will recognize CHICA-Canada members who work beyond what is expected as part of their employment, tirelessly, and creatively, to reduce infection, raise awareness, and improve the health of Canadians. Awards will be presented at the 2013 National Education Conference in Ottawa. Award criteria and nomination form will be posted to www.chica.org by November 1, 2012. The deadline for 2013 nominations is March 1, 2013. &





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## **Certification Board of Infection Control**

Barbara Russell RN, MPH, CIC

he Certification Board of Infection Control and Epidemiology held a strategic planning retreat in 2011. CHICA was represented by thenpresident Donna Weins as well as CBIC board members Dr. Kathy Suh and Kathy McGhie. One of our key strategies was to host an organizational summit of CHICA, APIC and CBIC leaders to help build consensus between the three organizations. That summit was recently held on November 10 at APIC headquarters in Washington, DC.

Many topics were discussed including demonstrating the value of certification through research endeavors, developing a point prevalence study, strengthening the relationship between CBIC and the APIC and CHICA-Canada chapters, enlisting CIC® ambassadors to help promote the importance of certification, and increasing certification internationally. Please watch for updates as we work to move these initiatives forward.

CHICA was represented via phone by Jim Gauthier, current CHICA president, and Gerry Hansen, CHICA executive director.

As I finish my year as CBIC president, I want to thank all the CHICA members I have had the opportunity to interface with for their comments and support. I hope to see many of you at future APIC and CHICA conferences or wherever our paths may cross. I leave CBIC in good hands with incoming president Craig Gilliam and the 2013 board of directors. I also want to congratulate Dr. Kathy Suh on her election as presidentelect, Kathy McGhie as secretary, and Suzanne Pelletier in being reappointed as a non-board member to the CBIC Test Committee. 34

"I want to thank all the CHICA members I have had the opportunity to interface with for their comments and support. I hope to see many of you at future APIC and CHICA conferences or wherever our paths may cross."

#### CIC graduates June-October 2012

"Certification is commitment." These three words are part of the vision statement for the Certification Board of Infection Control and Epidemiology (CBIC). Certification was developed to ultimately protect the public. A recent article found that hospitals that have a certified infection control director have significantly lower rates of MRSA bloodstream infections (AJIC 2012;40(3):96-101).

The new and recertified CICs, from a variety of healthcare settings, have spent hours studying, digesting facts, and reading current literature. This information and life experiences, along with successful completion of the CIC examination, ensure the infection prevention and control practitioner deserves to place a CIC® after their name. Congratulations one and all!

- Jim Gauthier, MLT, CIC, President, CHICA-Canada

Patricia D. Bedard, CIC, Kanata, ON Barley Chironda, CIC, Toronto, ON Lorraine Dales, RN, MN, CIC, Toronto, ON Kornelija Delibasic, CPHI(C), CIC, Cambridge, ON Marian Kabatoff, RN, BSN, CIC, Nanaimo, BC Michele Larocque-Levac, RN, CIC, Bourget, ON Natalie Marcello, RN, CIC, Sault Ste. Marie, ON Laura McNaught, RN, CIC, Toronto, ON Karlene M. Panko, CPHI(C), CIC, Swift Current, SK Jean-Louis Pitre, RN, BScN, CIC, Ottawa, ON Erin A. Roberts, RN, BScN, CIC, Edmonton, AB Jennifer R. Scoging, RN, CIC, Murillo, ON Dorianne Y. Chesterton, CIC, Belleville, ON Susan A. Cooper, MLT, CIC, Kingston, ON Allyson W. Davis, RN, BNSc, MSc, CIC, Kingston, ON Amanda Knapp, BASc., CPHI(C), CIC, Kingston, ON Mary E. Kristel, RN, CIC, Stony Plain, AB Donna M. Lyle, CIC, St. George, ON Sally E. MacInnis, CIC, Merrickville, ON Melanie C. Maracle, MPA, CIC, Shannonville, ON Jo Anne C. McConnell, CIC, Owen Sound, ON Elaine F. Reddick, CIC, London, ON Suzanne E. Rowland, RN, CIC, Ottawa, ON Nancy Todd-Giordano, CIC, Nepean, ON



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## Newly elected **Board of Directors**



Suzanne Rhodenizer-Rose, President-elect (one-year term) Suzanne Rhodenizer-Rose, RN, BScN, CIC, is Director, Healthcare Quality, Patient Safety and

Infection Control Nova Scotia. She is responsible for the overall strategic development and implementation of a provincial strategy for quality/patient safety and infection prevention and control. The development of a comprehensive Quality Framework that embodies the work of IPCNS along with an indicator framework has been a key focus to drive her team's work. She manages a team of five whose expertise are sought from myriad jurisdictions and healthcare organizations across the province. From a governmental perspective, this involves standardization of best practices, sharing of lessons learned, and building capacity for frontline healthcare providers and support staff. Additionally, her work involves providing subject matter expertise and education on issues related to quality and infection prevention and control to healthcare providers, organizations, governmental branches and the ministry. Suzanne has taken a leadership role in several exciting projects to improve the practice of infection prevention and control including provincial surveillance, best practice guidelines and policy, and fostering a high level of competency for infection control professionals. Suzanne has been in infection prevention and control for 12 years and a CHICA member for 11 years. Recently appointed as a Centennial College mentor in the infection prevention and control program, Suzanne is also the Chapter President of CHICA Nova Scotia and is an active member of several interest groups.

Philosophy: I have always believed in the stated goal of CHICA-Canada to be a nationally and internationally recognized leader in the field of infection prevention and control. As an organization, CHICA-Canada has already identified important values that will guide the organization in this pursuit including professional integrity, critical thinking, accessibility, responsiveness, innovation, diversity, advocacy, and finally, the quest for excellence in all its endeavors. In order for CHICA-Canada to be successful, there must be true investment in the membership to promote professional development and education, access to resources, pan-Canadian communication and openness, facilitation of professional competencies, sharing of ideas, building capacity from the bottom up, and promoting excellence and innovation. As a national organization, it is imperative that the membership and the leaders ensure the organization and its activities remain relevant to and supportive of the field and the healthcare professionals within it. Strong leadership and engagement is the key to success. I feel that with strong leadership and focus, I can help to provide the organization with vision, guidance, and the bringing together of people so that collectivity, we can strive to achieve CHICA-Canada's goals, build a strong and credible organization, support the memberships' needs, and be recognized on the international stage for our infection prevention and control work.



Mandy Deeves, **Director of Programs & Projects** (three-year term) Mandy Deeves, RN, BScN, CIC is Network Coordinator, Public Health Ontario

 North Simcoe Muskoka Infection Control Network, Orillia, Ontario. She has been in infection prevention and control for six years and has been a CHICA-Canada member during that time. Her role at the Network is to provide a specialized range of evidencebased, educational and consultative services to infection prevention and

control staff, management and frontline healthcare providers in regional and provincial stakeholder organizations. Mandy was instrumental in the formation of CHICA's newest chapter, CHICA-Simcoe Muskoka and currently serves as its president. She has been a member of the Programs & Projects Core Committee and continues her acquired knowledge in her new role as director.

**Philosophy**: The practice of IPAC in the healthcare setting can often be a daunting task. Serving in the role of Director of Programs and Projects, I hope to represent the needs of healthcare settings that are challenged in this area, working to promote resources and/ or create tools that will assist them in meeting IPAC needs. This will help to promote both CHICA-Canada and the practice of IPAC. I would also continue the excellent work that has already been done by this committee to maintain and support projects that have been developed by our membership.



Victor Leung, **Director of** Standards & **Guidelines** (three-year term) Victor Leung, MD, FRCPC is Infection Prevention and Con-

trol Physician, Infectious Diseases Consultant and Medical Microbiologist at St. Paul's Hospital, Vancouver. Educated at the University of British Columbia and McGill University, Dr. Leung has received several awards, including the George McKacken Infectious Diseases Fellow (American Society of Microbiology, 2011), the 1st prize for Resident Research, Division of Infectious Diseases and Department of Medical Microbiology (McGill University, 2011), and the Canadian Journal of Infectious Diseases and Medical Microbiology Trainee Review Article Award (2011). Specializing in hospital infection pre-



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vention and control, Dr. Leung also leads the hospital antimicrobial stewardship program. Dr. Leung became a member of CHICA-Canada in 2012 and has already demonstrated his expertise and interest in the development of strong practices in infection prevention and control.

### Philosophy:

It is a challenging and exciting time for Infection Prevention and Control teams in Canada. With increases in reporting demands, ongoing demands in evidence-based guidance, rapid development in diagnostics, informatics

and environmental cleaning technology, infection control professionals are faced with pressures that can sometimes feel overwhelming. This is particularly true when it comes to translating knowledge into effective policies and practice. As healthcare systems change, ICPs will need to adapt their skills and practice to continuously improve and maintain infection control practices so that we achieve our ultimate goal of protecting the vulnerable from acquiring preventable infections. As the incoming Director for Standards and Guidelines, my goal is to work with CHICA-Canada in addressing these challenges. &

# CHICA-CANADA online novice infection prevention and control course SEPTEMBER 2013-JUNE 2014

n September 2013, CHICA-Canada will once again be offering the Novice Infection Prevention and Control (IP&C) course.

Preference for admission to this interactive online distance education course will be given to the novice infection prevention and control practitioner (less than two years' experience) currently working in IP&C. Applications will also be considered from others working in healthcare and/ or exploring opportunities in IP&C.

The course consists of six modules and a 12-hour practicum. The duration of each module is approximately one month with a week break between modules. There is a longer break scheduled over the December holiday period. The course will run from September 2013-June 2014.

Student evaluation consists of online discussions, a final take-home exam, and may include assignments. Graduates will receive a certificate of completion from CHICA-Canada on successful completion of the six modules (with a minimum grade 65% in each module) and successful completion of the practicum.

Students must be able to dedicate 12-15 hours per week to

read course material, participate in discussions, and complete assignments and exams.

Please refer to http://www.chica. org for a detailed description of course content, schedule, and tuition.

Tuition: Tuition is \$1700.00 CDN for all six modules and the practicum. Tuition is paid in two installments of \$850.00 due August 1, 2013 and \$850.00 due February 1, 2014. Tuition can be paid through postdated cheques or credit card (VISA, MasterCard or American Express). Inquiries: Questions about the course should be directed to Heather Candon or Jane Van Toen, CHICA-Canada Course Coordinators at chicabasicde@mymts.net. Application: Interested individuals should complete the application form located on the CHICA website and submit to either chicabasicde@mvmts. net. Completed application forms should be forwarded no later than March 25, 2013. Students will be notified of their acceptance by mid-June. A waitlist will be maintained and late applications may be accepted if space is available. Spaces are limited and competitive so apply soon!



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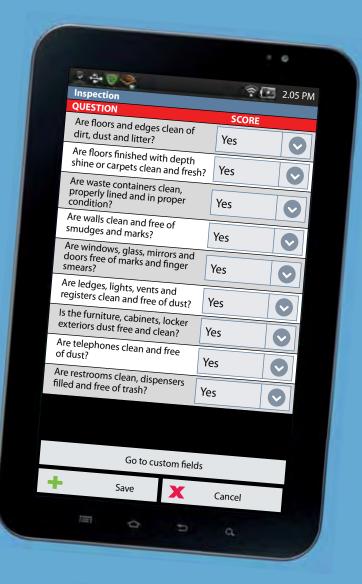
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## National Infection Control Week 2012 Highlights





We are a community health organization in Ontario. We have over 300 employees, nurses, PSWs, office support, and volunteers. Every year the staff anxiously await NICW. Due to the fact that most staff are on the road (see photo), it is a challenge to reach them all during the week. The past few years, we have been running an IPC trivia contest over voicemail. We received over 300 replies all week long with staff answering the trivia and gift cards being handed out to the lucky winners. This year we had a guess the number of bugs/germs in the jar contest. Hand Hygiene Police watched over office staff and rewarded those seen washing their hands. Overall, we were able to reach all staff with a fun-filled educational week. Here at Acclaim Health, we are spreading the knowledge!

**Polly Griesbach** — Acclaim Health, Oakville, Ontario

We staged a flash mob! My musician-partner and I adapted Beatles songs. With "Help" from the Cumberland Hotel jam musicians, who in good spirit met at Studio Live, and willing singers from the hospital staff added the music and vocals. The artistic director for a local dance company volunteered his choreography skills, and in an amazing under-one hour tutorial and practice created a group of skilled uninhibited performers from a rather serious group willing to jump into unknown territory.

The event took place in the hospital cafeteria to the surprise of staff and visitors alike on Friday October 19. The normally sedate dining room was suddenly filled with loud and lively music, and people jumping up, and putting on the moves with microphones of hand sanitizer bottles and rock-star energy.

I am thrilled with how the event was filled with such good spirit and camaraderie in addition to program information. For all its humour, a commitment was stated and reinforced that our organizational culture is to the best safety standards and hospital practices possible.

See the YouTube video http://www.youtube.com/watch?v=6KJxxcYtc3w

**Toby Krell** — Comox, British Columbia









The Provincial Infection Control Network of British Columbia (PICNet) visited nine residential care facilities throughout the Lower Mainland of B.C. This year, we wanted to make our infection control learning activities memorable and fun. PICNet created several educational games, including Count the Bugs, Infection Control Jeopardy, and Germ CSI. For the latter, teams had to take swabs and find the germiest areas of their facilities — which was usually elevator buttons and door handles. (A great lesson in why hand hygiene is always important.) The Infection Control Jeopardy game covered such topics as flu season, hand hygiene, personal protective equipment, and common infections in residential care facilities. For the rest of the BC IPC Community of Practice, PICNet provided resources and activities on its website, and also had a song contest. You can view the entries on the PICNet website, along with photos of the IC Week visits.

**Helen Evans** — PICNet of British Columbia





An educational workshop was attended by 84 infection control representatives from hospitals, long-term care homes, and many other healthcare facilities in the district. The keynote speaker, Dr. Michael Gardam, Director of IP&C University Health Network in Toronto and CHICA-Canada Physician Director, was a most engaging presenter. He described organizational behavioural changes to manage infections, including understanding the complexity of the problem and valuing frontline ownership and involvement in finding solutions. Strategies were included using ideas from those who are touching the problem. For example, one doctor decided that her choice of clothing could help control infections in her hospital. She chose to wear scrubs during hospital rounds in an attempt to reduce the chance of spreading germs. Her colleagues at first made fun of this simple action, but soon were joining her. Surprisingly, infections did decrease. Even though wearing scrubs may not have been the cause of this decrease, the fact that healthcare providers were considering how infections can spread and making a change was very significant. She helped others consider actions that could also improve this issue. This day presented an opportunity to network and for ICPs to share their successes and challenges.

Martina Flanagan — Leeds, Grenville and Lanark District Health Unit Smith Falls, Ontario

Earlier this year, our facility had a C. difficile outbreak, so the slogan Spread Knowledge, Not Infection was very appropriate. Our infection control team not only wanted to make sure we emphasized the importance of hand hygiene, but we wanted to make events and games with relevant information that people would not only participate in, but remember.

To include more of our staff, we asked charge nurses on the various floors to pose holding an object from their floor that might give a clue as to which floor they were from, in a game called, Who Do These Clean Hands Belong To? Our focus on hand hygiene inspired the game, Your 4 Moments for Hand Hygiene, in which the participant chose a hand hygiene opportunity from a container and matched it with its correct hand hygiene moment. Our team also came together and designed fun T-shirts that were proudly worn all week.

Besides having candy, draws, prizes, and cake, our booth allowed the opportunity for fun, participation, and awareness in all our staff, volunteers and physicians. Because the best way to prevent the spread of infection really is knowledge.

-The Infection Control Team at Bluewater Health, Sarnia

## National Infection Control Week 2012 Highlights



Royal Inland Hospital (Kamloops, BC) Poetry Contest \*Grand Prize Winner

#### The Infection Control Nurse By Laura Beyer, RN, NICU

I'm a nurse who's passionate about controlling infection so I come by the unit to do an inspection. Nurses scramble to hide food and clean up the mess and what's at the nursing station at night, I can only guess. I have lots of knowledge and can be a resource for what you need to know about transmission and source. I teach about precautions and what not to do and give you a shot so you don't get the flu. I have lanyards and buttons that say "It's okay to ask" and if your patient has a cough, please wear a mask. I encourage basics to staff, like please wash your hands and do regular audits, to see how it stands. Don't be afraid, and please don't start to mutter under your breath when I ask you to clean up the clutter. l ask you to laminate posters that go up on the wall and please don't store that equipment out in the hall. It's a big job for two, so we started to think and recruited some nurses, to create a link. They know what to do for MRSA and VRE and know negative pressure is for those with TB. Now there is no glory for an IPC nurse but without me, our infection rates would be worse. You can call me to come when it's not guite clear, you can only imagine some of the questions I hear! You'll find me on the units, or just down the hall so if you have any questions, please give me a call.

#### The challenge:

- Inconsistent/non-existent stool charting.
- Inconsistent/non-existent use of bedpan liners.
- Inappropriate stool specimens being sent for C. difficile testing.

#### Meeting the challenge:

The traveling poop cart — containing all the necessary teaching tools to meet the challenge:

- Bedpan with bedpan liner to demonstrate use.
- The Bristol Stool Chart game match the amazing look-alike replicas with the number on the Bristol Stool Chart and win a prize (which looked surprisingly like a Type 2 or Type 4).

Outcome: It's too soon to tell, but we had a lot of fun and our traveling cart provided a great opportunity for education and staff interaction on all of our in-patient units. Participants included students, frontline staff, clinical managers, and physicians.

Jessa Craig, Gail Fisher, Jessica Fullerton, Patty Peltsch – Hamilton Health Sciences Centre, Hamilton





The Winnipeg Health Region ran a fun, interactive campaign to enhance awareness of the importance of infection prevention and control practices. Four characters were created based on hand hygiene and equipment cleaning products: Lola LiquidSoap, Doris Disinfectant, Abbi HandRub and Remi Ready-To-Use. A Grime Scene Investigation (GSI) scenario was created and outlined in *Inspire*, our regional news magazine. Staff were asked to be on the lookout for the characters called The Cleansers, wanted for questioning in the death of MRSA and C. difficile. The Grime Scene Investigators (ICPs) planted stickers portraying the characters on product bottles throughout their sites to engage staff in the campaign and to promote use of cleaning products. When a sticker was found, staff contacted Grimestoppers by phone, email or scanning a QR code to provide their witness statement. A draw from all statements was held, with prizes allocated to acute care, long-term care/PCH and community. The campaign was promoted online, in print, by word of mouth, and through social media using staff newsletters, eye-catching posters and the site ICPs. Staff had the opportunity to get their photo taken with life-size images of The Cleansers, which were posted online and on Facebook for viewing or downloading. (Copies of the posters used to advertise NICW activities are available from CHICA-Canada, chicacanada@mts.net.)

**Krista Maxwell** — Seven Oaks General Hospital, Winnipeg









NICW was celebrated at both London Health Sciences and Saint Joseph's Health Care London sites. This year's theme was Spread Knowledge, Not infections. LHSC and SJHC are both committed to the highest standards of patient safety and we continue to promote infection control to our staff and to our patients and visitors. To increase awareness of the activities for the week we have posted on Twitter, Facebook and thehealthline.ca, a short video and media release. On the first day, ICPs were on entranceways to promote hand hygiene to staff, patients, and visitors: "A squirt of ABHR to keep the germs away."Throughout the week, there were posters and display boards for staff and visitors. And to spread the knowledge

to the farthest reaches of our sites, we sent out roving ICPs armed with questions and games to increase knowledge and awareness. As an influencer strategy to engage frontline staff, the ICPs at Parkwood Hospital of St. Joseph's Health Care, London ensured that all 16 in-patient units as well as all eight in-patient units at Regional Mental Health London were visited by ICPs with a roaming infection control cart. The cart was decorated with infection control handwashing stickers and clinically relevant information regarding influenza, flu vaccination myths, additives, ARI screening tools, and information on obtaining NP swabs. Healthcare workers and physicians joined in the fun and won not just prizes, but nuggets of information that will help in

the guest to conquer healthcare-associated infections. The ICPs were able to engage many frontline workers including nurses, doctors, housekeepers, allied healthcare workers, porters, and unit secretaries. There were guessing games, puzzles and raffle draws to spice up the week. The highlight was the talk given by Dr. Bryna Warshawsky, the Associate Medical Officer of Health from the Middlesex London Health Unit. She presented on What's New with the Flu. Feedback was very positive. Information was delivered using different ways, which allowed for greater

**Rhodora Laylo** — London Health Sciences, London, ON



Maintenance worker, John Ramm (L) is shown best practice in hand hygiene using **Isagel, by volunteer, Sally Byblow.** Article and picture submitted by the Sunrise Health Region Infection Prevention and Control Department

The Sunrise Health Region Infection Prevention and Control team chose to highlight hand hygiene during NICW. We wanted to include every long-term care, acute care, and integrated care facility within our health region, so 19 displays were needed. The ICPs visited the sites and set up the display area which included hand hygiene information, a hand-rub station, and word scramble puzzles.

Volunteer Services recruited a volunteer to be present at the display, at each site, for one day NICW. The volunteers encouraged staff and public to participate and handed out small prizes of scary bug stickers for children and hand rub or lotion to adults.

Plans are already under way for next year to expand and include all of the home care

**Sherilyn Fenwick** — Sunrise Health Region (South), Melville, SK

#### NB/PEI Chapter says thank-you to The Moncton Hospital

CHICA NB/PEI is celebrating 30 years as a recognized chapter.

It all began 35 years ago, in 1977, as the New Brunswick Infection Control Group. In 1978 registered nurses from Prince Edward Island joined the Interest Group. The name changed to the NB/PEI Infection Control Interest Group (NBPEI ICG). In 1980-81 the group wanted to host a CHICA national conference and at that time preference was given to chapters.

So, at the national CHICA board meeting in Halifax in 1982, after much discussion regarding the small numbers of members, chapter status was granted and also permission to host the 1985 CHICA conference. The conference in Saint John, NB in June 1985 was a huge success.

The longevity of this group shows the commitment and dedication of past and current members. The goal of the chapter has always been to offer a forum for sharing knowledge, expertise, and assistance for ICPs developing and working in programs in the two provinces.

The results are evident as standardization of infection prevention and control programs have emerged. ICPs provided and continue to provide quality infection prevention and control service to the consumers of health care in New Brunswick and Prince Edward Island.

The biannual meetings have been held at The Moncton Hospital for over 30 years. The members took the opportunity at their October 19, 2012 meeting to thank the hospital for the many years of support and hospitality with a certificate and a donation to the Friends of The Moncton Hospital.

Karen O'Regan, BN, RN, CIC — Upper River Valley Area





Stacey Burns, CHICA NB/PEI Chapter President; Nancy Parker, Executive Director, The Moncton Hospital; Mary LeBlanc, a founding member of NB/PEI Chapter.

NICW provides an opportunity to engage and educate our patients, staff, physicians and senior leadership regarding key principles of infection control in a fun and entertaining way. With support from internal (Environmental Services, Microbiology Laboratory) and external stakeholders (Peel Public Health, Deb Canada, Aramark and mAiriner), the IPAC team at the Credit Valley Hospital and Trillium Health Centre celebrated yet again with a bang.

**Spot, Stop, Report:** Throughout the week, something went around and staff were warned about the bugs (hand puppets) making appearances on the floor. If they spotted one, they had to stop and report it to IPAC. The unit that reported the most sightings and correctly completed the question sheet received a prize at the end of the week.

**Battle of the Managers:** Most often, the focus of our educational efforts and compliance audits are with the frontline staff. The IPAC team believes that compliance should start from the top. This was the guiding principle of the game. Five patient care managers competed for the title of PPE Champ (Leader Category) 2012. As leaders, they demonstrated their skills in donning and doffing contaminated PPE in front of all staff using speed and proper technique.

The fun-filled week was closed by a ceremony awarding the winners of the different games and contests held. The event was graced by the presence of senior leadership representatives and IPAC colleague at Mississauga site.

Marianita Q. Lampitoc — The Credit Valley Hospital and Trillium Health Centre, Mississauga, Ontario

At Lakeridge Health, Infection Prevention and Control and Quality, Safety and Patient Experience teamed up to coordinate this year's IPAC and Patient Safety Week. The week's events included: core competency education, a hand hygiene flash mob, and poster board information.

**Education sessions:** provide staff learning opportunities and refresher information on the following core competency topics:

**Hand hygiene:** Reviewed the (Ontario) 4 Moments for Hand Hygiene and how the moments relate to contacts (physical touches) within the patient environment and the health care environment. Many times there is confusion about these environments and how to safely contact one environment to another.

**Routine practice risk assessment:** Reviewed the risk assessment that should be performed before all patient interactions. Provided scenarios to review how to incorporate this into practice.

**PPE donning and doffing:** Reviewed the PPE requirements for different types of isolation as well as the sequence for donning and doffing PPE safely.

#### Flash mob: hand hygiene

We want to be the safest hospital in Ontario. Part of that is making sure we all clean our hands. Check out our fun flash mob singing the Moments for hand hygiene http://www. youtube.com/watch?v=PSjDqfnfR\_4

Poster: Spread Knowledge, not Infection

Janessa McGuire – Lakeridge Health, Oshawa, ON

## Ask the microbiology expert

Do you have a microbiology-related question about collection, results, analysis or other aspect?

Submit your pressing microbiology questions for the experts, Drs. Baldwin Toye and Marc Desjardins.

One submission will receive a complimentary registration to the 2014 CHICA-Canada National Education Conference.

Submit questions to chicacanada@mts.net no later than May 1 2013.

## National Infection Control Week 2012 Highlights



At Brockville General Hospital, an infection prevention and control display was set up in the main hallway outside of the cafeteria.

There was a large poster-size Batman saying, "Infection Prevention is in your hands." The display included two large hands and pictures of Batman fighting grime, and there was information about hand hygiene. There were "Ask me if I washed my hands" buttons available and hand sanitizer.

There were two activities staff could participate in:

- 1. Trivia sheet with infection prevention related questions: staff could complete the sheet and enter it into a draw for a prize.
- 2. Jar O'Germs contest: a glass jar contained red candy to represent gram negative organisms and purple candy to represent gram positive organisms. Staff could enter a guess of how many red and purple candies were in the jar; closest to the actual number won a prize and the jar of candy.

Prizes were sponsored by BGH and Ecolab. The prizes were gift bags containing hand sanitizer from Ecolab, an Ecolab T-shirt with a hand on it stating "high 5 to healthy habits," a BGH coffee mug, and a BGH first aid kit.

A celebration pizza lunch was held at the end of the week.

**Dana Finnigan-Yee** – Brockville General Hospital, Brockville

Partners and You was the theme for The University Health Network (UHN) this year. Celebrating all their partners, which included staff, patients and families, and public health, the UHN staffed their display tables with ICPs to answer questions and provide information about IPAC.

All eight sites reported solid interest from visitors and staff alike and many new questions were asked about infection control. "It was wonderful to



hear questions from visitors about the services we provide. Typically we spend most of our day interacting with clinicians and other staff, so it was nice to have the opportunity to educate the public about IPAC and polish our halos a bit," said Shauna Henry-Hudson, ICP.

Handouts for patients and their families included colour-coded handwashing cards and small packets of tissues. Staff were given small bug buttons and/or mini chocolates, AFTER they asked a question about infection control. And, for our 2012 featured partner, Environmental Services, "Thank you for making us shine" postcards were given to each ES staff member who popped by the booths. These postcards have wildflower seeds embedded in them so they can eventually be planted in a pot of soil and they will produce an array of flowers.

Environmental Services has shone brightly at UHN this year, and we want to recognize their extremely valuable contribution to preventing and controlling infections at all our sites.

**Giggs Russell** — University Health Network, Toronto

Bug Day marked its 16th anniversary on October 16, 2012. This day-long academic program is hosted by the Health Sciences Centre, Winnipeg, and focuses on topics in infection prevention and control, public health, and infectious diseases. Approximately 1500 participants took part in Bug Day, either in person, or by telehealth transmission to remote and rural communities in Manitoba and northwestern Ontario (including Dryden, Kenora, and Thunder Bay). Bug Day is accredited by the Royal College of Physicians



Arlene Wilgosh, President and Chief **Executive Officer, Winnipeg Regional** Health Authority, answers questions from the media about hand hygiene audits.

and Surgeons of Canada, and the program also meets accreditation criteria for the College of Family Physicians of Canada; the Manitoba Pharmaceutical Association; Registered Nurses, Registered Psychiatric Nurses and Licensed Practical Nurses; and the College of Medical Laboratory Technologists of Manitoba. Bug Day is provided completely free of charge to attendees. The speakers at this event are local, national, and international experts in infection prevention and control, infectious diseases, and public health. The presentations included:

- Infection Prevention and Control: Enough Talk, More Action! John Embil, MD
- When is Safe, Safe Enough? Patient Safety and Infection Prevention and Control, Arlene Wilgosh, RN, CEO, Winnipeg Regional Health Authority
- Hospital Accommodation in Prevention of Infection, Dick Zoutman, MD, Queen's University
- The Epidemic of Allergy and Asthma and Other Chronic Disease: Are We Too Clean for our Own Good? Allan Becker, MD, Department of Pediatrics, University of Manitoba
- CHESS: The Canadian Hospital Environmental Services Study. Dirty Details to Date, Dick Zoutman, MD, Queen's University
- How Safe Are We? How Germs Get into the Food Chain, Robert Mancini, MSc, Manitoba Health
- Infection Prevention and Control: What Would You Do? John Embil, MD and Molly Blake, RN Infection Prevention and Control Unit, Health Sciences Centre
- Tales from the Front: Battlefield Infections, Yoav Keynan, MD, Department of Medical Microbiology, University of Manitoba
- Bed Bugs and Mosquitoes: The Things You May or May Not Want to Know, Taz Stuart, MSc, City of Winnipeg
- **Delusional Parasitosis: Under your Skin or All in your Head?** Pierre Plourde, MD, Winnipeg Regional Health Authority

**Dr. John Embil** — Health Sciences Centre, Winnipeg

The Porcupine Health Unit infectious disease team and the inspection team collaborated to celebrate NICW. Our goal was to decrease communicable disease transmission in the day nursery setting. The single most important thing that can be done to prevent infections in a child-care



setting is to keep hands clean — those of staff and children.

To facilitate the importance of good handwashing, the Porcupine Health Unit has developed an Infection Control Resource Kit that includes some of our own activities as well as activities adapted from multiple organizations. It contains 20-plus activity ideas that can be done with children and /or staff. They range from simple demonstrations, storybooks, experiments, physical activities, and more.

We delivered the new resource to all licenced day nurseries in the Porcupine Health Unit catchment. Other resources in the kit were GIANTmicrobes®, crayons, storybooks, handwashing posters, and the Porcupine Health Unit's own Soaper Hero posters and window clings. Our staff also took the opportunity to answer any questions the operators had regarding infection control issues. Our day nurseries were excited to start implementing this new resource in their facility.

**Renelle Lafleur, RN, BScN** — Porcupine Health Unit, Timmins, Ontario



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<sup>&</sup>lt;sup>3</sup> Compared to the STERRAD 100NX.

## **New!** Diversey Education **Bursary**





CHICA-Canada and Diversey Inc. are pleased to announce the launch of the Diversey Education Bursary. The objective of the bursary is to provide financial assistance to eligible CHICA-Canada members to attend continuing professional education programs. The amount of \$5,000 will be set aside for the bursary annually by Diversey Inc. The maximum amount granted to each recipient per award year would be \$1,000. Applicants will not necessarily receive the full amount. The tuition/registration eligible for reimbursement are one of:

- a) Registration fees for attendance at the CHICA-Canada national education conference
- b) Registration fees for attendance at a CHICA-Canada chapter education day

- Tuition fees for the CHICA-Canada online basic infection prevention and control course
- d) Tuition fees for an online basic infection prevention and control program endorsed by CHICA-Canada

CHICA-Canada President Jim Gauthier notes, "There is an increased need of funding for CHICA-Canada members to attend or participate in these important educational events. The generous sponsorship of this bursary by Diversey Inc. will enhance CHICA-Canada's ability to support its members in attendance at the annual conference, at a chapter educational event, or as a student at one of the distance education courses supported by or endorsed by CHICA-Canada."

"We are pleased to partner with CHICA-Canada to provide this education bursary which advances our joint objective - promoting best practice in infection prevention and control to improve patient and staff safety," said Carolyn Cooke, Vice President, North America Healthcare Sector. "We see continuing education and shared knowledge as cornerstones to improving patient outcomes and program quality, and we are proud to partner with CHICA-Canada to be able to provide an opportunity for increased learning and knowledge sharing."

Applications must be submitted online through www.chica.org. The deadline date for applications is January 31, 2013. &

## **NEW!** Best Practices for Infection Prevention and Control Related to Gram Negative Resistance

Developed by CHICA-Canada in collaboration with the Association for Professionals in Infection Control and Epidemiology Inc. (APIC).

Multidrug-resistant gram-negative bacteria are being seen more commonly in many areas of the world. It is unclear whether specific infection prevention and control (IPAC) or antibiotic control measures will be effective in controlling their spread.

The new GNR Toolkit contains information to help IPAC professionals make informed decisions on what measures to implement when needed. Included are:

- Routine and special practices
- Screening
- Surveillance
- Antisepsis, and disinfection
- Laboratory practices
- Antimicrobial resistance
- Outbreak investigation tools

CHICA-Canada thanks the working group that developed this important document.

Candace Friedman, MPH, CIC, Chair Joanne Archer, RN, BTech, MA, CIC Sandra Callery, RN, MHSc Isabelle Langman, RN, CIC Pat Piaskowski, RN, HBScN, CIC Barbara Smith, RN, BSN, MPA, CIC Micheline Beaudry, Graphics

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## **Moira Walker** Memorial Award for International Service



About the International Service **Award** This award honors an individual or group that has demonstrated extraordinary

efforts to bring about change or improvement related to infection prevention and control in parts of the world that are under developed or under resourced. The annual award is in honour of Moira Walker, RN, CIC, a Past President of CHICA-Canada and Past Honourary Secretary of the International Federation of Infection Control. Moira's life was dedicated to enhancing the physical and spiritual health of her many friends and colleagues.

## **Nomination guidelines**

Who is eligible

Preferred: Current CHICA-Canada members in good standing. The award may be presented to individuals, prior nominees, or a group of individuals, but not past award recipients, who have demonstrated international cooperation in the field of infection prevention and control or public health. Fundraising efforts alone will not be sufficient criteria for this award.

#### Who may nominate

Any member of CHICA-Canada may submit a nomination. The CHICA-Canada Board of Directors (the Board) also has discretion to name an award winner in the event nominations do not result in a winner of the award. The nomination form is available at www.chica.org (Opportunities).

How to nominate

A completed nomination form and covering letter outlining the nominee's projects that have resulted in this nomination must be forwarded to the Membership Services Office no later than March 1st of each year.

Selection process

The nomination forms and covering letters will be summarized by the Executive Director and forwarded to the Board for review. The Board will select the recipient(s).

#### **Award**

A print with a First Nations and Inuit art theme. Award winner(s) will be provided with a complete waived registration (excluding special events) for the national education conference at which the award is presented. In the case of a group award, one representative of the group will be provided a complete waived registration.

NOMINATION DEADLINE: March 1, 2013

#### Announcement and presentation

The award winner(s) will be advised by May 1 of each year. The award will be presented at the Opening Ceremonies of the CHICA-Canada National Education Conference. :

## 2013 ECOLAB POSTER CONTEST

An annual poster contest is sponsored by Ecolab and supported by a chapter of CHICA-Canada to give infection prevention and control professionals (ICPs) an opportunity to put their creative talents to work in developing a poster which visualizes the Infection Control Week theme.



Prize: Waived registration to 2013 CHICA-Canada National Education Conference or \$500.

REMINDER: Posters should have meaning for patients and visitors as well as all levels of staff in acute care, long term care and community settings. The poster should be simple and uncluttered, with strong visual attraction and few if any additional words.

Judging will be on overall content. Artistic talent is helpful but not necessary. The winning entry will be submitted to a graphic designer for final production. Your entry will become the property of CHICA-Canada.

#### Send submissions to:

Submissions will only be accepted by email. chicacanada@mts.net or chicacanada@mymts.net

#### Submission format:

Electronic file in Word or PDF format only. File size: must print out to 8.5"x11.0" paper Name, address and telephone number must be included in the covering email. DO NOT include identifiers in the

DEADLINE: January 31, 2013 poster submission.



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