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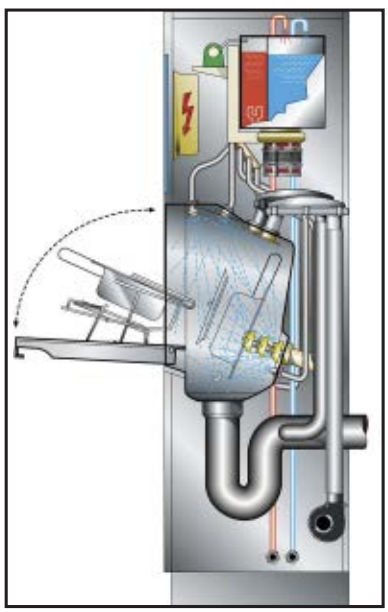

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Improving hand hygiene and other infection prevention and control (IPAC) practices: From Jerusalem to Jericho

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

Infection control professionals (ICPs) in all healthcare settings continue to be challenged in assisting their organizations to improve hand hygiene compliance among healthcare workers. Improving hand hygiene is truly an organizational initiative with many departments playing a role in compliance.

One of the questions asked by many ICPs is "if we teach staff how and when to clean hands and know that it can prevent infections, why they don't just do it?"

The answer to this and many other complex infection prevention and control (IPAC) compliance issues is not simple. It is multifactorial. Most hand hygiene programs and initiatives combine a mix of educational, promotional tools, monitoring tools and behaviour change strategies. Although these programs have been in place for a few years, ICPs and organizations continue to work towards achieving consistent, sustained improvements in hand hygiene compliance rates.

An older study "From Jerusalem to Jericho" (1) may help explain why knowledge of the importance of an ethical and helpful behaviour such as hand hygiene alone is not enough to improve hand hygiene compliance among busy healthcare workers. Although this parable was originally used to describe a Good Samaritan situation and response of helping individuals it does provide an interesting parallel to the improving performance of hand hygiene based on knowledge alone.

In this study of situational and other variables in helping behaviour, two groups of subjects were each to have a surprise encounter with an individual needing assistance while they were hurrying on their way to present a session. At this session, one group who had studied the parable of the Good Samaritan, was to present a lecture on this topic. The other

group had studied another unrelated topic and was to present on that topic.

In the final analysis of the responses of the subjects in the two groups both either hurried past or provided minimal assistance to the individual needing assistance. This occurred despite one group being very well versed on the story of the Good Samaritan. A conclusion of this study is that a person in a hurry (such as a busy healthcare worker) is likely to keep going and not perform an act that they know is important (hand hygiene).

Although busy healthcare workers having time to perform hand hygiene is one factor limiting compliance, there are other key factors.

One of these key factors involves improving compliance with patient safety initiatives such as hand hygiene through "work system design." Work system design is a model for patient safety is the Systems Engineering Initiative for Patient Safety (SEIPS) model which was first described by Carayon et al in 2006 (2). This model provides a framework for understanding how structures, processes and outcomes can be used to improving patient safety. This model is based on the premise that most errors or inefficiencies in patient care come from systems rather than the actions of individuals. The key messages of the SEIPS model are:

- That the design of work systems affects patient safety and outcomes.
- Design of work systems affect processes which in turn affects outcomes with the individual (healthcare worker, team or patient) at the centre of the work system.
- The work system need to be balanced to consider the needs of these individuals.
- Outcomes are influenced by work system design as well as each other.

By exploring works of other disciplines and non-health care sectors ICPs can add more tools in improving compliance with hand hygiene and other IPAC practices.

1. Journal of Personality and Social Psychology 1973, Vol.27, No. 1, 100-108. *http://faculty.washington.edu/jdb/345/345%20Articles/Darley%20&%20Batson%20(1973).pdf* Accessed December 2, 2013

2. Quality and Safety in Health Care 2006 December; 15 (Suppl 1):i50-i58 *http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2464868/* Accessed December 2, 2013

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ABSTRACT

An overview of the Canadian Transportation of Dangerous Goods Regulations (TDG Regulations) as they apply to transporting infectious substances in clinical specimens by ground or road transportation in the community setting will be provided. A review of nursing provincial or territorial communication addressing the transportation of community specimens was done in 2011 to identify gaps and issues. Practical strategies to address these gaps and issues are presented.

KEY WORDS:
Transportation of Dangerous Goods Regulations (TDG Regulations), infectious substance, ground transportation, community, public health, clinical specimens.

INTRODUCTION

As a community healthcare nursing provider, have you ever taken a nasopharyngeal swab or blood sample from a client and then either driven and delivered the specimen to a laboratory, or given the specimen to a cab driver to take to your local laboratory? Did you know there are regulations requiring a professional assessment to categorize the specimen, and regulations requiring specific types of packaging and marking and or labeling? Did you know, for some categories of specimens, the individual assessing the specimen, packaging the specimen, and transporting the specimen must have specific training? Do you and your healthcare organization have written policies about this process and do you know where to look for these regulations?

During a meeting of the Community Health Interest Group of the Community and Hospitals Infection Control Association – Canada (CHICA-Canada) in 2010, members were polled about their organizational policies regarding this practice issue. The majority of members, representing several provinces across Canada, did not know if their organization had policies and some said they had no policies related to this subject at all. Subsequent discussion followed about the different practices and types of clinical specimens being transported. Many different types of clinical specimens were being transported without knowledge of safe practices or Canadian regulations, and any policies and procedures. The authors investigated the topic further and presented this topic during a community concurrent session of the Toronto 2011 CHICA-Canada conference. There were many comments and much discussion by the attendees following the presentation about gaps and issues. It was decided to investigate this issue further by adding a literature search on the topic and share the information with colleagues. Canadian Transportation of Dangerous Goods (TDG) Regulations will be described, followed by a summary of some gaps and issues as identified from the above discussion and a cursory environmental scan of recommendations by professional nursing regulatory bodies across Canada related to this common practice of transporting clinical specimens by community nurses who work in home care and/or public health. A practical process to assist community healthcare agencies and/or public health departments/authorities in developing policies and procedures to help protect their community healthcare workers (and ultimately the public and the environment) from possible exposure to infectious substances will be discussed. Common case scenarios will also be included.

BACKGROUND AND DISCOVERY

The majority of infection prevention and control professionals are either nurses or medical laboratory technologists. Clinical laboratory staff regularly transport clinical

specimens. To meet clinical laboratory accreditation requirements they must comply and be familiar with Canadian regulations for TDG. The majority of the members of CHICA-Canada's Community Health Interest Group, however, are nurses who work in home care settings or public health units or health authorities and during discussions they admitted they have little experience or knowledge of the Canadian regulations for TDG. In nursing as in other professions, it is essential to evaluate professional practices on a regular basis. Infection prevention and control professionals are continually surprised to discover common practices that pose risk of exposure to and transmission of infections. A common response to a question by infection prevention and control professionals about why a particular practice or process is being followed is, "Because we've always done it this way." Delving into issues identified by simple questions often evolves into many hours of research and collaborative work to arrive at a safe and reasonable practice or process. The transportation of clinical specimens by community healthcare workers is one of these issues. Community healthcare nurses may transport a variety of clinical specimens during the course of their work and they need to know how to do it safely correctly and adhere to the Canadian TDG act and regulations.

A literature search of Medline, EMBASE, and CINAHL was done using combinations of the following search terms: care, community care, community health/or home care services/or community health nursing/or midwifery/or nurse midwives/community setting or in-home care or public health and specimen handling/or blood specimen collection, transport, blood or swab or sample or specimen or placenta or stool. The grey literature was not searched. The above search revealed articles related to transportation of blood for transfusion and intravenous therapy, clinical waste management in home healthcare, and the challenges of infection control practice in home healthcare. None of the content was specific to the transportation of clinical specimens previously mentioned, nor were any of the articles pertinent to Canadian Transportation of Dangerous Goods (TDG) training.

Of note were three articles relevant to include in the development of policies and procedures to transport clinical specimens. In the United States (US), Becan-McBride recommends US Department of Transportation training, occupational health and safety and standards/universal precautions as well as transporting clinical specimens in special containers when phlebotomists perform home blood draws and then transport specimens to the core laboratory (1). An article about the management of infectious waste in the home care setting emphasized the importance of occupational health and safety and associated policies and procedures to protect the home health care worker in the US (2). Legislation regarding clinical waste, hazardous waste and cytotoxic drugs was delineated for home health nurses in Britain including examples of handling, special packaging requirements and safety measures (3).

These articles provided cues to the authors to assist with the development of a safe, Canadian process for the transportation of clinical specimens in the community healthcare setting. Provincial and/or territorial bodies are responsible for the enforcement of the Transport Canada's Act and Regulations and violations may result in financial penalties (4,5). Alberta Transportation in November 2009 established the Government of Alberta's Transportation of Infectious Substances, which are based on the Canadian TDG Act and Regulations. The purpose of transportation regulations is to prevent the release of dangerous or infectious substances, thereby protecting the health and safety of the public, staff and the environment from any potentially harmful effects that may occur from an exposure to these materials.

CLASSIFICATION OF DANGEROUS GOODS

There are nine classes of dangerous goods (4). See Box 1 for a list of these nine classes. The Classification of Infectious Substances, Class 6.2 is the section of the TDG regulations pertinent to this discussion of the transportation of clinical specimens in the community setting. Routine practices (6) aids healthcare professionals in the handling of specimens as though they are hazardous or potentially infectious. In addition to routine practices when handling specimens, the TDG Regulations deem patient and or clinical specimens require an evaluation (commonly referred to by infection prevention and control professionals as "risk assessment" (6)) by a professional doctor, nurse, scientist or medical technologist (5). The professional is responsible to assess whether the specimen is infectious or not (5). The specimen also needs to be assessed for its potential degree of hazard and thus is to be classified into whether it is a Category A or Category B specimen (5). The lists of Category A and B infectious organisms are found in Part 2, Appendix 3, *A Guide to Category A and Category B Assignment*, of the TDG Regulations (5). Refer to Table 1 for key definitions for the classification of infectious substances.

Category B infectious substances present less risk of infection because they are not as easily transmissible as Category A organisms, and routine practices will prevent infection in the event of an incident. Community staff would generally not be

BOX 1:
Nine Classes of Dangerous Goods

Class 1	Explosives
Class 2	Gases
Class 3	Flammable and combustible liquids
Class 4	Flammable solids
Class 5	Oxidizing substances and organic peroxides
Class 6	Poisonous and infectious substances 6.1 Poisonous (Toxic) substances 6.2 Infectious substances
Class 7	Nuclear Substances, Radioactive materials
Class 8	Corrosives
Class 9	Miscellaneous

BOX 2: Category A and B UN Number and Shipping Names

Category A

UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS
UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS

Category B

UN 3373, BIOLOGICAL SUBSTANCE, CATEGORY B

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TABLE 1: Key Definitions for Classification 6.2

Patient/Clinical Specimen	Specimen collected directly from a patient and transported for the purpose of research, diagnosis, investigational activities, disease treatment or prevention.
Cultures	The result of a process by which pathogens in a specimen are intentionally propagated. This definition does not include specimens taken from a patient and are intended to be processed in a laboratory (5).
Infectious Substance	Substance known or reasonably believed to contain viable microorganism such as a bacteria, virus, parasite, fungi or prion are known or reasonably believed to cause disease in humans and is listed in the Part 2, Appendix 3 of the TDG Regulations (5).
Category A	An Infectious substance transported in a form such that, when released, is capable of causing permanent disability or life-threatening disease, and listed in Part 2, Appendix 3 of the TDG Regulations (5).
Category B	An infectious substance not meeting the criteria for inclusion in Category A and listed in Part 2, Appendix 3 of the TDG Regulations (5). Infectious substances included in Category A and are in a form other than a culture may be handled, offered for transport or transported as Category B (5a).
Exempt Human Specimen	Specimens not considered as Category A or Category B. Specimens taken directly from the client and are not cultured and there has been a professional judgment made to confirm the sample does not contain or is not likely to contain an infectious substance and where there is no reason to believe there is an infectious substance, or there is minimal likelihood that a pathogen is present. These are non-regulated specimens (5).

handling Category A specimens. These lists are not considered to be exhaustive and are only used to provide guidance. Agents exhibiting characteristics similar to substances found in these lists should be considered for inclusion in the classification. If a healthcare professional ascertains that a clinical specimen is deemed a Category A infectious substance or a Category B infectious substance, then they would require naming by different United Nations (UN) numbers and shipping names (5). For example, Category A infectious substances have two UN numbers and different shipping names while Category B infectious substances have only one UN number and shipping name (5a). Refer to Box 2 which shows examples of the differences between Category A and B and the associated United Nations (UN) numbers and shipping names.

Exempt Human Specimens are the vast majority of specimens. They are taken directly from a client, are not a specimen that has been cultured (such as those specimens cultured in a microbiology laboratory), and a professional judgment is necessary to confirm the specimen does not contain or is not likely to contain an infectious substance. Factors such as the known medical history, symptoms and individual circumstances of the source are to be included in the health care worker's risk assessment. See Table 2: Examples of Category A and B and Exempt Human Specimens by Classification which compares the two different categories of specimens with exempt human specimens.

Routine specimens not believed to have an infectious disease organism as listed in Appendix 3 of Part 2 of the TDG Regulations are considered "exempt" (5). TDG Regulations do not apply to Exempt Human Specimens. In practice, the majority of clinical specimens transported by community nurses would be Exempt Human Specimens. A comprehensive decision making algorithm (Figure 1) has been created to aid decision making about the classification of clinical specimens that may require transportation.

PACKAGING REQUIREMENTS AND SHIPPING RESPONSIBILITIES

Packaging of clinical specimens for transportation must meet a minimum standard (5a). Three layers of packaging are required: 1) inner package 2) leak-proof package and 3) crush-proof outer package. The inner package or primary receptacle is the specimen container. The secondary

TABLE 2: Examples of Category A and B and Exempt Human Specimens by Classification

	Category A	Category B	Exempt
Examples	TDG Regulation 2.36 (5a) provides a list of infectious substances that must always be handled, offered for transport or transported as Category A.	Those listed in Part 2 Appendix 3 for Category A and Category B, other than those that must be Category A, and in a form other than a culture.	Specimens that **MAY** be transported under this section (5a):
	Examples: Ebola virus Monkeypox virus Variola virus	Examples: Hepatitis B Hepatitis C HIV Mumps	Examples: Cholesterol, hormone, blood glucose levels, organ function levels, biopsies to detect cancer, antibody detection. Non-regulated specimens include neutralized or inactivated pathogens such as for Pap smears. Also, dried blood spots on absorbent paper such as for newborn metabolic screens.

package must be a water-tight or leak-proof package such as a plastic biohazard bag with the zipper seal type top intended to hold the primary receptacle. If there are several fragile primary receptacles placed in a single secondary packaging, they must be individually wrapped or separated to prevent contact between them. An example is the use of a plastic bubble wrap sleeve for multiple blood tubes. There also must be an absorbent material between the secondary packaging and the primary receptacles must be able to absorb the total liquid contents of the primary receptacles if there is a leak.

A *Type 1B rigid outer package* is to be used for Category B specimens and must be in compliance with the safety standards as delineated by Transport Canada (5b). For an outer container to have Transport Canada's approval and meet the minimum standard, the package must be able to withstand specific testing. For example, liquid substances, such as when tubes of blood need to be transported, need to withstand the internal pressure test and withstand the drop test from 1.2 meters on to a hard surface so breakage is prevented (5b). The primary receptacle containing the infectious substance must remain protected and intact without breaching containment. Packages tested by a manufacturer also need to have the symbol "TC-125-1B" and the name and address or symbol of the manufacturer of the package is to appear on the package (5b).

All containers, whether manufacturer certified or other strong outer container, must be designed, constructed, filled, closed, secured and maintained so under normal conditions of transport, including handling, there will be no accidental release of dangerous goods that could endanger public safety (5). The minimum dimension of the outer package is to be 100mm x 100mm or 4 inches x 4 inches.

It is the shipper's responsibility to ensure the correct packaging is used. Whether it is a manufacturer-certified outer container or other container, it is the responsibility of the shipper to ensure compliance with the minimum standards for packaging. If containers are reused, then it is best infection prevention and control practice to clean and disinfect these packages regularly and as needed, documenting the date of cleaning and disinfection for infection prevention and control audit purposes.

It is recommended that Exempt Human Specimens follow the same basic packaging as Category B specimens. The inner and secondary packaging should be the same as the above, and it is recommended that the outer package be a sturdy package with the inner receptacles well cushioned against shock or crushing.

As mentioned before, Exempt Human Specimens are not regulated under the TDG Regulations. Note, however, Category B and Exempt Human Specimens cannot be in the same outer container as the requirement for markings are different and the external container must reflect the classification of the contents. Refer to Table 3 for an overview of shipping responsibilities.

CATEGORY B MARK LABELING ON OUTER PACKAGING

Category B Mark labeling on outer packaging, as noted in Figure 2, should be indicated by a square on a point (diamond-shaped) with each side at least 50 mm, the letters and numbers must be at least 6 mm high and the line at least 2 mm wide, with the UN number, UN3373, and the background of the mark must contrast with the letters, numbers and lines (5c). The outer label must also include clear readable information for delivery indicating the following: To/From, senders' phone number, as well as the Category B mark and shipping name, UN3373, and BIOLOGICAL SUBSTANCE, CATEGORY B. If the outer package is manufacturer certified, the Transport Canada marking "TC-125-1B" and the manufacturer's name or symbol also needs to appear on the outside of the container. Note that the particular name of the known or suspected microorganism should not

FIGURE 1: Classification of Specimen

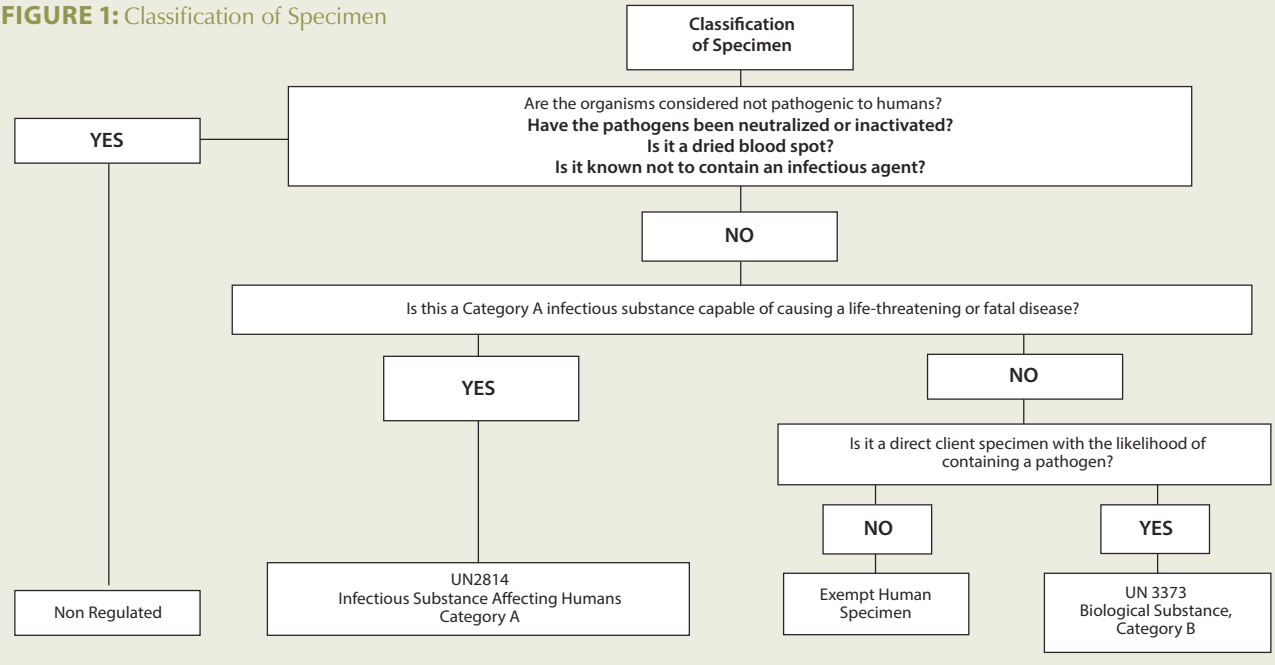

TABLE 3: Overview of Shipping Responsibilities

Shipper	Classification, packaging, marking/labeling, documentation, emergency policies. Shared responsibility between organization and staff.
Carrier	Accepts package by checking documentation and packaging, handles, transports and delivers the package. Carrier keeps a copy of the transport documentation, as appropriate. Carrier has documentation for the road within easy reach of the driver.
Receiver	Inspects and verifies the package and notifies the shipper if a leak is noted. Receiver reports dangerous goods occurrences. Keeps final documentation, as appropriate.

appear on the outside of the package. If the outer package is not manufacturer certified, it is the responsibility of the sender to ensure compliance with TDG Regulations for markings and minimum standards for packaging.

DOCUMENTATION

The client requisition is the only documentation required for Category B and Exempt Human Specimens. In addition, carrier companies may require other documentation and/or waybill as per their company policies. When transporting specimens, it is suggested the healthcare worker or carrier have a list in the front of the vehicle describing the classifications of the specimens in the vehicle. For example: "2- UN3373, BIOLOGICAL SUBSTANCES, CATEGORY B; 4- EXEMPT HUMAN SPECIMENS." The rationale for this is if the driver is in a motor vehicle accident, a first responder will be able to quickly identify any potential hazard in the vehicle.

TRANSPORT TRAINING AND CERTIFICATION

All staff handling Category A or B specimens must have documented TDG training and it is the employer's responsibility to ensure employees are trained. An employer must not direct or allow an employee to handle, offer for transport or transport dangerous goods unless the employee is adequately trained and holds a training certificate (5d). A person is adequately trained when they have a sound knowledge of all facets relating to their TDG duties; the TDG certificate certifies that the worker, even healthcare workers, have had additional training. Any persons not adequately trained must work under the direct supervision of a person who is trained, such as for a new employee. Some employees may not need training in all aspects of the TDG regulations if it is not directly related to their work. It is the employers' responsibility to determine what constitutes adequate training for their employees. The training is employer-specific. It is not transferrable between employers and is valid for three years. Records of training are to be kept either in paper or electronic form for two years past the expiry date. Both shippers and carriers must be trained about TDG Regulations so they can prepare shipments and recognize and respond to the risks posed by the materials. A worker must be prepared to show an inspector their certificate immediately upon request.

TDG Regulations Part 1 Section 1.19, *Samples for Inspection or Investigation Exemption (5e)*, allows the transportation of samples of goods for inspection or investigation to be transported under the direct supervision of a government employee acting in the course of their employment. It is recommended that all community agencies and local health authorities review their current processes for clinical specimen transportation, assessing the risks and benefits, especially for time and cost.

REPORTING OF AN ACCIDENTAL RELEASE

There must always be a process in place for reporting any accidental release of an infectious substance, such as a car accident with leakage of specimen contents. The incident must be reported as soon as possible to the Canadian Transport Emergency Centre of the Department of Transport (CANUTEC) at 613-996-6666

FIGURE 2: Category B Mark

FIGURE 3: Example of Category B package label

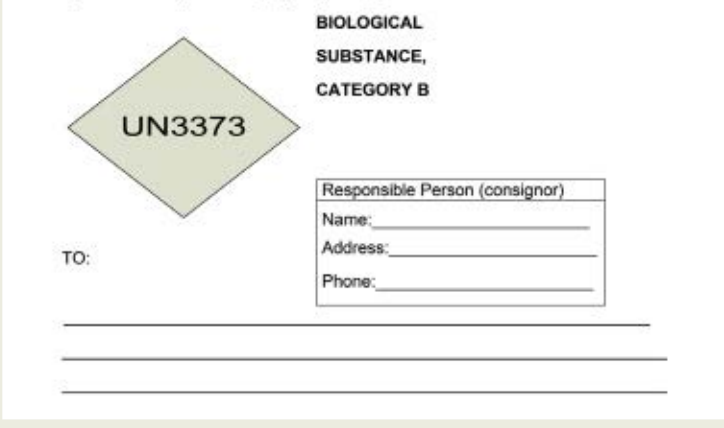

TABLE 4: Responses Received from Canada Nursing Professional Colleges/Regulatory Bodies about the Transportation of Clinical Specimens in the Community Setting

Process	Province/Territory
Nurses are exempt from requiring a TDG certificate, if they have the knowledge, skill and judgment.	Northwest Territories, Manitoba, Ontario, Prince Edward Island
Nurses require a TDG certificate.	New Brunswick, Nova Scotia
If there is legislation, then it must be followed. Provincial legislation cannot be less than federal, thus a nurse requires a TDG certificate.	Alberta
Employers are responsible for the policies and procedures for their nurses.	Newfoundland and Labrador, Quebec, Saskatchewan
Acknowledgement of inconsistent policy and practice.	British Columbia

(5e). Other notifications include a provincial or territorial authority, local police, employer, original sender and whoever owns the vehicle. If a receiver notices a release of an infectious substance, they must notify the shipper and carrier.

BOX 3:
Steps for Developing a Process for the Transportation of Clinical Specimens

1. Become familiar with the Canadian TDG Regulations.
2. Perform a "needs assessment".
3. Ascertain the following:
   a. The types of clinical specimens being transported by the organization and their purpose.
   b. The current processes used to transport these specimens.
4. Contact your provincial or territorial government authority who enforces the TDG regulations. Ask if they have specific guidelines for biological substances.
5. Ask your nursing college and/or health authority if there are existing policies. Review those policies and apply them to the organizational policies and procedures being developed. Assess if there is a policy in your organization for the specimen transport exemption.
6. Ask the medical laboratory representative (director level) for your health authority regarding their policies and procedures.
7. Ascertain whether the local laboratory does something differently than the provincial or territorial laboratory. Explore and evaluate any discrepancies.
8. Create a committee of interested stakeholders to develop organizational policies and procedures. Ensure there is representation from Workplace Health and Safety.
9. Ensure Canadian TDG Regulations are followed as there are international differences in some of the regulations.
10. Investigate the supplies currently being used to transport the specimens. Evaluate the appropriateness of packaging/labelling/marking including:
    a. Inner packages
    b. Secondary packages (leak proof, absorbent)
    c. Category B outer packaging
    d. Exempt Human Specimen outer packaging
    e. Use manufacturer approved packaging, or meet the appropriate standard for packaging
    f. Label appropriately
    g. If re-using containers, then develop a procedure for the associated cleaning of equipment.
11. Source the required and appropriate supplies.
12. Write your policy and procedures.
13. Assess current available education materials and develop further resources as needed.
14. Develop an educational plan, educational materials (printed or e-learning) and educate staff and stakeholders.
15. Monitor and audit the practice and process.
16. Revise and/or update the policies and procedures as necessary based on audit information and TDG regulation amendments.

NATIONAL REVIEW OF NURSING TDG RECOMMENDATIONS

Nurses are regulated by their provincial or territorial acts and are governed by their professional colleges or regulatory bodies. As professionals, they are expected to know and are accountable for their infection prevention and control practice such as how to apply routine practices, including risk assessment, hand hygiene and the use of personal protective equipment (6). They also need to know how to handle specimens safely, label specimens appropriately, use the appropriate containers and document correctly. The gap in knowledge, skill and judgement about the transportation of clinical specimens was discussed during the aforementioned Community Health Interest Group meeting and subsequent presentation at the CHICA-Canada annual conference. As a result, it was suggested the nursing regulatory bodies may have standards or guidelines about the transportation of clinical specimens. An environmental scan of the professional nursing college or regulatory body in each province or territory was done to see if they had such resources. This scan was done by way of an exploratory e-mail sent to contacts listed on each province's or territory's professional nursing colleges or regulatory body websites across Canada. Responses from all the provinces and territories in Canada were received by e-mail or telephone. Five different responses or recommendations were received. The provincial or territorial responses are collated in Table 4: Responses Received from Canada Nursing Professional Colleges about the Transportation of Patient Specimens in the Community Setting. Some of the

professional nursing colleges or regulatory bodies delegated the responsibility for this process to the employer and did not have college policies, standards or guidelines related to this practice issue. Others had not dealt with this issue before and commented that nurses are professionals with knowledge, skill and judgement, thus, do not require additional, specialized TDG training for the transportation of clinical specimens by nurses in the community healthcare setting. One province, Alberta, stipulates the TDG training requirement.

GAPS, ISSUES AND CHALLENGES

In addition to the above gap(s) at the nursing professional college or regulatory body level, four other general gaps were identified during the course of the discussions with the Community Health Interest Group members and attendees at the CHICA-Canada presentation described above. They include: 1) Lack of knowledge of which type of clinical specimens were being transported and how they were being transported; 2) Lack of policies and procedures for the transportation of any clinical specimens by nurses in the community setting; 3) Lack of knowledge regarding requirement for TDG certification, and; 4) Lack of knowledge regarding the Transport Canada Act and Regulations. It was acknowledged there are many challenges (fiscal, operational, clinical and operational) for the employer and the staff regarding applying the proper practices and meeting the Canadian regulations for transporting clinical specimens. Also, other healthcare workers from various disciplines may be transporting clinical specimens such as a public health inspector who is investigating an outbreak or other healthcare workers with infection prevention and control responsibilities who may work in a variety of community healthcare settings.

TDG Certification and the education required for transportation of clinical specimens creates numerous challenges and questions: What types of specimens are we currently transporting? How are we doing this currently? Who needs to be trained? How many require training? Who will do the training? How costly will it be? How will it be monitored? Where do we start to develop a safe process that meets Canadian TDG regulations? Development of organizational policies and procedures is also challenging due to the various iterations and evolving nature of the TDG Regulations. The healthcare worker's risk assessment is key in classifying specimens, but who takes the final accountability? Is it the healthcare worker in the community, the off-site physician, or the employer? Third-party carriers must also hold TDG certification, such as taxicab companies or courier services. How would this be managed? Family members who transport a Category B specimen which a healthcare worker has obtained, classified and packaged, is considered a third-party carrier which carriers shipping responsibilities for the healthcare worker and employer. What are the risks associated with family members who transport a specimen? Is the community agency or public health unit or local health authority willing to manage these risks?

Employers are accountable to follow both federal and provincial regulations. They are also responsible to develop, implement and maintain current policies and procedures reflecting the regulations, ensure availability of appropriate supplies such as packaging and labels, provide education to staff about the regulations and to audit their practice (5e). In speaking with colleagues from various provinces and territories, it is evident there are organizational gaps in both knowledge and practices regarding TDG Regulations governing road transportation of clinical specimens in the community setting. As a result, the following steps to develop a comprehensive process for the transportation of clinical specimens in the community setting are recommended.

BOX 4: Other Considerations for the Development of Policies and Procedures and/or Educational Materials

- Follow routine practices and occupational health and safety practices.
- Specify which specimens your health care worker can transport.
- Plan for staff TDG certification.
- Educate staff how to:
  - Use containers supplied – inner, secondary and outer packaging based on the biological product.
  - Affix appropriate marks, labels and identification.
  - Complete requisitions properly and place requisitions with secondary packaging.
  - Transport specimens in an employee's trunk or rear of the vehicle in upright containers in a secure manner so the specimen container doesn't slide around in the health care worker's trunk.
  - Clean containers on a routine basis when an outer container is re-usable and document.
  - Manage specimen container leaks such as a blood or body fluid spill and/or accidental release.
- Notify relevant stakeholders about this new process.
- Monitor the entire process of the transportation of clinical specimens, and perform audits followed by feedback and subsequent follow up.

PRACTICAL STEPS TO DEVELOPING POLICIES AND PROCEDURES FOR ROAD TRANSPORTATION OF CLINICAL SPECIMENS

In order to develop safe policies and procedures, it is important to identify what your community agency or health authority is doing now with the road transportation of clinical specimens by your staff, then, develop a plan for moving forward. See Box 3 for steps to consider for the development of a standardized process.

It is also recommended that sample content for a policy and procedure would include infection prevention and control practices, occupational health and safety practices, and educational requirements. See Box 4 for other considerations to include in a policy and procedure or educational manual/e-learning resource material for transportation of clinical specimens in the community setting.

SAMPLE SCENARIOS

In discussion with community colleagues, there are several common scenarios that occur in community agencies and public health units/health authorities across Canada. Four common scenarios will be described which meet the Canadian TDG regulations (Table 5).

CONCLUSION

Infection prevention and control professionals (ICPs) in the Community Health Interest Group of CHICA-Canada identified that many community healthcare organizations may not be currently complying with the federal and/or provincial or territorial regulations for the transportation of clinical or biological specimens by road, and in some instances, an organization may not even be aware they are transporting TDG regulated substances or are not in compliance with TDG regulations. ICPs who are medical laboratory technologist are familiar with these regulations, but ICPs from other disciplines may not be familiar with TDG regulations and the associated safe practices. It is essential to identify gaps and issues in current practices and work toward compliance with the TDG regulations for all healthcare workers in all community healthcare settings. Applying the previously stated regulations, principles and processes for development of safe practices in transporting clinical specimens by road transportation to prevent the release of infectious substances, helps to ensure the health and safety of staff, the public, and the environment from potential harmful effects that may occur from an exposure to these infectious substances. Prevention is preferred.

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   - 5b: TDG Regulations Class 6.2, Infectious Substances, Part 2, Section 5.16.1 Additional Requirements for Type 1B Means of Containment
   - 5c: TDG Regulations Class 6.2, Infectious Substances, Part 4, Section 22.1 Category B Mark
   - 5d: TDG Regulations Class 6.2, Infectious Substances, Part 6 Section 6.1, 1 and 2
   - 5e: TDG Regulations Class 6.2, Infectious Substances, Part 8.
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TABLE 5: Case Scenarios

Scenario	Response to Scenario
I am a new public health nurse and have just completed a home visit to take a nasopharyngeal (N/P) swab from a child symptomatic with influenza-like-symptoms. Public health has identified that there is a potential respiratory outbreak situation at the child's school. I now need to deliver the specimen and requisition to the lab. Are there any special steps I need to take?	Response to Scenario 1: Use routine practices and additional precautions for acute respiratory illness when procuring the swab. Know how to procure the swab using the proper technique. The N/P swab is considered an infectious specimen as the child is symptomatic, thus, requires Category B packaging and labelling. According to the regulations, you must have a TDG certificate to handle and transport the specimen. You require the knowledge, skill and judgement to classify, package, label and transport this specimen. In some jurisdictions, Exemption Part 1, Section 1.19 may apply if you are a government employee healthcare worker who will deliver the specimen to the laboratory. The nurse and the employer are accountable as shippers.
I am a community nurse and recently withdrew some blood from a client's central line. How do I transport this specimen?	Assess whether the specimen is infectious or not. If it is routine blood work and according to the medical history, the client has no known blood borne pathogens, and there is no reason to believe there are infectious microorganisms in the blood as named in Part 2 Appendix 3 of the TDG Regulations, then it is considered an exempt specimen and is to be labelled and packaged as EXEMPT HUMAN SPECIMEN. If it is an exempt specimen, you don't need a TDG certificate to transport this specimen. If the client is known to have a blood borne pathogen or there is reason to believe the specimen may contain an infectious organism, then consider this to be infectious. It is then a Category B substance and requires the associated packaging and mark. According to the regulations, a TDG certificate is needed to handle and transport a Category B specimen. You require the knowledge, skill and judgement to classify, package, label and transport this specimen. Again, in some jurisdictions, Exemption Part 1, Section 1.19 may apply for a government employed healthcare worker taking the specimen to the laboratory themselves. The nurse and the employer are accountable as shippers.
In my health unit, we often send specimens to the laboratory by cab. Is this acceptable?	Category B items must be shipped, carried and received by TDG trained individuals. This applies to cab drivers as they would then become the third-party carrier of your dangerous goods and therefore must be licensed as a TDG certified carrier. Exempt Human Specimens are not covered under the TDG regulations; anyone can carry them using appropriate sturdy packaging and they may be transported by cab depending on the policy of the cab company and the local health authority. The nurse and the employer are accountable as shippers.
I just did a heel prick on an infant for testing. The spot of blood is placed on absorbent paper.	A dried blood spot on absorbent paper such as for the newborn metabolic screen, is considered a "non-regulated specimen." This specimen can be transported by anyone. In some jurisdictions it may be mailed.

CASE REPORT:
A Christmas visit from VRE

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KEY WORDS:
neonatal intensive care unit, vancomycin resistant, enterococcus

ABSTRACT

Vancomycin resistant enterococci (VRE) remain rare in Canada, and occur much less commonly in pediatric than in adult in-patient units. We describe VRE identified from a rectal swab obtained on the day that a four-day-old full-term infant was admitted to our NICU from home. Repeat screening of the infant confirmed VRE colonization; subsequent investigation did not identify any transmission in the NICU. Further investigation found that a grandparent, who had not seen the baby, but had visited the family's home a month before his birth, was known to be colonized with VRE. Rectal swabs taken from baby, mother and grandparent yielded VRE isolates that were indistinguishable by pulsed-field gel electrophoresis. Household transmission of VRE may be relatively common; as the prevalence of VRE increases, nurseries should be alert to potential VRE exposures from community admissions.

INTRODUCTION

Enterococci are common hospital pathogens, whose importance is related to the combination of their antibiotic resistance, both intrinsic and acquired, and their ability to survive in the environment and be transmitted from patient to patient within hospitals (1). Vancomycin resistant enterococci (VRE) first emerged in North American hospitals in the late 1980s, but remains uncommon in Canadian hospitals, particularly in pediatric and neonatal wards (2).

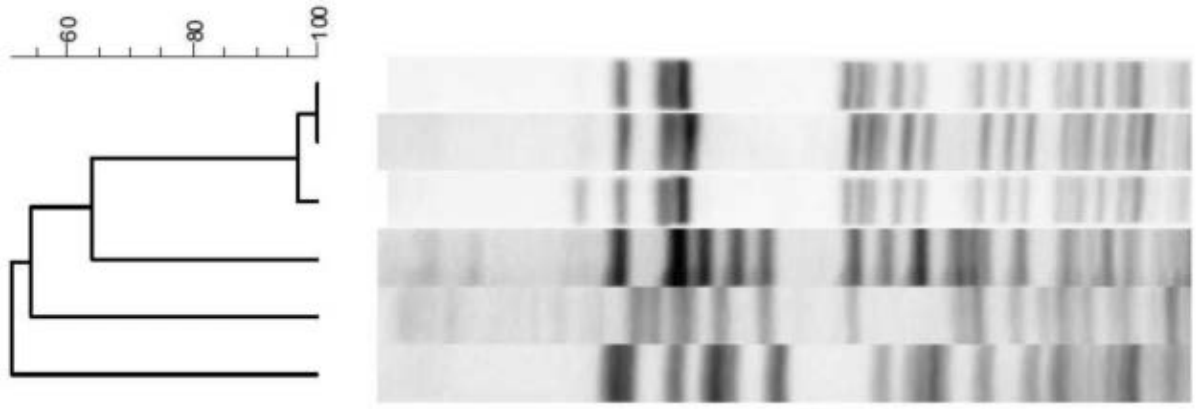
CASE PRESENTATION

An infant born in our facility in January 2011 at 36 weeks gestation was discharged home with his mother at 48 hours. The pregnancy was complicated by threatened preterm labour resulting in two 48-hour admissions to our antenatal unit at 32 and 34 weeks gestation. On day four of life, the infant was readmitted for evaluation of jaundice, and had a three-day stay in our open, 37-bassinette neonatal intensive care unit for phototherapy. After his discharge, the infection control team was notified that vancomycin resistant *Enterococcus faecium* (VRE, vanA phenotype) had been isolated from his routine admission screening rectal swab. Our hospital routinely screens out-born infants being admitted to our neonatal intensive care unit, at risk obstetrical admissions, and conducts routine screening at day 10 of life for antibiotic resistant organisms in infants in our neonatal intensive care unit. VRE had not been previously identified in either clinical or screening specimens in our neonatal or obstetrical services.

The admission rectal swab was reprocessed to confirm the result, a prevalence screen of rectal swabs to identify VRE colonization of mothers on our antenatal and post-natal units was conducted, discharges of infants to other facilities from our NICU were suspended and other neonatal units were notified of the exposure, and a "bucket" clean (3) was performed of high-touch surfaces in the NICU (nursing station, doctor's charting area, breast milk fridge, medication cart, IV pumps, ventilators, phototherapy units and common equipment) as well as the space that was occupied by the colonized infant. Follow-up screening by stool or rectal swab, of all infants in the NICU was conducted 3, 7 and 12 days after the last exposure to the colonized infant. No VRE was identified in any screen, and the suspension of discharges to other units was lifted when the day 7 post-exposure screen was negative.

Further investigation with the family identified that the household comprised

FIGURE 1: Results of SmaI pulsed-field gel electrophoresis of VRE isolates from the infant, mother and grandparent (top three lanes), a sample isolate of the most common strain from the outbreak at the hospital the grandparent had visited as an outpatient (fourth lane), and two representative VRE strains from the hospital of birth of the baby. Scale at the right demonstrates relatedness as assessed by Bionumerics (Applied Maths, Sint-Martens-Latem, Belgium).



the child's parents and a sibling. The mother did not work outside of the house. The sibling had had a short hospital admission for appendicitis 18 months previously, and the father had been treated for bacterial sinusitis; the family reported no other contact with healthcare as workers, patients, or visitors. A grandparent who lives in another city visits the household regularly, most recently for six days in late December 2010. The grandparent had recently had a prolonged course of intravenous antibiotics for cellulitis surrounding a wound, associated with multiple outpatient visits but no hospital admissions at a hospital with known epidemic VRE. A wound culture obtained in December prior to her visit yielded no enterococci; a repeat wound culture obtained early in January 2011 yielded VRE. During her visit to the family's home in December, she performed her own wound care and used a separate bathroom from the rest of the family because of the infection.

Repeat rectal swabs submitted by the mother and infant both yielded VRE. The three isolates (mom, infant, and grandparent) had identical susceptibility patterns and were indistinguishable by pulsed field gel electrophoresis (PFGE). The PFGE pattern was unrelated to any VRE previously identified in our hospital, and unrelated to the most common epidemic strain at the other hospital (Figure 1).

DISCUSSION

Although the incidence of VRE in Canadian hospitals has increased substantially, it remains uncommon, with only 5.4 colonized and 0.35 infected patients per 1000 admissions in hospitals participating in the Canadian Nosocomial Infection Surveillance Program (CNISP) in 2010 (see CNISP reports at *www.ammic.ca*). Pediatric isolates comprise less than 2% of all isolates in CNISP surveillance. VRE has not been reported from Canadian neonatal intensive care units, although outbreaks have occurred in NICUs in several countries (4-10), and one outbreak involving older children on multiple wards in a Canadian pediatric hospital has been reported (11). In these outbreaks, environmental contamination is an important contributor to transmission and identified risk factors for VRE colonization/infection in neonates were low birth weight, prolonged antibiotic use and use of vancomycin (8,9,12).

Expert recommendations suggest that whenever a new VRE case is identified by a single positive from a single site, consideration should be given to confirming with a repeat specimen to rule out error (13). Although this unusual case represented true colonization, VRE frequently contaminates the environment not only in patient care units, but also the laboratory, and laboratory contamination of specimens with VRE has been reported on multiple occasions (14).

In this case, investigation led to the identification of interfamilial spread of VRE but did not identify a source: both the mother and grandparent had recent contact with healthcare facilities. Transmission between the mother and grandparent presumably occurred during the visit prior to delivery; the infant may have acquired VRE either vertically during delivery or from the mother or fomites during the time he spent at home. Household transmission has been identified previously in households of both patients and healthcare workers (15,16). As VRE becomes more common in adults, pediatric hospitals and units should be alert to the potential of introduction of VRE from the community. Admission screening may aid early recognition of patients colonized with VRE and with the implementation of infection control strategies, prevent VRE outbreaks in NICUs.

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CHICA-CANADA NEWS

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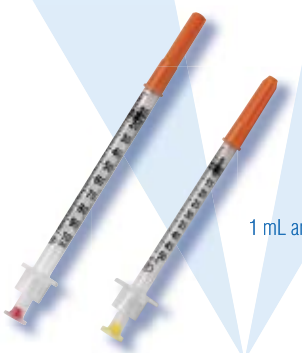

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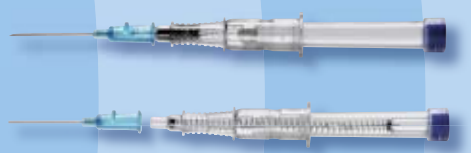

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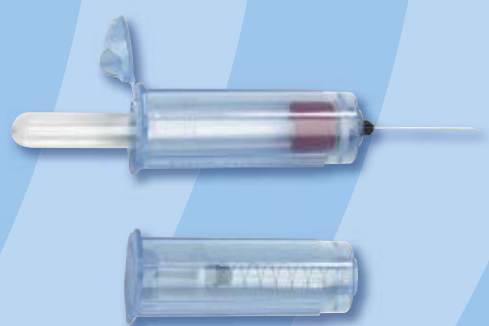

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Infection prevention **is global**

Bruce Gamage, RN, BSN, CIC
President, CHICA-Canada

In early October I had the honour of representing CHICA-Canada at the International Federation of Infection Control (IFIC) and Argentine Congress of Epidemiology, Infection Control and Patient Safety (ADECI) Conference in Buenos Aires, Argentina.

I congratulate the members of the scientific planning committee from both IFIC and ADECI for putting on an excellent conference. There were approximately 800 attendees, greater than 50 presentations, and more than 100 poster submissions. Issues addressed included device-associated infections, surgical site infections, hand hygiene compliance, antibiotic stewardship, and professional development. Our own Natalie Bruce from Ottawa, Ontario won the award for best poster presentation!

Even though we come from different countries, it was no surprise to see that our colleagues from around the globe are dealing with very similar issues to us in Canada. During the conference I had the opportunity to network with delegates from Egypt, Germany, Malta, Holland, Sweden, Norway, Scotland, South Africa, Chile, Brazil and the US, just to name a few. I presented, along with a panel of colleagues from Argentina, Chile, and the US, on our experience with developing core competencies for infection prevention and control, education, and certification.

Our friends from ADECI were very gracious hosts. The delegates had ample opportunities to explore the wonderful city of Buenos Aires with all it has to offer. From walking the narrow historic streets of San Telmo to visiting the remarkable Recoleta Cemetery where Evita is buried, to seeing a live tango show (and even taking a tango lesson) the excitement never ended. I don't think I've ever had such wonderful beef and full-flavoured red wine.

IFIC is an umbrella organization of societies and associations of healthcare professionals in infection control and related fields worldwide. The goal of IFIC is to minimize the risk of infection within the healthcare setting world-wide through developing of a network of infection control organizations for communication, consensus building, education and sharing expertise. Membership in IFIC is extended to societies of healthcare professionals in infection prevention and control and related fields in countries throughout the world. The organizations that join IFIC are then called member societies. Currently IFIC has 66 members from 51 countries.

Our representative to the IFIC board, Carol Goldman, will be completing her term as of December 2014. I want to take this opportunity to thank Carol for all the work she has done as IFIC's Honourary Secretary. Next year there will be an opportunity for the board of CHICA to nominate two representatives to the board, as Terrie Lee, also from our district, moves to being Chair of IFIC next summer. I highly recommend that we continue to support IFIC and the very valuable work that this organization does. CHICA's ongoing support of IFIC is very important to the organization. Our annual contribution of scholarship from our IFIC run was also recognized and I had the honour of presenting this year's prize to Ricardo Da Silva, who presented on a carbapenem-resistant organisms outbreak at his home hospital in Brazil. I encourage you to join me at our upcoming conference in Halifax and participate in the IFIC run. Even if you can't participate, please sponsor a colleague. The more funds we can the raise, the more we can support IFIC!

I look forward to representing our organization, under its new banner, Infection Prevention and Control Canada at the upcoming IFIC Conference next March in St. Julians, Malta. As an added bonus, I have been invited to speak at the conference of the German Society for Hospital Hygiene in Berlin following the IFIC Conference.

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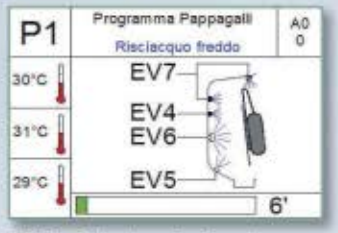

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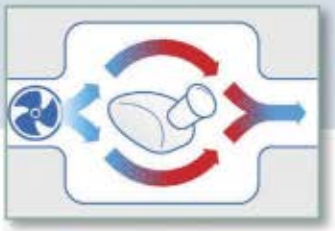

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Professionnel en contrôle des infections : un terme chargé de sens

Bruce Gamage, RN, BSN, CIC
President, CHICA-Canada

Début octobre, j'ai eu l'honneur de représenter l'APIHC Canada au congrès d'épidémiologie, de contrôle des infections et de protection des patients organisé par l'International Federation of Infection Control (IFIC ou fédération internationale du contrôle des infections) et par l'association argentine du personnel infirmier spécialisé en contrôle des infections (ADECI) à Buenos Aires, en Argentine.

Je tiens à féliciter les membres du comité de planification scientifique de l'IFIC et de l'ADECI pour l'excellence du programme. Plus de 50 présentations de vive voix et plus de 100 par affiches ont été proposées à quelque 800 congressistes, sur des thèmes comme les infections transmises par les appareils, les infections de sites opératoires, l'hygiène des mains, l'utilisation raisonnée des antibiotiques et le perfectionnement professionnel. Natalie Bruce, d'Ottawa (Ontario), nous a fait honneur en remportant le prix de la meilleure présentation par affiches!

De mes discussions avec des délégués d'Égypte, d'Allemagne, de Malte, des Pays Bas, de Suède, de Norvège, d'Écosse, d'Afrique du Sud, du Chili, du Brésil et des États Unis, pour ne nommer que ceux-là, il ressort que les préoccupations sont similaires, partout au monde. Par ailleurs, dans le cadre d'une discussion d'experts avec des collègues d'Argentine, du Chili et des États Unis, j'ai présenté notre expérience de l'établissement des compétences de base en prévention et en contrôle des infections, en formation et en certification.

Nos amis de l'ADECI sont des hôtes parfaits. Les délégués ont eu largement la possibilité d'explorer Buenos Aires et ses trésors. De la balade dans les rues étroites du quartier historique de San Telmo à la visite de l'étonnant cimetière Recoleta où Evita fut inhumée puis au tango en direct (avec leçon, qui plus est), les occasions de découvrir n'ont pas fait défaut. Et je ne crois pas avoir jamais dégusté un aussi bon plat de bœuf et un aussi bon rouge bien corsé.

L'IFIC est un regroupement international d'associations professionnelles en contrôle des infections et autres domaines connexes. Son but est de réduire au minimum le risque d'infection dans le milieu des soins de santé dans le monde. Le réseau des organisations membres qu'elle a créé favorise la communication, le consensus, la formation et le partage de l'expertise. L'IFIC compte actuellement 66 organisations membres représentant 51 pays.

C'est Carol Goldman qui nous représente actuellement au conseil de l'IFIC, mais son mandat prend fin en décembre 2014. Je profite de ce billet pour la remercier de tout le travail qu'elle y a accompli à titre de secrétaire honoraire. L'an prochain, le conseil de l'APIHC Canada pourra nommer deux représentants au conseil de l'IFIC, puisque Terrie Lee, également déléguée de notre district, assumera la présidence de la fédération dès l'été. Je recommande fortement le maintien de notre appui à l'IFIC et à son précieux travail. L'IFIC a besoin de notre soutien indéfectible. Notre contribution annuelle à la campagne de financement, sous forme de bourse d'études, a d'ailleurs été soulignée, et j'ai eu l'honneur de présenter le prix décerné cette année à Ricardo Da Silva, qui nous a entretenus d'une éclosion d'organismes résistant au carbapénème survenue à l'hôpital où il travaille, au Brésil. Je vous invite à participer à notre congrès de Halifax et à la campagne de l'IFIC. Si vous ne pouvez pas être des nôtres, commanditez un collègue! Plus nous recueillerons de fonds, plus nous pourrons aider l'IFIC!

Il me tarde de représenter notre organisation sous son nouveau nom – Prévention et contrôle des infections Canada / Infection Prevention and Control Canada – au congrès de l'IFIC en mars prochain, à St. Julians, sur l'île de Malte. Mon rôle sera d'autant plus intéressant qu'on m'a invité à faire une présentation au congrès de l'association allemande d'hygiène dans les hôpitaux (German Society for Hospital Hygiene), à Berlin, après le congrès de l'IFIC.

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Developing our **leadership team**

Gerry Hansen, BA
Executive Director, CHICA-Canada

The Nominating Committee of the Board of Directors of CHICA-Canada/IPAC Canada is charged with the responsibility of ensuring our association is governed with excellence and vision and has begun the process. They have worked diligently to ensure the continuity of the association by highly qualified candidates. The 2014 Nominating Committee is:

Jim Gauthier, MLT, CIC, Chair
Anne Bialachowski, RN, BN, MS, CIC
Donna Moralejo, RN, PhD

However, announcement of the board's slate does not mean those candidates may be the final choice. Membership is invited to nominate additional candidates if they so wish.

There are three board vacancies to be filled this year. Dr. Donna Moralejo has completed her term as Director of Education and her position will be replaced by a Director with an education background. Marilyn Weinmaster will seek re-election for a second three year term as Secretary of the Board (the Membership Director position has been eliminated). A fifth Director position will be elected. The latter will be an experienced ICP.

In the past, Directors were nominated by their expertise in a specific area, i.e., Education, Standards & Guidelines, Programs & Projects. With the restructuring of the board (see fall 2014 journal), Directors will no longer have specific portfolios but will be nominated based on core competencies that will produce a strong, cohesive, and visionary board. What are the factors when considering applicants for possible nomination as board members? Following are the core competencies that should be inherent in each Officer or Director.

1. **Governance:** The Director should demonstrate an understanding of the distinction between governance and management, show a good appreciation of the association's mission and strategic plan; and contribute to the achievement of the association's objectives by effectively applying knowledge, experience and expertise to the issues confronting the association.
2. **Knowledge and Judgment:** The Director should demonstrate adequate knowledge of the profession to understand and question the assumptions upon which the association's business plans are based; demonstrate sufficient knowledge of financial matters to judge financial indicators of the association's performance; appropriately question data and information; and demonstrate an ability to identify the costs, benefits and risk implications of board decisions.
3. **Participation and Preparation:** The Director evidences diligent preparation for meetings, is available when needed, accessible and approachable; and volunteers for tasks and related work that furthers the strategic direction of the association.
4. **Communication:** The Director respects the confidentiality of the association's business information and the deliberations of the board; contributes meaningfully and knowledgeably to board discussions; expresses views frankly and openly in board meetings; and listens to, respects and encourages the expression of opinions by other board members.
5. **Teamwork:** The Director demonstrates a high standard of personal values and ethics and expects ethical behaviour by members of the association; interacts well with other board members, staff and membership; shows sensitivity to complex relationships that exist among governments, the association, special interest groups, the board and the Chief Staff Officer (Executive Director).
6. **Overall Board Performance:** The Director makes a positive contribution to the long term viability of the association and the succession of the board; demonstrates an ability to assist the board in meeting the strategic objectives of the association; contributes to consensus-building and decision-making by consensus; shows an understanding of and wiliness to respond to members' needs; and contributes to the overall effectiveness of the mission and preferred future of the association.

There are many leaders in our membership. They could have the opportunity to be a leader of the association. Have a look at the Nominating Committee slate of candidates and do not hesitate to nominate others if you feel they would make a valuable contribution. Knowledge specific to the association's governance and management model will be relayed to Officers and Directors at a Board Orientation to take place the afternoon following the close of the 2014 conference.

Revised nomination forms will be available by December 15 and will include providing an outline of experience and qualifications in relation to the above core competencies.


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REFERENCES: 1. Stone S, et al., Removal of bath basins to reduce catheter-associated urinary tract infections. Poster presented at APIC 2010, New Orleans, LA, July 2010.
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CHICA-Canada 2010-2015 Strategic Plan
Goals, objectives and strategy update

November 2013

Goal	Current Status
GOAL ONE: Raise the profile of the association and its activities	
1.1 Actively and effectively promote the role of ICPs as per CHICA-Canada professional practice standards	
Review current standards and clarify roles of the ICP	CHICA-Canada is currently working with APIC to update the Professional Practice Standards. A revised document is anticipated to be published in mid-2014.
Obtain recognition from the Canadian Nurses Association (CNA)	CHICA-Canada became a CNA Associate Member in 2011 and participates on its Network of Nursing Specialties. Discussions with CNA on the recognition of Infection Prevention and Control as a specialty certification will resume in 2014.
Provide CIC preparation assistance/ CHICA-Canada endorsed courses	A full day workshop on CIC preparation is under discussion with CBIC and APIC. In addition, the Education Core Committee will investigate the feasibility of launching an online CIC study prep course.
CHICA-Canada endorsed courses	Policy, Procedure and Terms of Reference for the Endorsement Review Committee are in place. Currently, there are one CHICA-Canada sponsored course and four CHICA-Canada endorsed courses. Endorsed courses have a three-year term. Each endorsed program is required to submit an annual update for review by the committee. There are intake dates for spring and fall for applications for endorsement of courses and receipt of annual updates from CHICA-Canada endorsed courses. The CHICA-Canada course, sponsored by CHICA-Canada, has undergone the same endorsement review as courses who have received a CHICA-Canada endorsement. Information on the courses is available at *http://www.chica.org/educ_education.php*
Ensure standards and guidelines are built into job descriptions	The Network of Networks Interest Group will be communicating with the Certification Board of Infection Control (CBIC) about the initiative to include updated practice guidelines in job descriptions so there is alignment of marketing.
1.2 Raise visibility within the membership and other health care communities	
Expand the e-newsletter and increase circulation	The e-newsletter is circulated to members, industry representatives, and external stakeholders.
Increase communication with chapter executives and interest group leaders	Board members visit or teleconference with as many Chapter meetings as possible. The Education Core Committee produces a quarterly newsletter and there are plans for Programs & Projects and Membership to also produce a quarterly newsletter. The board is developing a chapter questionnaire as to what information members would want from the board and in what format. Post-board meeting summaries will be sent out indicating the major issues that were discussed at the board meeting and how they benefit members. Additionally, the board is exploring options for ensuring Chapter Presidents Meetings are relevant and more strategic in nature.
Promote "CHICA Connections" as a tool for questions and answers	CHICA Chat (and its predecessor, CHICA Connections) was disbanded as a chat room. A new process for circulating and responding to practice questions has been implemented. Questions and answers received are posted on the Website. See *http://www.chica.org/Members/members_forum.php*
1.3 Establish a strong and ongoing relationship with government	
Develop key messaging and act in a proactive manner	A part-time Communications Manager is required to address media opportunities and ensure timely social media posts and responses. After mid-year analysis of the 2014 budget, the board will review the possibility of implementing this position.
Identify and train key CHICA-Canada representatives to communicate with government	This has not been successful as a general initiative; however, board members will receive training in the future.
Conduct regular consultative discussions with federal, provincial and territorial politicians	Meetings with federal representatives have been held in person, at the national conference, and via teleconference. The board will review advocacy initiatives in 2014.
1.4 Continue to develop the *Canadian Journal of Infection Control (CJIC)* as a worthy and cited peer reviewed journal	
Dedicate *CJIC* to scientific information and field material	Although the number of scientific articles submitted has increased, advertising revenue will not support a stand-alone scientific journal. Association News will continue to be part of CJIC until scientific articles are increased substantially to then support a scientific journal.
Migrate non-scientific components to other communication venues	When advertising revenues are assured to support a scientific journal, Association News will be migrated to a stand-alone publication.
Promote *CJIC* as a peer-reviewed citable journal to membership, committees, academics, chapters and interest groups	Because of the low publication of scientific articles in *CJIC,* the National Library of Medicine (NLM) withdrew its endorsement in 2012. *CJIC* is cited by EBSCO. The Clinical Editor will review the NLM endorsement annually.

Goal	Current Status
GOAL TWO: Enhance the mix of products and services	
2.1 Create a recognizable brand for all CHICA-Canada products	In June 2013, members voted to change the association name to Infection Prevention and Control Canada – IPAC Canada / Prévention et contrôle des infections Canada – PCI Canada. The legal process of change has been completed. The association will officially start using the new name on January 1, 2014. Rebranding is currently being addressed.
Retain a marketing/branding consultant	Hep Communications of Winnipeg has been contracted to develop logo concepts. An online member preference vote will take place in December 2013.
Align chapters with national branding efforts	Members will be notified of the final logo choice in December 2013.
2.2 Establish a national CHICA-Canada standard for IPAC programs	
Develop documents outlining the components, activities and outcomes of an effective IPAC program, incorporating geographic and cultural differences	A Program-Wide Audit Tool Working Group has been appointed. It is anticipated that the Toolkit will be launched at the 2015 national conference.
Develop training tools and templates	The Audit Tool Working Group has developed approximately 45 tools for infection prevention and control audits in several settings. These are available to members at *http://www.chica.org/AuditToolkit/toolkithome.php*. The Working Group has been disbanded; however scheduled revisions to the tools and development of new tools will take place under the Programs & Projects Core Committee. The Education Core Committee has developed a series of webinars around Adult Learning and Hand Hygiene to be presented in early 2014. They will consider development of other training tools in 2014. They will include the new branding look in their templates.
Provide evaluation methodologies	This will be included in the Program-Wide Audit Tool. In addition, the Programs & Projects Core Committee is developing a survey of users of the Infection Prevention and Control Audit Tools, to be distributed in early 2014.
2.3 Institute new technology-based service delivery modes	
Survey member technology capacities and preferred delivery methodologies	The Education Committee surveyed members in 2011 around their education priorities and preferred delivery methodologies. It was determined that members prefer roadshows and webinars. Survey results are available at *http://www.chica.org/pdf/2013_CHICA-Canada_Membership_Education_Survey_Report.pdf*
Evaluate current system capabilities	Communication and learning platforms are under regular review.
Implement necessary adjustments/upgrades to current systems	Ongoing.
Maintain a leading edge web portal	The website was revitalized in 2012. It is currently undergoing review and revision in preparation for the name change. The new website will be launched on January 1, 2014.
2.4 Develop fee-based consulting services for other organizations	
Develop a business plan and consult legal counsel	Legal counsel has indicated there could be liability problems with this initiative. There has been discussion of the development of a template contract to protect independent consultants. When CHICA-Canada receives a request for an independent ICP consultant, the opportunity is forwarded to membership who is advised to send proposals directly to the employer/contractor. CHICA has no further involvement at that point. Finder fees paid to CHICA are the same as for the posting of an employment opportunity.
Enlist ICPs with demonstrated skills and knowledge	A roster of expert speakers from membership will be developed in 2014 along with a disclaimer around liability issues. Operating procedures, fee schedules and publication will occur in 2014.
Develop a CHICA-Canada "one voice" messaging platform for sessions	The values of the Board of Directors prescribe 'one voice' in discussions on association issues. The contracting of a Communications Manager will ensure that key messages enforce the "one voice."
Provide training for consultants around CHICA-Canada messaging	The 2015 Scientific Program Committee has proposed a workshop directed to those considering becoming an independent consultant.
GOAL THREE: Expand the association's education initiatives	
3.1 Provide recommendations for basic and continuing competencies for ICPs	
Develop a CHICA-Canada endorsed list of ICP novice, proficient, expert core competencies	A Core Competencies Working Group was appointed in 2012. Their primary focus will be novice core competencies.
Finalize, disseminate and promote	It is anticipated that the guideline will be finalized for publication in 2015.
3.2 Expand education programs and supports for ICPs	
Perform a needs assessment of ICP educational needs, technological capacities and preferred delivery methodologies	The Education Survey has been posted to *http://www.chica.org/pdf/2013_CHICA-Canada_Membership_Education_Survey_Report.pdf*
Assemble a Learning Object Repository	A Learning Object Repository (LOR) Working Group has been appointed to develop the web platform and evaluation process for member-developed education resources. Additional members will be appointed to this committee to develop Terms of Reference, policies and procedures, review submissions and maintain the web page. It is anticipated that the LOR will be launched in 2014.

Goal	Current Status
Develop alternative education programs, webinars, local education, on-line continuing education, tools and modules for ICPs	A Routine Practices E-Learning Tool was developed in collaboration with Georgian College and Ycommunicate. The English modules were launched in 2012. The French modules will be launched in January 2014. The Education Core Committee has developed a series of webinars on adult learning. Other education tools are under discussion.
Establish process for continual review and maintenance of Basic Infection Prevention and Control distance education course.	The Distance Education Advisory Committee has been appointed to review the online curriculum on an annual basis. Terms of Reference have been established.
Roll out distance education Basic Infection Prevention and Control course to additional educational institutions	The initiative to roll out the distance education course to other education institutions was not successful. There were too many institutional barriers to complete negotiations. Recently, the course has been licensed to a provincial health authority for the education of new ICPs in that region. Similar deliveries will be considered under special circumstances.
Evaluate effectiveness of all education programs	Evaluation surveys are received at the end of all educational offerings. With board restructuring, all committees have been reviewed to determine which continue or which will continue in a different format. Committee and program evaluations will be provided to the board through an annual Operations Report collated by the Executive Director.
3.3 Ensure health care workers have the required knowledge and skills to practice IPAC competently within their specific roles	
Develop core competencies specific to different HCW groups	See 3.1 and 3.2 An additional working group will be appointed to review the current Core Competencies for HCWs document. This will occur in 2014. *http://www.chica.org/pdf/corecompfinal.pdf*
Outline a curriculum and develop support materials Knowledge base poor for some HCW	A Designates Day was held at the 2011 National Education conference and has been successfully mirrored by several chapters. The Routine Practices E-Learning Tool is directed to all HCWs, not just ICPs. The Education Committee will consider other HCW educational tools in the future.
Provide educators with standardized criteria and tools that can be customized to meet the needs of the learners	See above.
Engage and support educators in implementation	See above.
Evaluate program effectiveness	See above.
3.4 Develop a national IPAC orientation program	
Review current programs and resources in place	The development of a national orientation program has been unsuccessful. Orientation programs have been developed in British Columbia, Prince Edward Island and Newfoundland/Labrador. These are available to members. *http://www.chica.org/pdf/12Jul12news.pdf*
Develop content, script and a variety of delivery methodologies	Not being investigated at this time.
Issue an RFP for possible delivery methods, including video	Not being investigated at this time.
Implement a marketing strategy	Not being investigated at this time.
GOAL FOUR: Expand and develop the membership base	
4.1 Increase CHICA-Canada membership in targeted areas	
Continue focus on current target groups	The Membership Core Committee and the board monitor membership statistics from traditional groups: Acute Care, Long Term Care, Community, and Public Health. Two major groups have been included in marketing campaigns: PreHospital (Police, Fire, EMS) and Designates.
Identify and address new target groups	The Bring in a New Member contest has been successful and will continue in 2013-2014. The Membership Core Committee has identified dental professionals, students and healthcare facility engineers as professional groups who should be made aware of the benefits of membership. A campaign directed to Dental Hygienists and Assistants in the Atlantic Provinces will embark in January 2014. A half-day session on Infection Control in the Dental Office will be held at the 2014 National Educational Conference in Halifax NS.
Produce appropriate resources	Communication materials will be developed. The Board has discussed ways to engage younger ICPs to membership and participation on national committees.
4.2 Develop a mentorship program for new ICPs	
Scan mentoring programs already in use	Resources for this are limited. Several members have shared information with the Membership Core Committee. The Membership Core Committee will review mentorship resources in 2014.
Develop a CHICA-Canada specific program	In 2014, the Membership Core Committee will determine if a CHICA-Canada mentorship program is feasible. The Interactive Lunch at national conferences was launched in 2011 and has proven to be very successful and appreciated by both new and experienced conference attendees. The Leadership Team at the Interactive Lunch will be charged with the responsibility of contacting their table companions after the conference to facilitate ongoing communication.
Recruit mentors and support training through local chapters	This is on hold until review of mentorship resources.

Goal	Current Status
4.3 Increase retention of retirees	
Promote associate membership for retirees	As more ICPs retire, the membership category of 'Retired' is increasingly utilized. This keeps retired members informed of events at CHICA-Canada and able to participate at chapter levels and on national committees.
Engage retirees in association activities	Retired members are included in any call for volunteers.
4.4 Promote membership opportunities and involvement	Awards and Scholarships are actively promoted and advertised through the website, *CJIC* and e-News
Increase communication between chapter executives and the Board	Annual Chapter President and Chapter Treasurer teleclasses are held to assist current and incoming executive members with their duties and provide an understanding of the chapter and CHICA-Canada relationship. Additional teleclasses are held as required. For instance, Chapter Presidents participated in a teleconference around the implication to the chapter around the national name change.
Prepare information packages for senior management	The Membership Core Committee has created a template for members and non-members to use when discussing CHICA membership with decision-makers. The template can be addressed, additional information added, and the member/potential member can sign the letter if required. Template available at *http://www.chica.org/links_human_resources_icp.php* This document to be reviewed in 2014.
Promote CHICA-Canada at other conferences and events	The President and Executive Director attend other conferences and events as finances will allow. It is not productive to have a booth at each of the conferences; however, marketing opportunities are available at conferences and in stakeholder publications.
GOAL FIVE: Provide national and international leadership	
5.1 Strengthen association leadership	
Inform members of roles/responsibilities of board members and the process for nominations	With board restructuring, information about board positions has been circulated to membership through the journal. The Winter 2013 CJIC will contain an over of board nominations and position descriptions.
Update the board orientation manual	A Board Orientation Manual has been developed and has been posted to the Board page on the website. It undergoes regular review. An in-person Board Orientation will follow elections at the AGM, starting in 2014.
Institute a succession plan for Board and staff members	A Succession Plan for short term, long term and permanent vacancy of the Chief Staff Officer will be developed by the Executive Director and Board committee in 2014. An Operations Manual is being developed by staff and will be presented to the Board in November 2014.
5.2 Expand our advocacy role by engaging other organizations	The CHICA-Canada board, staff and members have established strong relationships with several external partners, among them the Public Health Agency of Canada (PHAC), Canada Health Infoway (CHI), CNA, Canadian Patient Safety Institute, CBIC, APIC, Canadian Standards Association, Infection Prevention Society (IPS), the International Federation of Infection Control (IFIC), the Association for Medical Microbiology and Infectious Diseases (AMMI), the Operating Room Nurses Association of Canada (ORNAC), the Canadian Association for Drugs and Technology in Healthcare (CADTH), First Nations and Inuit Health Branch (FNIHB), Corrections Canada, Accreditation Canada, Accreditation Canada International, the Canadian Association of Environmental Managers (CAEM) and the Canadian Association for Medical Device Reprocessing (CAMDR). Plans to communicate more formally with the Royal College of Physicians and Surgeons and the Canadian Dental Association are being developed.
Establish regular communication with like-minded organizations	Regular meetings with the Public Health Agency (PHAC) have been ongoing in person or by teleconference. The international presidents in attendance at the annual conference meet to discuss issues of mutual importance. The Executive Director has regular monthly meetings with the administration of APIC and CBIC. Projects or educational events have been developed or are in development with many of our external partners.
Assess opportunities for representation on national committees and boards	Requests for representation are considered and decisions made after review of the benefit and cost to the organization.
Ensure CHICA-Canada representation on national surveillance committees	CHICA-Canada is currently represented at CNISP.
Work with provincial and regional networks on mutually beneficial goals	The Network of Networks Interest Group works on issues of provincial and regional importance. Good working relationships have been established with provincial infection control bodies.
5.3 Improve the ability of the organization to respond to issues in a thorough and timely manner	
Retain the services of a communications manager and other contract resources.	See 1.3 and 2.4
Explore use of alternative technologies for rapid contact and communication	E-blasts and the monthly e-newsletter are utilized to broadcast news items to members.Facebook and Twitter accounts have been established. Our use of social media will be revitalized under the rebranding initiative.
Enhance industry partnerships	The Corporate Relations Committee (CRC) is comprised of representatives of CHICA-Canada Corporate Members. It meets twice per year to discuss issues of mutual interest and importance. Strong working relationships have been established with conference exhibitors and sponsors which in turn enhances CHICA-Canada membership. A CRC representative is on the planning committee of future conferences.

The 2010-2015 Strategic Plan will undergo a major review in 2015 in preparation for a 2016-2018 Strategic Plan.

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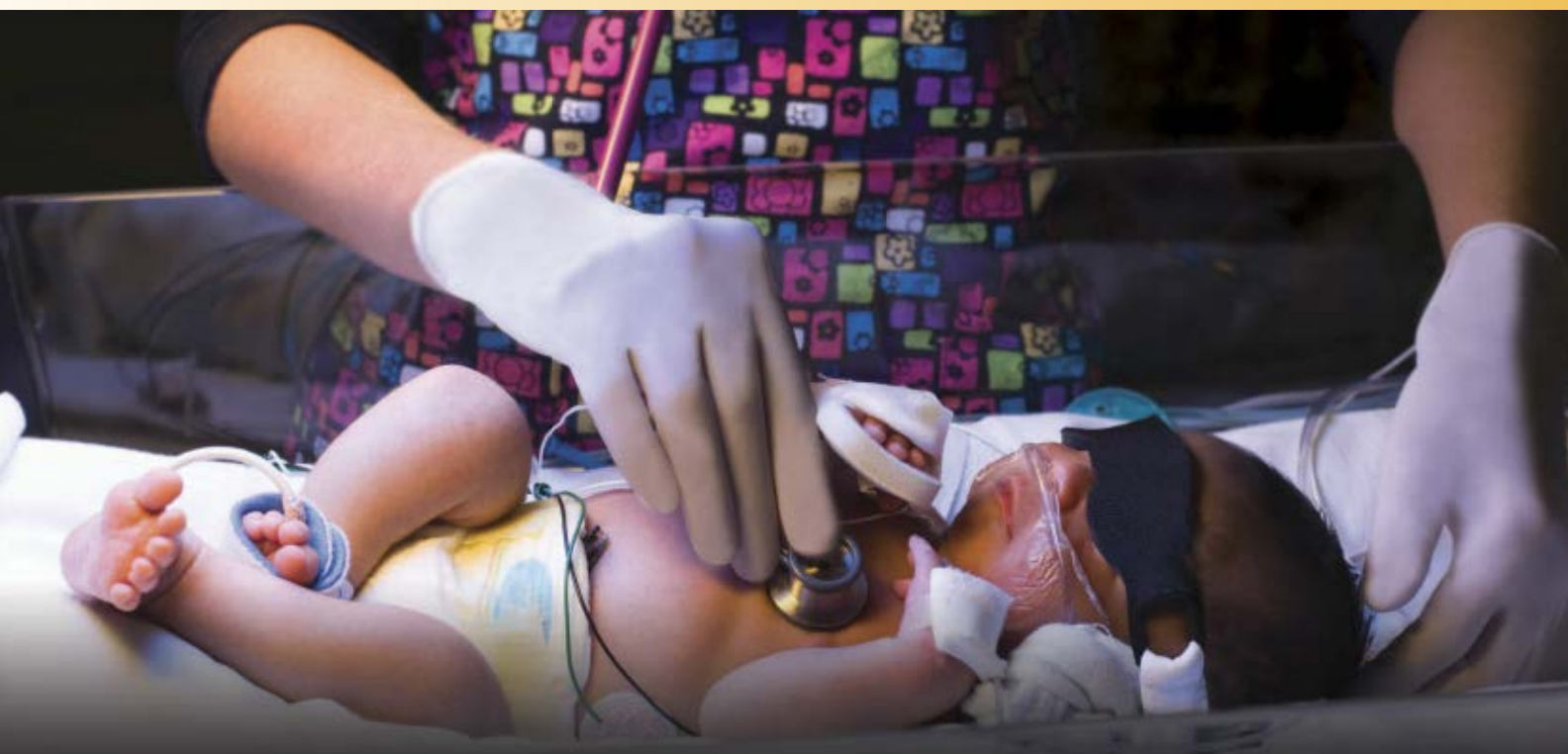

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References: 1. QFT Package Insert, March 2013, US05990301L; 2. Diel, R., et al. (2011) Am. J. Respir. Crit. Care Med. **183**, 88. 3. Harada, N., et al. (2008) J. Infect. **56**, 348; 4. Diel, R., et al. (2008) Am. J. Respir. Crit. Care Med. **177**, 1164.

Webinar Series:
The Art of Teaching Infection Prevention and Control: An Educational Series

Webinar 1: Focusing on Learners – Wednesday, January 29 (1330-1430 ET)
Webinar 2: Making Teaching Effective – Wednesday, February 19 (1330-1430 ET)
Webinar 3: Lessons Learned and Sharing Experiences – Wednesday, April 9 (1330-1430 ET)

CHICA-Canada is offering a three-part series of one-hour webinars for the winter of 2014.

The goal of this series is to teach ICPs how to teach! The series will focus on key concepts related to developing an education session and illustrate application of the concepts by focusing primarily, but not solely, on teaching hand hygiene. After participation in this series, participants will have gained knowledge in the assessment of the learners' needs, while considering strategies to develop a positive learning environment. As well, participants will be able to develop teaching strategies that adapt to the audience and to the topic and apply different approaches to evaluate learning.

The first webinar, Focusing on Learners, will review basic assumptions of adult learning and key domains of learning that are relevant to infection prevention and control in general and hand hygiene in particular. The influence of one's generation (e.g., Baby Boomer or Gen X) and experience on approaches to learning and behaviour will be discussed, and participants will learn how to assess and address different learning styles. Participants will also learn the benefits of, and practical tips for, develop a learning plan and learning objectives that take into account the concepts covered.

The second webinar, Making Teaching Effective, will review fundamentals of teaching and the pros and cons of various teaching approaches and strategies. Novices often think "I am not a teacher, so how do I become one?" This webinar will help answer that question and focus on effective teaching, making learning relevant and promoting supportive learning environments. Practical tips on implementation will be covered, such as overcoming nervousness when speaking in public, and include how to address common what-if situations. This session will also address evaluating learning outcomes.

In the final webinar of this series, Lessons Learned and Sharing Experiences, the ICPs will have an opportunity to do just that! At the end of each of the first two webinars, will be given exercises they can do between webinars to practice different aspects related to teaching and learning. In the third webinar, in a discussion guided by the webinar leaders, participants will share and learn from each others' experiences, whether positive or negative.

Each webinar will provide examples and discuss scenarios for adapting content and strategies based on the audience and the chosen topic. These include practical application, all leading to positive learning outcomes. There will be opportunities throughout the series for ICPs to express themselves leading to positive learning outcomes on "The Art of Teaching Infection Prevention and Control."

Dial-in information and webinar links will be provided to registrants at a later date.

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Non-Members $35 per webinar
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So you are thinking of reprocessing medical devices in your clinic: **Read this first**

Michael Gardam
and AnnMarie Gonsalves
Infection Prevention and Control Program,
University Health Network
Toronto

In collaboration with the CHICA-Canada Corporate Relations Committee

Undoubtedly, most Canadians have heard numerous media reports over the past few years about patients being exposed to improperly reprocessed medical devices. Literally thousands of people in several parts of the country have been recommended to be tested for blood-borne pathogens. These notifications have involved different types of equipment, including endoscopes. While it is unclear whether or not patients have become infected through these practice breaches, it is clear is that these events cause enormous stress to patients, severely damage the reputation of the institution or clinic forced to issue the notice, and will likely attract the attention of professional colleges and invite legal action. It is also important to note that these public notifications likely represent the tip of the iceberg as smaller reprocessing breaches are frequently dealt with quietly and escape the attention of the news media.

So why is this happening? Likely there are multiple factors that are contributing including: the movement of traditionally hospital-based procedures like endoscopy to outpatient clinics; increasing patient volumes and decreasing budgets; an ever-expanding array of devices and reprocessing parameters; and a considerable lack of awareness of the complexities of medical device reprocessing. We feel this last factor is particularly important as it compounds the others: as clinicians move procedures to outpatient settings away from the watchful eyes of the central processing department, they may significantly underestimate what is required to properly reprocess their devices. Simply put, they do not know what they don't know and do not put in place the necessary training, staffing, infrastructure, and equipment to ensure that standards are met.

The following are some of the most commonly observed deficiencies and challenges we have witnessed when working with clinics and organizations that have identified device reprocessing practice breaches.

1. *Not following the manufacturer's validated instructions for reprocessing and/or sterilizing.*
   In small clinic settings it is not uncommon to have one steam sterilizer set to one cycle time for the sterilization of all devices. While standards require that manufacturers provide users with at least one validated form of reprocessing for each device purchased, these reprocessing parameters will differ depending on the device. Thus, if healthcare facilities are adhering to existing standards, they will likely have to alter the sterilizer cycle times as recommended by the manufacturer for the different devices being reprocessed. If this is not happening, the sterility of the device cannot be guaranteed (1).

2. *Lack of certification and ongoing education of reprocessing staff.*
   Best practice guidelines state that any person involved in or supervising the reprocessing of medical devices must at a minimum be certified in sterile processing practices by a recognized institution. In addition there must be documented annual core competency testing performed for all staff who reprocess medical devices (2). Despite these clear guidelines, clinics frequently add on the task of reprocessing to clinic nurses, attendants and administrative staff. The inevitable consequences of this are increased errors, practice breaches and potentially adverse patient outcomes.

3. *Absent or poor cleaning and disinfection/sterilization protocols.*
   In order to sterilize a device effectively it first must be rendered free of all gross soil. Having clear decontamination protocols is a critical component of reprocessing to assist staff in performing all recommended cleaning steps appropriately, especially for complex devices like endoscopes. Similarly, clear step-by-step disinfection or sterilization protocols are necessary. It is not unusual for us to either note a complete lack of written protocols or protocols that are too vague. Current, detailed and accessible policies and procedures ensure consistency in the cleaning and sterilization processes (1).

4. *Not enough instruments to meet the demand.*
   Not having an adequate inventory of instruments to support the clinic case load can put pressure on those doing the reprocessing. As a result corners are cut in the reprocessing cycle so the instrument can be returned to use quickly. Some examples of shortcuts we have seen are skipped cleaning steps, shortened high level disinfection (HLD) soak times, skipped leak tests for endoscopes, and poor preparation and packaging techniques for instruments deemed ready for sterilization, etc.

5. *Poorly designed reprocessing areas.*
   We have seen clinic layouts where patient procedures, instrument cleaning, disinfection, sterilization and sterile storage all occur in the same small examination room. Best practice indicates that there

should be a separate space for reprocessing that is clearly divided into dirty and clean areas as well as appropriate storage available for devices such as endoscopes (1). Poor layout can easily result in device cross-contamination or recontamination.

6. *Poor or absent documentation.*
It is common for clinics to have small tabletop sterilizers and not adequately document that the sterilization process has occurred. Many do not document the contents of each sterilization load nor record the results of biological indicator testing. Many of these sterilizers do not have the ability to produce a mechanical indicator strip which itemizes the time, temperature and pressure experienced in the sterilizer chamber during the cycle as is recommended (2). Clinics that use instruments sterilized in this fashion cannot be sure that the sterilization process has occurred without interruption or mechanical failure.

7. *Purchasing equipment without understanding the reprocessing requirements.*
The method of sterilization or reprocessing recommended by a device manufacturer is based on material compatibilities as well as device design and complexities. Equipment purchased to reprocess or sterilize these devices must be appropriate for the job. For example, rigid scopes require low temperature sterilization to maintain the integrity of the lens yet we have seen these devices put in steam sterilization cycles, a method of sterilization that was not validated by the manufacturer and may compromise device integrity. Clinics must be fully informed as to the reprocessing requirements when purchasing equipment.

8. *Occupational health and safety concerns.*
Many clinics submerge instruments in liquid chemicals such as glutaraldehyde to achieve high-level disinfection or sterility (depending on length of contact time). In theory this is appropriate; however, proper room ventilation must be provided to remove toxic vapours (2). In our experience such ventilation is frequently not provided in small clinic settings. Appropriate personal protective equipment must be provided when these types of chemicals are being used and includes masks, face shields, gowns, plastic aprons and chemical-resistant gloves (1). Often these protective measures are not put in place and as a result employees and patients are put at risk.

None of the above issues are particularly difficult to address when setting up a new clinic but some can be quite challenging to address once a clinic is up and running. Proper planning, training and quality assurance programs can prevent the frightening scenarios we have witnessed over the passed few years. We note that these issues are not unique to non-hospital based clinics: indeed, we have witnessed some of these breaches occurring in hospitals as well. In such circumstances, however, the breaches have typically occurred in clinical areas that do their own device reprocessing rather than send devices to a centralized reprocessing department. No matter where reprocessing occurs it is important for the healthcare community to recognize the importance of this specialized field and the level of attention required to ensure patient safety.

References:

[1]Canadian Standards Association. CAN/CSA Z314.0-13 Medical Device Reprocessing – General Requirements. Mississauga, Ont.: Canadian Standards Association; 2013.

[1]Ontario Agency for Health Protection and Promotion (Public Health Ontario). Provincial Infectious Diseases Advisory Committee. Best practices for cleaning, disinfection and sterilization of medical equipment/devices. 3rd ed. Toronto, ON: Queen's Printer for Ontario; May 2013. Available at: *http://www.publichealthontario.ca/en/eRepository/PIDAC_Cleaning_Disinection_and_Sterilization_2013.pdf*

1 in 20 hospitalized patients will contract an HAI.*

*Source: The Centers for Disease Control and Prevention.

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CHICA-CANADA online **novice infection prevention and control course**

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In September 2014, 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 2014-June 2015.

Student evaluation consists of online discussions, a final take-home exam, and may include assignments. Graduates will receive a certificate of completion from IPAC 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, 2014 and $850.00 due February 1, 2015. Tuition can be paid through post-dated 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 *chicabasicde@mymts.net*.

Completed application forms should be forwarded no later than **March 17, 2014.** 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.

Getting to know the new Environmental Hygiene Interest Group (EHIG)

An interview with Bruce Gamage and Mark Heller

By Josée Shymanski

Shymanski: CHICA formed a new interest group this year, the environmental hygiene interest group or EHIG. Bruce, can you share from the board's perspective how the group came to be? Why now?

Gamage: There is growing clinical evidence linking environmental hygiene to infection prevention and control. For many of the pathogens that cause outbreaks in healthcare settings, including C. *difficile*, MRSA, Norovirus, CRE, the environment plays a large role in the transmission between patients. There appears to be a growing gap between the clinical, risk management and patient safety expectations of the healthcare system and the ability of the environmental services industry to meet those expectations. In the past few years, many infection prevention and control professionals (ICPs) have taken on a leadership role within their facilities in ensuring that environmental services are able to address this gap. In several jurisdictions, guidelines for environmental services have been created and ICPs have the role of auditing cleaning practices. ICPs also have a key role in developing resources to be used in the education of environmental services workers.

It was recognized that many CHICA members have been looking for support in their role as liaison to environmental services in their facilities. The drive to form a special interest group was led by Mark Heller, a specialist in environmental services and a CHICA member. A proposal to form the interest group came was brought to the board at the November 2012 meeting. The board agreed to have a trial meeting of this group at the 2013 conference in Ottawa. There was tremendous support from the membership, with more than 40 members attending.

Shymanski: What is the mandate of this interest group?

Gamage: The mandate of this group is to support the sharing of best practice guidelines and information around research and development in this field. It also provides a venue for ICPs to learn more from their partners in environmental services about the challenges in delivering cleaning services. It will also provide opportunities to members to collaborate on the creation of tools and resources. Finally, it will raise awareness in the infection prevention and control community around the important role that environmental services play in the prevention and control of transmission of healthcare associated infections and our need to advocate for the enhancement of these services in the facilities we serve.

> "It was recognized that many CHICA members have been looking for support in their role as liaison to environmental services in their facilities."

Shymanski: Mark, you have been instrumental in getting this group together and it is easy to see that environmental hygiene is a topic that you are passionate about. Can you first explain the difference between environmental hygiene and environmental services?

Heller: Environmental hygiene describes the platform of science, technology, tasks, responsibilities related to the cleaning of the clinical environment in a healthcare facility and non-critical equipment. Today it is common to find many healthcare workers play a role in the hygiene program. Environmental services (aka, housekeeping) are a major contributor to the hygiene program, however, are not alone. It is not uncommon to find clinicians cleaning in specialized areas, such as operating suite, or providing after-hours coverage in emergency departments (not all healthcare facilities have 24/7 housekeeping staff). Specialized areas, such as facilities for food preparation, sterilization, and pharmacy preparation, will have their own environmental hygiene programs. It typically falls to infection prevention and control to ensure hygiene program in environments outside of the jurisdiction of environmental services are effective.

Shymanski: What has the group accomplished to date and what are the future plans?

Heller: Our new interest group was launched at the 2013 National CHICA Conference in Ottawa. The interest by CHICA members has been overwhelming and is a testament to the board's recognition

> "It is not uncommon to find clinicians cleaning in specialized areas, such as operating suite, or providing after-hours coverage in emergency departments."

of environmental hygiene is a strong concern by its members. We have been successful in establishing our first executive, including:

- Chair: Mark Heller
- Co-Chair: Natalie Bruce
- Recording Secretary: Suzanne Hydeman
- CJIC Liaison: Josée Shymanski

We have established a bi-monthly national conference call to engage our members in areas of concern and support. Already we are receiving questions and comments from CHICA members.

Our first priority has been the preparation and launch of a member Needs Assessment Survey (NAS). We are so thankful for the volunteer efforts of our NAS task force led by Christine Moussa, and including Carolyn Cooke, Salah Qutaishat, Natalie Bruce, Pamela Chalmers and I. Our NAS is designed to inform our interest group understanding of ICP priorities and shape our projects and priorities for the coming year(s). Our survey steering committee will present a summary of key findings as part of the next EHIG bi-monthly conference call, on November 12. Furthermore, we plan to provide a full analysis presentation at the 2014 Annual Conference in Halifax.

Shymanski: Who could benefit from participating in the interest group?

Heller: The Environmental Hygiene Interest Group (EHIG) is open to all CHICA – Canada members. Our target member, however, is the infection prevention and control professional who has responsibility to oversee environmental hygiene and/or support the work of environmental services teams.

We are receiving inquiries from across the spectrum of this sector; including environmental services leaders, hygiene technology and product manufactures. While we remind all members that our interest group will not endorse or recommend specific products or technologies, we welcome everyone with interest in improving access to resources, and building stronger hygiene oversight capabilities for ICPs.

Shymanski: Where can members find additional information about this interest group and the work that is being done by the group?

Heller: Our CHICA Web Master, Shirley McDonald, has done a great job ensuring the EHIG page on the CHICA website is up and full of great information; remember you need a member's password to access the interest group page. Once inside, you will find our terms of reference, foundational proposals, our meeting schedule, and contact information for the executive and meeting minutes.

Shymanski: Mark and Bruce, thank you for your dedication in getting this important group up and running and for kindly sharing this information with CHICA members.

To become a member of the interest group, CHICA members should contact the CHICA administrative office in Winnipeg; Kelli Wagner can assist you, she can be reached at chicaadmin@mymts.net, *or 204-488-5027.*

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[2] As of April 2012, STERRAD® 100NX and NX are cleared to process 10 stainless steel lumens per load. V-PRO maX is cleared to process 20 stainless steel lumens per load.

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A collaborative approach **to improve quality and patient safety**

The Central South Region of Ontario, also known as Hamilton Niagara Haldimand Brant (HNHB) Local Health Integrated Network (LHIN), employs a collaborative approach when administering health care to its diverse and aging population. A regional health care model is used to deliver care to 1.4 million people within the district, within 10 corporate hospitals at 22 sites with 13 emergency departments (ED) and 87 long-term care facilities.

The LHIN Emergency Services Steering Committee (ESSC) has worked closely with the Central South Infection Control Network (CSICN) and the infection prevention and control (IPAC) hospital managers over the past three years with a goal of IPAC best practices while improving wait-times and patient flow in regional emergency departments. CSICN/IPAC leaders and ED Directors from local area hospitals have reviewed and standardized practices between sites and offered continued support to stakeholders – such as ED Management, staff, physicians and IPAC practitioners – through a variety of initiatives including an annually cohosted workshop.

On October 9, 2013, the third ESSC IPAC Workshop was a success with 100 registered attendees from across the LIHN. Several key messages were the focus of the topics presented:

- EDs are the most common point of entry into hospitals. It is imperative that ED staff remain vigilant.
- Safe and appropriate bed management decisions are facilitated by a comprehensive patient assessment (including travel history and recent exposure to family members/individuals who have a recent travel hisotry to an endemic area), early specimen collection, and the use of IPAC decision-making tools.
- There is an emergence of new respiratory viruses, and rising numbers of antibiotic resistant organisms and C.difficile infections.
- Prepare for influenza season in advance (i.e., early staff immunizations and communication with the laboratory regarding the timely turnaround of testing results).
- The majority of facilities are juggling high occupancy, limited solutions for surge capacity, ED wait-times, and patient flow, with IPAC best practices.
- It has been noted that standardization of IPAC practices across the LHIN, compliance with best practices, and lab turnaround times have improved.
- Reliable IPAC resources are available and accessible to all levels of healthcare.
- Patient flow is a system wide problem and a continued collaborative approach is required to overcome healthcare challenges.
- Consider reaching out to other healthcare partners in the region for support.

Ongoing collaboration between IPAC and ESSC in the Central South Region is necessary to enhance communication and improve operational and patient care outcomes. Attendee evaluations were positive and reported that the forum allowed key stakeholders to share experiences, knowledge and creative strategies relating to bed management, early screening and diagnostics to achieve incremental improvements.

HANDIC members: Andrea Iacurti, Cindy O'Neill, Virginia Tirilis

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Donna Moralejo retires from the board

Dr. Donna Moralejo has completed her two terms as Director of Education. At a recent board meeting, President Bruce Gamage presented Donna with a plaque acknowledging her service to the association over the past six years. The board of CHICA-Canada thanks Donna for her strong support as a board member and specifically for her significant contributions to the education of ICPs and HCWs. Donna will continue as Chair of the Core Competencies for ICPs Working Group. Barbara Catt, RN, BScN, MEd, CIC has been appointed Interim Director to fill the vacancy left by Dr. Moralejo's departure. Her term will expire with the 2014 AGM elections.

2014 Virox Technologies Scholarship

Through the financial support of Virox Technologies, 13 CHICA-Canada members were awarded scholarships to attend the 2013 CHICA National Education conference in Ottawa. 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 2014 National Education conference in Halifax (May 25-28, 2014). The 2014 Virox Technologies Scholarship online application will be launched in November 2013. The deadline for applications is January 31, 2014.

VIROX TECHNOLOGIES INC. CHICA-CANADA

Diversey Education Bursary

CHICA-Canada and Diversey Inc. have collaborated on the establishment 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. With the need for increased funding for CHICA-Canada members to attend or participate in educational events, the sponsorship of this bursary by Diversey Inc. enhances 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 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."

The 2014 Diversey Education Bursary will be online in November 2013. The deadline date for applications is January 31, 2014.

Diversey for a cleaner, healthier future CHICA-CANADA

Bring in a **new member**

Win a complimentary 2014-2015 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, 2014, both you and the new CHICA-Canada member will be eligible to win a complimentary 2014-2015 membership (value $202). 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 2014-2015 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, 2014. An announcement of the winners of this offer will be made at the 2014 conference. Membership applications can be found at *http://www.chica.org/about_join.php*

New member name _____

Email address _____

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Email address _____

Send this form by fax or email to:
CHICA-Canada Membership Services Office | *chicacanada@mts.net* | Fax: 204-895-9595

2014 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.

YOU ARE INVITED to design a poster that will be used for Infection Control Week 2014 using the following theme:

Infection Prevention:

Staying ahead of the game

Prize: Waived registration to 2014 IPAC 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.

HOST CHAPTER: CHICA Ottawa Region

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 poster submission.

DEADLINE: January 31, 2014

CHICA-CANADA ECOLAB®

Position Search Announcement for **CLINICAL EDITOR**

The Canadian Journal of Infection Control (CJIC)
The official journal of Infection Prevention and Control Canada (IPAC Canada)

It is with regret that the Board of Directors, IPAC Canada, has accepted the resignation of Pat Piaskowski as Clinical Editor. We are now actively seeking a successor.

There are four issues of the journal published annually, each containing an editorial by the Clinical Editor. This position requires an average of four to six hours per week to accomplish the task. The individual seeking this position should have at least five years of current infection prevention and control experience as well as CIC certification. Previous experience producing, reviewing or authoring manuscripts is a definite asset. The individual seeking this position should be self-motivated and organized with excellent verbal and written communication skills. Knowledge of Excel and Word is essential. The Clinical Editor is responsible for coordinating the review of submitted manuscripts, publication agreements, and communicating with the lead author regarding the status of articles and/or revisions as well as review of final revised manuscripts and submission of final manuscripts to the publisher. The Clinical Editor works closely with the publisher (Craig Kelman and Associates) for scheduling and placement of final manuscripts and may be required to view and provide feedback on some advertising content. The Clinical Editor also chairs a *CJIC* meeting at the annual conference. Editorial board membership and recruitment is the responsibility of the editor with approval by the Board of Directors.

This is a volunteer position. The Clinical Editor is fully funded to attend the annual IPAC National Education Conference. Membership in the Council of Science Editors is provided.

The new Clinical Editor will assume full responsibilities effective September 1, 2014. However, the appointee will work with the current Clinical Editor in the development of the spring and summer 2014 issues of *CJIC*.

Please see policies 16.20-16.60 and 17.10 for Terms of Reference and other information.

All members of IPAC Canada who are interested in this challenging responsibility and rewarding opportunity in editorship are urged to submit their curriculum vitae to IPAC Canada to be received no later than **January 30, 2014**. Please forward by email to *chicacanada@mymts.net* or *info@ipac-canada.org* (after January 1, 2014).

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IN MEMORIAM

Thomas Dunn

Paramedic Thomas Dunn began his medical career in 1960. His distinguished commitment to public service spanned over 52 years throughout the United States of America, Canada, and abroad.

Tom first entered the U.S. Naval Corpsman program and served as a military medic on a Riverine Patrol Unit in Vietnam. In the years that followed, Tom worked for multiple paramedic services in the USA. On land, he served as an Advanced Care Paramedic and eventually earned additional education credentials to become a Critical Care Paramedic. In the air, Tom also spent time responding to emergencies by helicopter in Colorado.

Always seeking new challenges, Tom chose to serve in the Middle East as both a paramedic and a consultant where he provided the Kingdom of Saudi Arabia with expertise in setting up their first paramedic service. While on that mission, he was quick to acquire fluency in Arabic. For years, Tom would continue to surprise paramedics when he would strike up conversations with tourists or New Canadians who spoke Arabic during emergency calls.

In 1992, Tom accepted employment in Eastern Ontario with the St. Lawrence and District Ambulance Service. During this pre-amalgamation tenure he provided 911 emergency care to communities on the outskirts of Ottawa. Tom was eventually promoted to Assistant Manager with aspirations to become Manager before the provincial download took place.

Following amalgamation in 2001, Tom accepted a position with the Ottawa Paramedic Service and shortly thereafter took on the responsibility of Regulatory Compliance Officer. This very complex position entrusted Tom with many initiatives and responsibilities related to infection control. As part of this role, he joined CHICA and was one of the founding members of the Pre-Hospital interest (PHIG) group, where he helped to bring the infection control issues of the Emergency Services to the wider healthcare communities. He aided in the development of the PHIG position statement on cleaning and disinfection for emergency services. In partnership with his colleagues in the Pre-Hospital Working Group (PHWG), he created a sophisticated yet simple reference tool for the front-line staff of Ottawa Paramedic Service. His Paramedic Infection Control reference tool, Contact Forms and Exposure documents have been recognized by the Ontario Workplace Safety and Insurance Board. He had also recently joined the Ontario Association of Designated Officers (OADO) to continue supporting the IPAC agenda in emergency services closer to home. Tom was extremely committed to supporting his workers in all areas of occupational health and safety, especially infection prevention and control.

In September, Paramedic Superintendent Thomas Dunn was awarded the Governor General's EMS Exemplary Service Medal as he continued to serve one of the longest paramedic careers in Canada.

Tom had a way of talking with you that made you feel like you were the most important person in the room. He was deeply respectful of his colleagues, and took every opportunity to learn from those he considered experts in infection prevention and control. He could be adamant about his views when he felt that the front-line could be at risk, and was always passionate about what he was doing and his role in keeping his workers safe. The work mattered to Tom and his commitment to IPAC never wavered. The PHIG and the PHWG is privileged to have known Tom, and to have been able to work with him in helping to keep the front-line and their clients safe from communicable disease. He was a good man and we will miss him terribly.

He died on November 8, unexpectedly at home at 70 years of age. He is survived by his wife, Myra Menchetti, and two children.

$50 has been donated in Tom's name to both The Ottawa Paramedics' HELP fund and CHICA-Canada by the OADO and the PHWG.

This journal would not be possible without the advertising support of the following companies and organizations. Please think of them when you require a product or service. You can also access the electronic version at *www.chica.org*.

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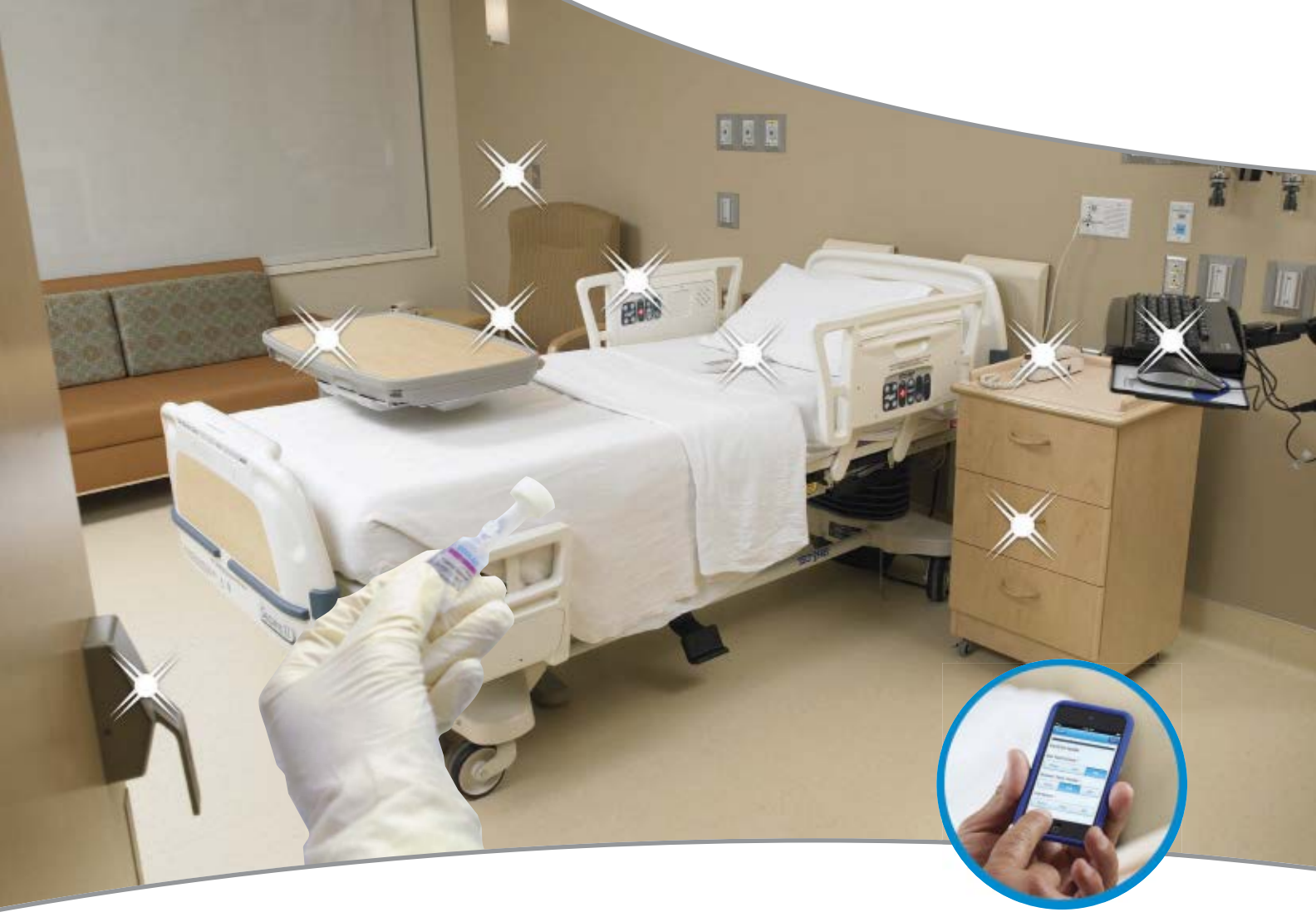

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