

The Canadian Journal of INFECTION CONTROL

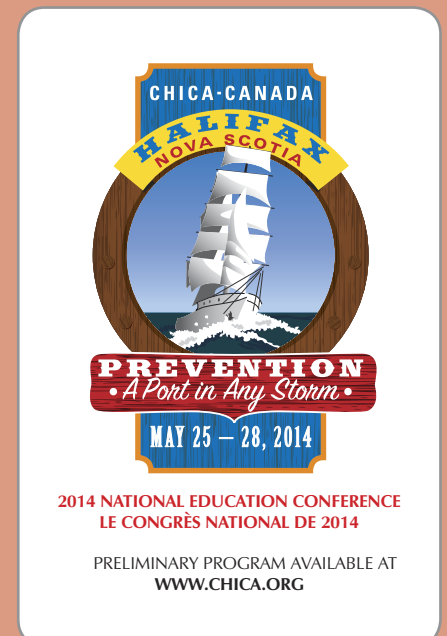
Revue canadienne de PRÉVENTION DES INFECTIONS

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

INSIDE:

Design and evaluation of an interactive online program to enhance retention of infection control skills

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Publications Mail Agreement #40065075

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

Subscriptions do not include online access to the journal. Members have online access to the current issue.

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Vol. 28 No. 2 Summer 2013

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

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ISSN - 1183 - 5702

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

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



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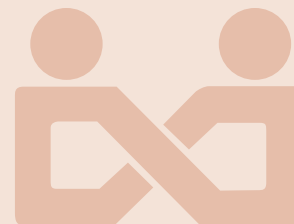
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Emotional intelligence (EI) in infection control professionals (ICPs)

A few years ago, psychologist and author Daniel Goleman first defined the term emotional intelligence in his New York Times best-selling book by the same title (1995 Bantam Books).

EI is the ability to recognize your emotions, understand what they are telling you, and realize how these emotions affect the people that you relate to and with. EI also involves realizing your perception of others and understanding how they feel.

More recently, management and leadership experts cite EI as essential qualities for leaders to help them succeed both professionally and personally. ICPs are leaders and developing their EI is another tool in assisting them to achieve positive impacts in the workplace. Whether working with management, staff or other departments, EI is an essential attribute for the ICP.



Using EI in the workplace enables ICPs to improve relationships with others and obtain their cooperation and collaboration to effect positive change. Whether improving hand hygiene compliance or promoting other infection prevention and control best practices, EI is an important quality for the ICP.

EI further expands on the balance between task and relationship in leadership. ICPs need to find the balance between the task side of leadership (getting the right job done at the right time in the right way) and

“ICPs are leaders and developing their EI is another tool in assisting them to achieve positive impacts in the workplace. Whether working with management, staff or whole departments, EI is an essential attribute for the ICP.”

the relationship side (understanding and working well with others). EI is a crucial aspect of building and sustaining positive workplace relationships

ICPs can rate their EI test by examining their responses to five key elements of EI:

Self-awareness

Am I self aware and do I understand my own emotions? Do I avoid letting my emotions rule how I feel? Do I work at controlling my emotions and recognizing my strengths and weaknesses? Do I trust my intuition?

Self-regulation

Do I think before I act? Am I comfortable with change? Do I have the ability to say no? Do I avoid getting angry or jealous at work? Can I be humble about my own success?

Motivation

Am I willing to defer immediate results for long-term success? Do I love a challenge? Am I able to produce change with and for others?

Empathy

Empathy is likely one of the most important elements of EI. Do I have the ability to identify with and understand

the needs, wants and ideas or viewpoints of others I work with? Do I truly listen when people tell me how they feel or what they want or perceive? Do I avoid judging or stereotyping people by which group they belong to, where they work or what they do?

Social skills

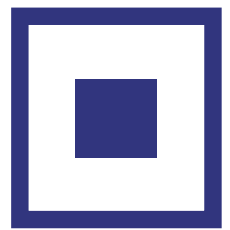
Am I truly a team player or am I focused more on individual success? Do I consistently recognize and encourage the skills of others and help them to grow and shine? Am I good at managing conflict and building and maintaining relationships at work relationships?

If an ICP can answer “yes” to the majority of questions then they likely have a high level of EI. For those who answer “yes” to some or a few of these self-reflective questions, there are a number of excellent resources available for developing and assessing their EI. There are many web based and print resources on the topic of EI that can be easily accessed by ICPs.

Relationships and EI are important in infection prevention and control and influencing and promoting best practices! http://www.mindtools.com/pages/article/newCDV_59.htm accessed July 10, 2013



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Design and evaluation of an interactive online program to enhance retention of infection control skills

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ABSTRACT

Training for use of personal protective equipment such as gloves, gowns and masks, often involves didactic methods with insufficient emphasis placed on physical practice. Additionally, practice is limited by the availability of space, time and experts to monitor sessions.

Unfortunately, procedural skills such as these are susceptible to decay when there are lengthy intervals between acquisition and clinical use that do not include sufficient practice. Computer-based programs and simulations for practicing technical clinical skills have been explored extensively in other healthcare disciplines, but there are few examples in infection prevention and control. To address the need for alternate practice opportunities, a simple interactive computer-based simulation was developed. As an initial study, novices were trained using an established online tutorial, after which a subset of the group practiced using the simulation. At the end of practice and one week later, all trainees underwent a test where they were asked to physically demonstrate their response to a mock clinical scenario. Changes in scores between end of practice and one-week retention suggest that the simulation is useful for enhancing skill retention. Further research and development is required to fully characterize the utility of the simulation for maintaining personal protective equipment skills after practice.

KEY WORDS:

Clinical skill, Psychomotor performance, Practice, Retention, Personal protective equipment, computer

Acknowledgements

HC is supported by the BMO Chair in Health Professions Education and a grant from the Natural Sciences and

Engineering Research Council of Canada. The authors would like to thank Cathy Egan, Liz Van Horne, Heidi Schweltnus and M. Shone Joos for their input during the development of simulation scenarios.

INTRODUCTION

Use of personal protective equipment (PPE) – gloves, gowns, masks, and goggles – is one of many important infection prevention and control (IPC) measures in healthcare. Training of healthcare workers (HCWs) for IPC usually involves some combination of lecture-delivered material and demonstrations. While it is assumed that these methods are sufficient for transferring the required skills, it is clear from the statistics of healthcare-associated infections (1-3) that gaps remain in knowledge and practice. PPE skills, which have both cognitive and motor performance elements, require practice for effective acquisition and maintenance of proficiency (4). The effects of poorly retained skills are especially dangerous in emergency situations when chances of transmitting infections increase, and there may be insufficient time or resources to provide refresher training.

There have been efforts to diversify the format of training programs as well as increase the effectiveness and accessibility of programs since HCWs are often challenged for time. For example, the Southwestern Ontario Regional Infection Control Network (Ontario, Canada) developed a video titled *The Grand Prix of PPE – What to Wear in Long-Term Care* that takes a humorous approach to teaching the basics of using PPE (5). In comparison, the Ottawa Hospital (Ontario, Canada) launched a program that included verbal explanations, demonstrations and return demonstrations, videos, individual feedback and positive reinforcement (6). Measures of

success, including short-term retention of information and self-reported utility, were positive. However, such a program is time, space and labour intensive, especially if undertaken by a large facility for all HCWs.

In response to demands for safer and more accessible supplements to health professions education, computer-based instruction and simulation have emerged as viable options. Computer-based instruction may include the translation of textbooks to electronic format, tutorials for specific subjects, quizzing software, or simulations and study guides (7). Proponents of electronic learning argue that tangible gains in learning and performance will be achieved when electronic media are utilized to create experiential learning spaces (8). However, many computer-based programs may be only electronic reproductions of traditional classroom content, which may not lead to improved acquisition or retention (8).

From a theoretical perspective, simulation moves the learning experience closer to the top of Miller's pyramid in his framework of clinical assessment (Figure 1; 9) where users are forced to elevate their skill level from simply knowing or knowing how to showing how (performance). A recent survey showed that medical students were amenable to the idea of enhancing their education using technology such as video games and believed that educators should utilize new media technologies more effectively (10). Computer-based simulations have been shown to be more effective than textbook-only studying for advanced cardiac life support (11), studying with a handout for anaesthetic emergencies (12) and is also effective for reducing errors in performing knee replacement surgery on bone models (13). In the field of IPC, a virtual simulation of care for an isolated patient with an antibiotic-resistant microorganism was developed (14). Pilot studies with this simulation received positive feedback for connecting IPC theory to clinical practice as well as enjoyment.

Collectively, these studies indicate that there is evidence of the utility of computer-based simulations in health professions education. However, there

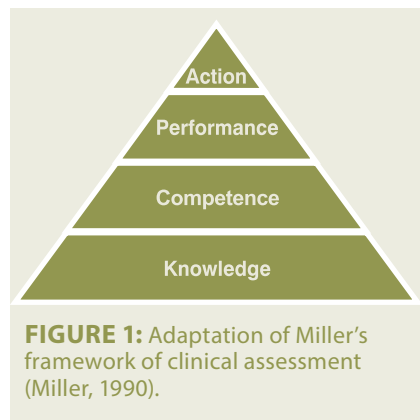


FIGURE 1: Adaptation of Miller's framework of clinical assessment (Miller, 1990).

are few examples in IPC and many of the reports are incomplete with regards to development of the instructional program or effectiveness of skills transfer and retention. To address the need for accessible, experiential practice of PPE skills, we proposed the development of a simple, interactive, computer-based simulation. Our objectives were:

1. Develop a proof-of-concept computer-based simulation that allows users to practise PPE skills.
2. Conduct a preliminary assessment to identify any change in skill retention or learner satisfaction when an initial training program includes the simulation.

We describe design considerations, the design process and the final simulation as well as methods used to evaluate the simulation. Finally, we outline results of these evaluations and discuss how the results may impact training in IPC.

METHODS

Design and development of simulation

Using PPE is a complex skill involving both cognitive and motor skills. Based on findings from a Delphi survey (15) and existing guidelines for PPE use, the skill was organized into three major tasks: selection of the correct items for the clinical task and environment; handling the items carefully, including correctly donning and doffing; and using items in the correct sequence to prevent contamination. Since selection and sequencing depend on the clinical scenario, this skill was classified as an open, procedural skill and we looked to the motor learning literature for optimal practice princi-

ples to maximize retention of skills that involve a level of uncertainty and include multiple discrete segments.

Motor learning is defined as a relatively permanent change in behaviour or the capacity to perform a skill. Importantly, this definition implies that the skill is retained over a period of time (16). The two most important variables for the facilitation of the skill learning process are practice and feedback. The Challenge Point framework suggests that how well a performer retains a skill is related to the amount of information available during practice. In order to constantly challenge the learner by gradually providing more information, the practice conditions should be altered to increase the difficulty of the task as learning progresses (17). It has also been shown that task complexity (number of task segments) and task organization (interrelationships between task segments) interact to affect the efficiency of training (18). These interactions suggest that high complexity and low organization tasks, such as using PPE, will benefit from part-task training, which breaks the task into several subtasks. Combining these principles, we designed the simulation with practice conditions that had gradually increasing task difficulty and provided independent practise of subtasks.

Feedback can provide goal-oriented information (e.g., whether item selection is correct) or process-oriented information about performance (e.g., description of handling errors). The simulation was designed to include both types of feedback.

Description of the simulation

Cover Up is a two-dimensional interactive computer-based simulation where users must follow routine precautions for using PPE in the context of performing clinical tasks (<http://www.ot.utoronto.ca/coverup/login.php>). The user progresses through three levels (called floors) to practice handling, selection and sequencing of PPE when presented with a series of clinical scenarios. Since the simulation is currently geared toward junior trainees, the scenarios cover a wide range of clinical tasks in various fields (e.g., nursing, medicine and rehabilitation).

Each scenario consists of a brief statement describing a patient's condition and a clinical task to be performed. We consulted a variety of sources including online resources, return demonstrations from a local hospital, and provincial and federal guidelines to develop the scenarios. For each scenario, an answer key and difficulty level were outlined and then reviewed iteratively by healthcare professionals for accuracy and face validity.

The feedback and scoring system includes both positive and negative scoring with the goal of making the simulation both realistic and challenging (e.g., one opportunity to complete each scenario) as well as encouraging repeated use (e.g., knowledge of results and points).

Performance on each floor determines whether the user advances through the game and previous users can start the simulation from any of the floors to bypass content that they have mastered. High scores are displayed on the main page, which may encourage a modest level of competition. Administrators can access session logs containing detailed information about users' performance through the web interface or download the data, which can be viewed with spreadsheet software.

Evaluation of simulation for skill retention

Participants and procedures. The institutional Research Ethics Board approved the study protocol. Twenty-one individuals from the University of Toronto community (7 males, 14 females; mean age 27.6 years) participated in the evaluative study. All provided voluntary informed consent before participating in accordance with the guidelines set out by the 1964 Declaration of Helsinki and the institutional Office of Research Ethics. The data presented here are a subset of data collected for a larger study, which included validation of a novel tool for assessing PPE skills and is reported elsewhere (15).

All participants had minimal or no previous training for using PPE and underwent a training regimen consisting of three parts: (i) using an online tutorial – the Core Competency Education modules for hand hygiene and routine practices (Tut) for up to 40 minutes (19,

20); (ii) physically demonstrating the selection, donning and doffing of PPE in response to a mock clinical scenario described verbally by the experimenter; and (iii) a 20-minute review period. For the review period, participants were assigned to one of two groups. One group was allowed to review the material by using the online tutorial (Tutorial only [Tut/Tut], $n=10$) while the second group was allowed to use the simulation (Tutorial then simulation [Tut/Sim], $n=11$). The length of time that participants used the tutorial or simulation during this period was recorded. Participants also had the opportunity to ask questions and obtain feedback about their performance on the practice scenario. At the end of the review period, all participants performed a post-practice test in which they were videotaped while asked to physically select, don and doff PPE in response to a mock clinical scenario (different from the practice scenario). Since a retention test is the best way to gain insight into the permanence of behavioural changes after a training program (i.e., skill retention), all participants returned one week later and responded to the same mock scenario used in the post-practice test, which was videotaped.

After the retention test, participants completed a satisfaction survey about the program(s) used: the Tut/Tut group completed a survey for the online tutorial while the Tut/Sim group completed two surveys – one for each of the online tutorial and simulation, respectively. The survey consisted of 10 statements and asked users to rate their agreement with each statement on a scale from 1 (strongly disagree) to 5 (strongly agree).

Two expert observers, blinded to the users' group assignment, reviewed the randomized videotaped performances. Each performance was scored using a novel assessment tool (15) in each of four categories: hand hygiene; donning, which encompassed selection, handling and sequencing; doffing, which encompassed handling and sequencing; and global rating to account for holistic performance indicators. For the scenario used, the maximum scores on hand hygiene, donning, doffing and global rating were 4, 51, 36 and 20 respectively.

Data analysis. Time spent using the assigned computer program was compared for the two groups using a one-way analysis of variance (ANOVA) with group (Tut/Tut, Tut/Sim) as a between-subjects factor. To assess skill retention after one week, we calculated a difference score for each participant in each performance category by subtracting the score at the end of practice from that obtained at retention test. These difference scores were subjected to a one-way ANOVA with group as a between-subjects factor. To assess learner satisfaction for the online tutorial, we performed a Mann-Whitney test (independent samples, non-parametric test) with group as a between-subjects factor. We also assessed differences in the ratings that the Tut/Sim group provided for the two programs using a Wilcoxon signed-rank test (related samples, non-parametric test) on this group's ratings with program (Tutorial/Simulation) as a related condition.

Results were considered statistically significant at $p < .05$. To help determine the importance of any observed effects, effect sizes were calculated using Pearson's r for both parametric and non-parametric tests (21). Effects were considered to be small, medium and large if their effect sizes were approximately .10, .30 and .50 respectively.

RESULTS

Skill retention after one week

As shown in Figure 2, for hand hygiene, donning and global rating the Tut/Tut group's scores decreased while the Tut/Sim group's scores increased. The analysis of scores revealed that there were significant differences between groups in the change in performance scores for hand hygiene $F(1, 19) = 4.62$, $p < .05$, $r = .44$, and donning $F(1, 19) = 5.34$, $p < .05$, $r = .47$, while the difference was marginally significant for global rating scores, $F(1, 19) = 3.05$, $p < .1$, $r = .37$. For doffing, scores for both groups decreased with the decrement being larger for the Tut/Tut group than for the Tut/Sim group, $F(1, 19) = 0.39$, $p > .05$, $r = .14$ (see Figure 2).

Learner engagement and satisfaction

Use of the online programs (tutorial and simulation) during the review period differed significantly between the groups. The Tut/Sim group, used the simulation during this time for a longer period ($M = 20$ min, $SEM = 0$, the maximum time allowed), while the Tut/Tut group went back to the tutorial for only a brief period ($M = 5.2$ min, $SEM = 3.3$ min), $F(1, 19) = 218.9$, $p < 0.001$, $r = 0.96$.

The Mann-Whitney test on survey responses for the online tutorial revealed that there were significant differences between groups for two statements. As shown in Table 1, the Tut/Tut group agreed more strongly than the Tut/Sim group for statement 7 regarding constructiveness of feedback, $U = 26.5$, $z = -2.12$, $p < .05$, $r = -0.46$, and statement 9 regarding confidence in knowledge and skills, $U = 32.5$, $z = -1.90$, $p < .05$, $r = -0.41$. The Wilcoxon signed-rank test on the Tut/Sim group's ratings revealed that ratings for the tutorial ($Mdn = 4$) were significantly higher than for the simulation ($Mdn = 3$) on statement 2 regarding sufficiency of information for direction and encouragement, $T = 5$, $p < .05$, $r = -0.45$.

DISCUSSION

The primary purpose of this study was to develop and evaluate an interactive simulation that is beneficial for practicing PPE skills in order to enhance the retention of skills over a period without experiential practice. The simulation allows users to practice PPE skills in stages: handling PPE then selecting and sequencing PPE in response to clinical scenarios and finally, performing all three aspects of the task. The design process incorporated principles of skill learning such as appropriate practice conditions and feedback in order to align the needs of the users with the information and challenges presented by the simulation.

Analyses to evaluate the retention of skills after training indicated that, across all performance categories, those who practised with both the tutorial and simulation experienced increased scores or smaller reductions in scores after one

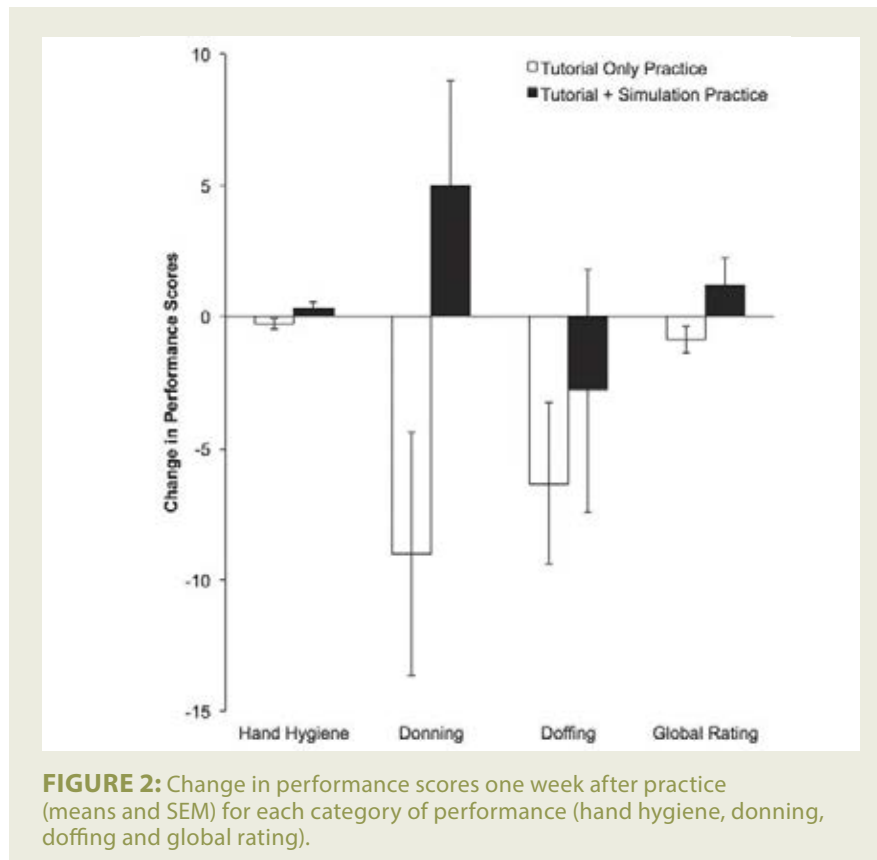


FIGURE 2: Change in performance scores one week after practice (means and SEM) for each category of performance (hand hygiene, donning, doffing and global rating).

week without practice. Even though the differences between groups were only statistically significant for hand hygiene and donning, the medium to large effect sizes for hand hygiene, donning and global rating scores suggest that these are all important effects, warranting further study. A larger sample size may be required to obtain stronger evidence (statistical significance) for the effect of simulation practice on global rating scores.

We measured the time spent using the assigned program during the review period and administered a survey after the retention test to analyse user engagement and satisfaction. During the review period, users assigned to the simulation used it for 20 min., while users assigned to the tutorial used it for only five min. This suggests that users were more interested and engaged in practice when presented with the simulation after initial instruction with the tutorial. It is unclear at this point, whether engagement was due to the novelty of the simulation or its design and content. Longer practice time for the group that used the simulation may also explain the enhanced retention seen with this group, as it is known

that practice is required for retention of procedural skills. Further studies would be required to control for time spent and engagement with different practice programs to tease these two issues apart.

Results of the learner satisfaction survey indicated that, depending on their group, learners rated the tutorial differently on the constructiveness of feedback and their confidence in skill development. We believe that exposure to the challenges of the simulation allowed users to gain a new perspective on how the skills might be used in the clinical environment and enabled them to be more critical of the learning programs (statement 7) and more realistic about judging their own abilities (statement 9). Users in the Tut/Sim group rated the simulation as comparable to the established MOHLTC modules with the exception of the amount of information provided at the beginning to direct and encourage the learner (statement 2). It is possible that the simulation was lacking in directional information and the users' ratings simply reflected this. Users may have also misinterpreted the intention of the simulation, expecting it to be *similar* to the MOHLTC modules,

a replacement perhaps that would be instructive, as opposed to practice-oriented. Together with the results of the performance evaluations, these results suggest that further studies must be done to discover the optimal simulation features to maintain proficiency of trainees at various stages.

We also acknowledge that there are limitations of the simulation design. First, the simulation currently provides limited interactivity with the environment, other HCWs and patients, which probably decreases the cognitive authenticity that supports deep learning (22). As such, users were unable to explore the ultimate results of their actions and related tasks, such as waste disposal and maintenance of the patient environment, were not practised. Second, users were not able to work through the scenarios using dialogues or discussions with peers or preceptors and there were no links to supporting information embedded within the simulation. Third, in this first iteration, the simulation was designed for users with different backgrounds and so contained

relatively simple scenarios. This limits the utility of the program (in its current state) for more experienced HCWs.

Our current study design has limitations with respect to the sample size, retention period and sample demographics. In order to generalize the simulation and findings of effectiveness, future studies must involve more users (larger sample size), test long-term performance after clinically relevant time periods (weeks and months) as well as include users with field-specific experience. This may require that the simulation be embedded within an existing training program and that the content of the simulation be revised for specific groups of healthcare professionals.

Additionally, there could be an optional tutorial or instructional portion for less experienced users. This would also allow the inclusion of more detailed and contextually rich scenarios, which may enhance the fidelity of the simulation as well as skill retention. Future iterations should also take full advantage of the experiential

learning experience that this medium can provide by utilizing a more holistic simulation of the clinical environment instead of independent scenarios.


In summary, we created a proof-of-concept simulation to demonstrate how skill characteristics may be used to direct the development of an interactive simulation to provide practice and encourage retention of a procedural skill. Learners rated the simulation comparable to a provincial web-based educational tutorial but would have liked the simulation to provide more guidance to direct learning at the outset. Our analyses also showed that learners using the simulation during practice had better retention of hand hygiene, donning and global skills one week after initial training and practice. While further research and development are required before this simulation can be implemented into training programs, this study has demonstrated that an online simulation can be useful for short-term retention of procedural skills that usually require physical practice. 

TABLE 1: Median and mean ratings of agreement with statements on the learner satisfaction survey for the Ministry of Health and Long-Term Care online tutorial and the newly developed simulation.

Statement	Tut/Tut Group		Tut/Sim Group			
	Tutorial Mdn	Mean	Tutorial Mdn	Mean	Simulation Mdn	Mean
1 I clearly understood the purpose and objectives of the learning tool.	5	4.7	4	4.5	4	4.2
2 There was enough information provided by the learning tool at the beginning to provide direction and encouragement. **	4	4.2	4	4.2	3	3.2
3 The learning tool motivated me to learn.	4	3.6	4	3.5	4	3.9
4 Real life factors, situations and variables were built into the learning tool scenarios.	4	3.8	4	3.4	4	4.0
5 The learning tool provided clear and adequate information for me to complete the tasks/answer and question/problem-solve the situations.	4	4.0	4	3.7	3	3.2
6 The learning tool was appropriate for my specific level of knowledge and skills.	4	4.0	4	3.8	4	3.6
7 Feedback provided by the learning tool was constructive. *	4	4.2	3	3.3	3	3.1
8 The learning tool provided feedback in a timely manner.	4	3.9	4	4.2	4	4.0
9 I am confident that I am developing the skills and obtaining the knowledge presented to me in this learning tool. *	4	4.3	4	3.8	4	3.8
10 I would recommend this learning tool to others who need to learn this skill.	4	4.2	4	3.6	4	3.6

NOTE: Mdn represents the median ratings for the indicated group (Tut/Tut = Tutorial only, Tut/Sim = Tutorial and Simulation) and program (tutorial or simulation). * Ratings for the tutorial program were significantly different *between groups* at $p < .05$. ** Ratings from the Tut/Sim group were significantly different *between programs* at $p < .05$.

REFERENCES

1. Carrico RM, Rebmann T, English JF, Mackey J, Cronin SN. Infection prevention and control competencies for hospital-based health care personnel. *Am J Infect Control* 2008; 36:691-701.
2. Jenner EA, Wilson JA. Educating the infection control team – past, present and future. *A British perspective. J Hosp Infect* 2000; 46:96-105.
3. Zoutman DE, Ford BD, Bryce E, et al. The state of infection surveillance and control in Canadian acute care hospitals. *Am J Infect Control* 2003; 31:266-272.
4. Arthur W Jr, Bennett W Jr, Stanush PL, McNelly TL. Factors that influence skill decay and retention: A quantitative review and analysis. *Hum Perform* 1998; 11:57-101.
5. Southwestern Ontario Regional Infection Control Network. The Grand Prix of PPE. Ontario: Ragtop Productions, Inc. 2009.
6. Bruneau M, Bruce N, Roth VR (Abst) A Success Story: Personal Protective Equipment (PPE) Training. Proceedings of the CHICA National Education Conference, *Can J Infect Control* 2008; 23:46.
7. Mooney GA, Bligh JG. CyberIST: A virtual game for medical education. *Med Teach* 1998; 20:212-216.
8. Squire KD. Video game-based learning: An emerging paradigm for instruction. *Perform Improv Q* 2008; 21(2):7-36.
9. Miller GE. The Assessment of Clinical Skills/Competence/Performance. *Acad Med* 1990; 65:S63.
10. Kron FW, Gjerde CL, Sen A, Fetters MD. Medical student attitudes toward video games and related new media technologies in medical education. *BMC Med Educ* 2010; 10:50.
11. Schwid HA, Rooke GA, Ross BK, Sivarajan M. Use of a computerized advanced cardiac life support simulator improves retention of advanced cardiac life support guidelines better than a textbook review. *Crit Care Med* 1999; 27:821-824.
12. Schwid HA, Rooke GA, Michalowski P, Ross BK. Screen-based anesthesia simulation with debriefing improves performance in a mannequin-based anesthesia simulator. *Teach Learn Med* 2001; 13:92-96.
13. Gunther SB, Soto GE, Colman WW. Interactive computer simulations of knee-replacement surgery. *Acad Med* 2002; 77:753-754.
14. Pulman A, Shufflebottom M. A Virtual Infection Control Simulation – The Development of a Serious Game in the Health Care Sector. Proceedings of the Serious Games on the Move. Cambridge, England: INSPIRE 2009:97-105.
15. Williams, C, Carnahan, H. Development and Validation of Tools for Assessing Use of Personal Protective Equipment in Healthcare. *Am J Infect Control*, 41: 28-32. doi: 10.1016/j.ajic.2012.01.027
16. Schmidt RA, Lee TD. Motor control and learning, 5th ed. Champaign: Human Kinetics 2011.
17. Guadagnoli MA, Lee TD. Challenge Point: A Framework for Conceptualizing the Effects of Various Practice Conditions in Motor Learning. *J Motor Behav* 2004; 36:212-224.
18. Naylor JC, Briggs GE. Effects of task complexity and task organization on the relative efficiency of part and whole training methods. *J Exp Psychol* 1963; 65:217-224.
19. Ontario Ministry of Health and Long-term Care. Infection Prevention and Control Core Competency Education for all HealthCare Providers – The First Three Acute Care Modules. 2007. Available at: <http://www.ontla.on.ca/library/repository/mon/18000/275642.pdf>.
20. Ontario Ministry of Health and Long-term Care. Infection Prevention and Control Core Competency Education Modules. 2007. Last accessed June 2010 at: http://www.health.gov.on.ca/english/providers/program/infectious/infect_prevent/ipccce_ref.html.
21. Field AP. Discovering statistics using SPSS (and sex and drugs and rock 'n' roll), 3rd ed. London: SAGE 2009:57, 550.
22. Squires D, Preece J. Predicting quality in educational software. *Interact Comput* 1999; 11:467-483.

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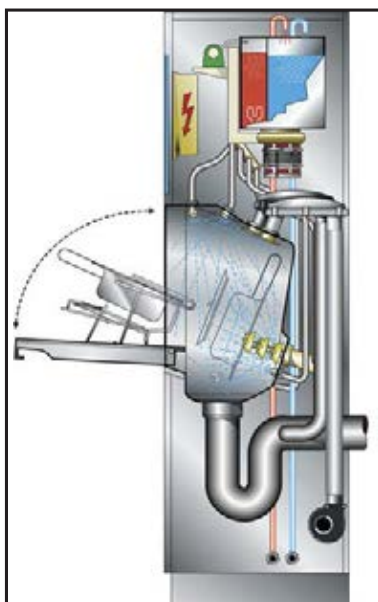
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Factors limiting the usage of personal protective equipment in a tertiary-care hospital

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ABSTRACT

Objective

Personal protective equipment (PPE) remains one of the cornerstones of standard precautions also known as Routine Practices. However, despite being one of the most important preventive measures for infection control it is often neglected by the health care personnel (HCP). The present study evaluated the compliance of HCP with use of PPE and the limiting factors affecting PPE usage in order to develop remedial measures for improving the compliance with use of PPE.

Methods

A structured questionnaire was distributed to the HCP to assess their practice regarding usage of PPE. The questionnaire also included various individual and organizational factors affecting the compliance of these HCP towards PPE.

Results

The mean age of the study group was 33.7 years and the male: female ratio was 1:1.4 (31:74). The compliance of usage of PPE by HCP was only 54%. The important factor leading to compliance was individual's own motivation (97.1%). The major factor hindering the compliance was the availability of PPE. The other limiting factors observed were understaffing (47.1%), inconvenience in usage of PPE (35.2%) and interference with patient care (26.2%).

Conclusion

The study highlighted the gaps in knowledge and adherence levels for recommended PPE. A combined facility wide programme involving the individual and the organization can improve the compliance of the HCP for use of PPE.

KEY WORDS:

Personal protective equipment, health care personnels, limiting factors

INTRODUCTION

Adherence to standard precaution (SP) also commonly known as Routine Practices (RP) is the most important approach in infection control (1). Appropriate usage of personal protective equipment (PPE) is one of the strongest pillars of Routine Practices. Personal protective equipment, if used effectively and correctly, tremendously reduces the risk of acquiring and transmitting health care associated infections.

Unfortunately, adherence to PPE usage is often the last line of defense against exposure to infection. Quality improvement of RP indicates that although PPE are available and the staff is increasingly aware of the need to protect themselves, compliance to RP remains inconsistent (2,3,4,5).

The various factors responsible for health care personnel's adherence to RP and other infection control practices are either administrative or individual related (5,6,7). Many studies have highlighted factors such as stock irregularity or non-availability of PPE at the right time and the right place, lack of awareness of its use, a sense of wasting of time while donning PPE and shortage of staff for the non-compliance for use of PPE by HCP (5,6,7). Many of these problems can be overcome by proper education and administrative support (5,8,9).

There are limited studies from India regarding the compliance of usage of PPE in HCP. The present study was undertaken to explore the practice patterns of HCP for PPE usage and the limiting factors that lead to compromise in its compliance by the HCP. This would provide valuable support for improving infection control measures.

METHODS

The study was performed in a tertiary care referral hospital from August 2009 to March 2010. A voluntary anonymous survey was distributed to critical care providers, faculty, residents, medical assistants, staff and registered nurses working in the intensive care units (ICU), operation theatres (OT) and wards of the hospital.

The survey questionnaire was distributed to all HCP during regularly scheduled infection control rounds and educational sessions. The questionnaire was completed by the HCP and collected on the same day. Incomplete questionnaires were rejected and only complete questionnaires used for final analysis. Two hundred and ten HCP who completed the questionnaire were finally included in the study.

The survey collected demographic data on respondent's characteristics, which included age, sex, marital status, professional qualification and years of experience in the hospital. The study groups were determined based on no standard protocols but rather according to their designation and the area where they worked in the hospital. The areas were either low risk area (HCP posted in wards), moderate risk area (HCP posted in medical intensive care units, ICUs) or high risk area (HCP in Surgical ICUs and Operation theatres, OTs). The risk areas were determined based on the disease severity of the patients admitted to the hospital. Respondents were given seven situations in which they were asked to identify the PPE (which included gloves, gowns, masks and eye wear) they thought should be used. The situations included insertion of central line, endotracheal tube, Foley catheter, control of major splash of blood, cleaning of incontinent patients, delivery of oral medicines to the patients and measuring the blood pressure of patients. This was done to ascertain their knowledge regarding the usage of PPE. The respondents responded by putting a tick mark on the option that was correct and a cross mark on the option that was incorrect. The guidelines issued by National AIDS control organization (NACO) was taken as reference to compare the knowledge of the HCP regard-

ing the use of recommended PPE. The answers that matched the recommended guidelines received a score of one and all other answers including the unanswered questions were given a score of zero.

The respondents were also asked to identify which PPE they actually use during the same seven situations. This was done to assess the practice pattern of these HCP. The answers were marked as always, often, sometimes, rarely and never. Response score was either one or zero. If the HCP used the PPE, "always or often" they were given a score of one and other responses (sometimes, rarely and never) were given zero. This was not compared with any recommended guidelines.

The HCP were further required to grade the availability of the PPE in their wards on a scale of 4 (Always: 1; Often: 2; Sometimes: 3; Never: 4). Availability

of PPE was the ease with which the HCP could obtain PPE when they were to enter the designated area or perform a task. Availability included whether the PPE were kept at the nursing counter and HCP had easy access or they had to wait outside the area until a staff would make it available for them on demand. If the PPE was available always or often, a score of one (1) was given otherwise a score of zero was given. This was done to correlate the practice of the HCP with the availability of the PPE in their wards.

Respondents were asked about the management's attitude towards PPE use and their own role regarding the infection control practices including PPE usage for the purpose of their own safety and infection control in their hospital.

The data was analyzed using *Statistical Package for the Social Sciences (SPSS)* for

TABLE 1: Overall demographic profile of the study group

Characteristics	Number/Mean	Percentage
Mean years of work experience in the hospital	9.64 ± 9.47 (range: 0.2- 34)	
Designation		
Staff nurse	122	58.1
Nursing supervisor	35	16.7
Residents	12	5.7
Faculty	36	17.1
Ancillary staff	5	2.4
Area of posting		
Low risk area	100	47.6
Moderate risk area	64	30.5
High risk area	46	21.9
Mean age of the respondents in years	33.7 ± 9.85 (range: 21-58)	
Gender		
Females	148	70.5
Males	62	29.5
Marital status		
Married	138	65.7
Unmarried	72	34.3

TABLE 2: Compliance of the study group for PPE usage

	Gloves N (%)	Gown N (%)	Mask N (%)	Eye wear N (%)
Central line placement	207 (98.6)	123 (58.6)	163 (77.3)	19 (9)
Endotracheal intubation	210 (100)	94 (44.8)	191 (91)	19(9)
Inserting a nasogastric tube	208 (99)	41 (19.5)	159 (75.7)	11 (5.2)
Oral/ nasal pharyngeal suctioning	209 (99.5)	63 (30)	184 (87.6)	15 (7.1)
Foleys catheter insertion	210 (100)	43 (20.5)	158 (75.2)	7 (3.3)
Control of major bleeding	210 (100)	146 (66.7)	178 (84.8)	39 (18.6)
Overall compliance	209 (99.5)	35 (16.7)	152 (72.4)	8 (3.8)

Windows version 16.0. Various statistical tests used were a simple frequency table, chi square test, Fischer's exact t test for significance and odd's ratio with 95% confidence interval.

RESULTS

The present study included 210 health care personnels comprising of staff nurse, nursing supervisor, residents, faculty and ancillary staff such as technicians or nursing orderlies. The demographic characteristics of the study group are shown in table 1.

The mean age of the study group was 33.7 years and the mean years of work experience was over nine years. Female respondents (70.5%) dominated the study group.

A set of procedures for which a particular PPE usage was required were delineated in the study and the compliance of the study group for that procedure was ascertained (table 2).

It was observed that gloves were the most frequent PPE used followed by masks. Eyewear was the PPE that was neglected in most cases. It was not used in almost 96 percent of the procedures. Gowns were not used in more than 80 percent of the procedures.

In the present study, the overall compliance for PPE usage was significantly higher in the moderate and high-risk areas (table 3). The staff posted in the

low risk area was more often found to neglect the necessary PPE to be used. The compliance for glove usage was not statistically significant (p value > 0.5) in any of the risk areas while in case of gowns and masks usage, the difference was statistically significant (p value < 0.5). The HCP working in the high and moderate risk areas used gloves and masks more often than HCP working in the low risk areas.

The odds of using PPE were much higher if they are readily available (table 4). The odds of using gloves were 4 times higher if they were readily available as compared to their non-availability. Similarly the odds of using eye were almost 24 times higher if they were readily available. The odds of using gowns were 4 times higher while mask usage were almost twice as high if they were readily available. This finding also emphasis the fact that at most places eye wear was not easily available.

It was observed that ready availability ensured PPE usage in over 95% of cases (table 5). About 11% of the HCP wore PPE because of the fear of the senior staff. The HCP felt that shortage of staff was a major factor hindering their compliance for PPE usage.

Almost 30% HCP felt that the recommended PPE usage caused discomfort to them and also interfered with patient care, while 16 percent of HCP felt that PPE usage was a waste of time. HIV

positive status of the patient was the most important factor which motivated them to use PPE as seen in 95% cases.

DISCUSSION

This study group comprised of approximately 70% females and 30% males. The majority of the staff was young, the mean age of the study group was 33.7 years and mean years of experience was 9.6 years.

The present study highlighted the gaps in knowledge and adherence to recommended personal protective equipment amongst all types of HCP. In spite of the HCPs' awareness, the compliance was uniformly poor (54 %). Other studies have also reported a similar finding that knowledge did not have direct relationship in improving the compliance of HCP (2,3,4). Nevertheless, it remains one of the most important prerequisite for improving practice by the HCP. This study reiterates the finding that in addition to increasing the awareness levels of HCP other factors should also be considered for improving their compliance.

Gloves were the most frequently used PPE (99%) in our health care setting followed by masks (72.4%). Though over usage of PPE may lead to unnecessary wastage of resources, it is still considered to be better than under usage for containment of health care acquired infections. However the fact that HCP should

TABLE 3: Compliance of the study group as per their area of posting

	Low risk N (%)	Moderate risk N (%)	High risk N (%)	P value
Gloves	99 (99)	64 (100)	46 (100)	0.575
Gown	14 (14)	18 (28.1)	12 (26.1)	0.007
Masks	63 (63)	49 (76.6)	40 (87)	0.007
Eye Wear	3 (3)	3 (4.7)	2 (4.3)	0.840
All PPE	36 (36)	34 (53.12)	27 (58.6)	0.016

be aware about the basics of PPE usage cannot be over emphasized. Gloves are pivotal for all infection control procedures but they should not be used as a substitute for hand washing.

Compliance for eyewear and gown usage was merely 3.8% and 16.7% respectively. This indicates that HCP were not fully compliant with guidelines for proper use of PPE especially eye wear and gowns. The non-compliance of HCP has been a matter of concern from early 1980's and up to now this has not changed significantly (3,4,5,10,11,12).

Availability of PPE was one of the major predictors for non-compliance with PPE usage. The odds of using PPE was much higher if they were readily available. This view was also supported by the fact that overall compliance of HCP for using all recommended PPE was significantly higher in the moderate and high-risk areas as compared to low risk areas. This is parallel to the observation that overall availability of PPE was also significantly higher in these areas. This fact has been supported by other observers who found ready availability of PPE leads to its increased use in any health care setting (3,9).

It is important to realize that the individual's own belief in infection prevention measures, their perception of the risk factors, familiarity with available PPE including its correct usage and disposal are strong motivating factors in PPE usage. In our setting individual motivation played a strong role in PPE usage. Over 90% of the HCP agreed that appropriate use of PPE helps in protecting both the

patients and themselves from getting infection. More than 85% of HCP were self-motivated to wear PPE and fear of their immediate in charge person was not a factor which motivated them to use PPE.

Many studies have highlighted the importance of factors such as discomfort or interference with patient care while using PPE [3,9,13]. Almost 25-35% of the respondents faced similar problems leading to non-compliance in the present study also. These problems could be overcome by appropriate selection of PPE and providing frequent breaks in between work schedules so that the HCP do not feel uncomfortable in regularly using the recommended PPE.

Almost 95% of the HCP wear all recommended PPE because of fear of getting HIV infection. Several other studies have also shown that HCP's perceived risk of being exposed to HIV increases their compliance to PPE usage (14,15,16). The HCP in this category are less likely to be routinely compliant to PPE usage.

The organization plays a pivotal role in emphasizing the importance of PPE in any health care setting [9,17]. Besides the availability of PPE, it has been noted that understaffing was a major problem in nearly 50% of cases for non-compliance. Adequate staffing may help these HCP to follow the infection control guidelines including the use of barrier precautions.

Other practical problems which came to light included a long and tedious process for acquisition of PPE from hospital stores. The problem of stock irregularity was very disturbing as often the HCP received less supply in comparison to their demands. These practical problems leading to non-compliance have also been noticed by other observers (3,17).

In the present study it was observed that when the PPE were kept in a restricted area it limited their effective usage. When these PPE were kept in an open and accessible area for easy use, it led to pilferage of the PPE causing economic loss to the hospital. This problem

TABLE 4: Odds of use of PPE depending on availability of PPE

PPE	Simple OR (95% CI)	P value (two sided)
Gloves	4.494 (1.17-15.4)	1
Gowns	4.101 (1.76-9.5)	0.0007
Masks	1.949 (0.7044-5.39)	0.2556
Eye wear	24.4 (8.269- 72.049)	< 0.0001

TABLE 5: Individual and organizational factors affecting the compliance of the study group

Factors	Agree	Percentage
I wear all the recommended PPE if they are readily available	202	96.2
I wear PPE because the In charge gets angry if I do not use recommended PPE	24	11.4
Understaffing is a major problem in compliance for PPE	98	47.1
It is inconvenient/ uncomfortable to use all the recommended PPE while doing patient care	74	35.2
Using all the recommended PPE interferes with patient care	55	26.2
Wearing all the recommended PPE wastes a lot of time	35	16.7
If a patient is Known HIV* infected I take extra precautions in wearing all PPE	201	95.7
PPE use prevents me from getting infection	204	97.1
PPE use protects patients from getting infection	200	95.2

*Human Immunodeficiency virus (HIV)

has also been noticed by other workers at various places (9,14). The PPE should be kept in the jurisdiction of the nursing supervisor. This would also ensure easy availability of the required PPE besides preventing pilferage and undue wastage.


Irregular water supply in most of the hospital areas was an important cause leading to non-compliance of hand hygiene practices. Though the HCP were aware about the importance of hand hygiene for routine patient care and wanted to practice the same but lack of water for hand washing made this non feasible on many occasions.

The study had a limitation in that it was a self-perceived survey of the health care personnels regarding their knowledge and compliance. It would have been better if independently a third party observation could have been made to substantiate the compliance of these HCP.

CONCLUSION

This study has highlighted the need for more innovative activities besides increasing the awareness levels of HCP. There should be a training and orientation programme at the initiation and

continuous reinforcement thereafter for all HCP regarding the importance and selection of PPE. The PPE should also be made easily accessible to the HCP for increasing their compliance. It should be the responsibility of the individual HCP to adhere to the set standards of the organization and they should be made accountable for not following them.

Compliance to PPE usage by HCP is often hindered by many limiting factors at both the individual and organizational level. However, a facility wide program involving both the organization and individual can definitely overcome these limiting factors and improve the compliance of HCP for PPE usage. 

REFERENCES

1. Johnson S, Gerding DN, Olson MM, et al. Prospective, controlled study of vinyl glove use to interrupt *Clostridium difficile* nosocomial transmission. *Am J of Med* 1990; 88:137-140.
2. Gammon J, Morgan-Samuel H, Gould D. A review of the evidence for suboptimal compliance of health care practitioners to standard/ universal infection control precautions. *J of Clin Nurs* 2008; 17: 157-167
3. Daugherty EL, Perl TM, Needham DM, Rubinson L, Bilderback A, Rand CS. The use of personal protective equipment for control of influenza among critical care clinicians: a survey study. *Crit Care Med* 2009; 37: 1210-1216
4. Anguaco TL, Oprescu FG, Lal SK, et al. Universal precautions guidelines: self reported compliance by gastroenterologists and gastrointestinal endoscopy nurses – a decade's lack of progress. *Am J of Gastroenterol* 2003; 98: 2420–2423.
5. Gammon J, Gould D. Universal precautions: a review of knowledge, compliance and strategies to improve practice. *J of Res in Nurs* 2005;10: 529–547.
6. Cutter J, Jordan S. Uptake of guidelines to avoid and report exposure to blood and body fluids. *J of Adv Nurs* 2004 ;46: 441–452
7. O'Boyle CA, Henly SJ, Larson E. Understanding compliance to hand hygiene recommendations: the theory of planned behaviour. *Am J of Infect Cont* 2001; 29: 352-360
8. Green-Mc-Kenzie J, Gershon R, Kar-

- kashian C. Infection control practices among correctional healthcare workers: effect of management attitudes and availability of protective equipment and engineering controls. *Infection Infect Cont and Hosp Epidemiol* 2001;22: 555-559
9. Hon CY, Gamage B, Ann Bryce E, et al. Personal protective equipment in health care: Can online infection control courses transfer knowledge and improve proper selection and use? *Am J Infect Control* 2008;36:e33-e37
 10. Larson E. Compliance with isolation technique. *Am J of Infect Cont* 1983;11: 222-225.
 11. Weber DJ, Sickbert- Bennet EE, Brown VM, et al. Compliance with isolation precautions at a university hospital. *Infect Cont and Hosp Epidemiol* 2007; 28: 358-361
 12. Puttaiah R, Miller K, Bedi DR, et al. Comparison of knowledge, attitudes and practice of dental safety from eight countries at the turn of the century. *J Contemp Dent Pract* 2011; 12(1): 1-7
 13. Naing L, Nordin R, Musa R. The prevalence of and factors related to compliance with glove utilization among nurses in Hospital universiti sains Malaysia. *Southeast As J of Trop Med & Pub Health* 2001; 32: 636-642
 14. O' Boyle Williams C, Campbell S, Henry K, Collier P. Variables influencing worker compliance with universal precautions in the emergency department. *Am J of Infect Cont* 2000; 22: 138-148
 15. Vaughn TE, Mc Coy KD, Beekmann SE, Woolson RF, Torner JC, Doebbeling BN. Factors promoting consistent adherence to safe needle precautions among hospital workers. *Infect Cont and Hosp Epidemiol* 2004; 25 :548-555
 16. Efstathiou G, Papastavrou E, Raftopoulos V, Merkouris A. Factors influencing nurses compliance with standard precautions in order to avoid occupational exposure to microorganisms: a focus group study. *BMC Nurs* 2011; 10:1, Published online 2011 , doi : 10:1186/1472-6955-10-1
 17. Shimokura G, Weber DJ, Miller WC, Wurtzd H, Alter MJ. Factors associated with personal protective equipment use and hand hygiene among hemodialysis staff. *Am J of Infect Cont* 2006;34: 100-107



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CHICA-CANADA

NEWS

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

New name, new strategy

I wanted to begin my message for this issue of the journal by saying how proud I am to be a CHICA-Canada member. I've just returned from our national education conference in Ottawa, and acted as CHICA-Canada's representative at the APIC 2013 conference in Ft. Lauderdale. We put on an amazing show. The presentations were world-class, the social and networking opportunities were excellent, and the learning never ended. I want to thank the Scientific Program Committee and our conference planners once again for doing such a great job. While I was in Florida, I had many folk tell me how much they enjoyed our conference. Several told me it was the best ever.


I also have to say that Ottawa, our nation's capital, was a wonderful host. The sights, sounds, tastes and entertainment were fabulous. Running along the Rideau Canal and past the Parliament Buildings made getting up at 6:00 a.m. for the Run for IFIC a pleasure (well, almost). Congratulations to everyone who participated in or helped support

"We should be driving the research and development in our field to ensure that studies are being done to address the major knowledge gaps that affect our practice."

this year's run. We raised over \$5000 for this worthy cause! I challenge our Nova Scotia Chapter to do better in 2014 – you've got a hard act to follow.

I'm sure all of you are aware that at this year's Annual General Meeting we voted to change our name. Once our new Articles of Continuation and bylaws are approved by Corporations Canada, our name will become Infection Prevention and Control Canada/Prévention et contrôle des infections Canada. I think this is a great step forward. We want our organization to be recognized nationally and internationally as the premier infection prevention and control organization in Canada. However, a name change alone won't accomplish that. We need to market ourselves. CHICA, or IPAC Canada as we will be known, needs to be rebranded. We need a new logo, with an updated look and new messaging. Still that's not enough. We need to be pro-

active about taking positions on issues that are important to Canadians, our members, and the patients being cared for in our healthcare institutions. Governments and healthcare leaders need to hear from us if we are to be recognized as an organization that can have a positive influence on the Canadian healthcare system.

Our membership includes the brightest minds involved in the field of infection prevention and control in Canada. We need to harness this resource. We should be driving the research and development in our field to ensure that studies are being done to address the major knowledge gaps that affect our practice. We need to ensure that research findings are translated into clinical practice so that practice is based on the best possible evidence, not just the best that is currently available. Changing our name is the first big step – but we've still got a long way to go! 



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

Nouveau nom, nouvelle stratégie


J'e tiens à dire, d'abord et avant tout, à quel point je suis fier d'être membre de l'APIHC-Canada. Je rentre à peine de notre congrès national à Ottawa et du congrès APIC 2013 à Fort Lauderdale où je représentais notre association et franchement, nous avons mis plein la vue! Les présentations étaient de tout premier ordre et les possibilités de réseautage, excellentes, sans compter des occasions d'apprendre à l'infini. Je remercie une fois encore le comité responsable du programme scientifique et les organisateurs de notre congrès pour leur travail extraordinaire. En Floride, beaucoup m'ont dit à quel point ils avaient apprécié notre congrès; pour plusieurs, c'était même le meilleur à ce jour.

Ottawa nous a merveilleusement accueillis! Notre capitale nationale nous a offert des paysages, des sons, des saveurs et des divertissements fabuleux. L'idée de courir le long du canal Rideau et devant les édifices du Parlement au profit de l'IFIC a fait de l'obligation de me lever à 6 h un pur plaisir

(enfin, presque). Félicitations à tous les participants et commanditaires de la course! Nous avons recueilli plus de 5000 \$ pour cette bonne cause. Je mets notre section de la Nouvelle-Écosse au défi de faire mieux en 2014. La barre est haute!

Vous savez bien entendu que nous avons voté en faveur d'un changement de nom en assemblée générale annuelle. Dès que Corporations Canada aura approuvé les nouveaux règlements et articles de prorogation, nous nous appellerons officiellement Prévention et contrôle des infections Canada / Infection Prevention and Control Canada. Je pense que c'est un grand pas en avant. L'objectif est d'être reconnu au Canada et sur la scène internationale comme le principal organisme de prévention et de lutte contre les infections au Canada. Bien entendu, le changement de nom n'y suffit pas. Il faut gagner en visibilité et repositionner APIHC ou plutôt PCIC Canada, puisque c'est notre nouveau nom. Nous avons besoin d'un nouveau logo, d'une image rafraîchie, de messages

repensés et plus encore! Nous devons faire connaître de manière très dynamique notre position sur les questions qui préoccupent le grand public, nos membres et les patients de nos établissements de santé. Il faut que les gouvernements et les responsables de la santé entendent notre voix si nous voulons être reconnus comme une organisation capable d'une incidence positive sur le système canadien des soins de santé.

Notre association compte l'élite du domaine de la prévention et du contrôle des infections au Canada. À nous d'optimiser cette ressource! Nous devons orienter la recherche-développement vers des études qui permettront de combler les lacunes de la connaissance qui entravent notre pratique. Nous devons faire en sorte que les résultats de la recherche se traduisent en une pratique clinique fondée sur les données les plus probantes et non plus seulement sur le meilleur de la connaissance actuelle. Notre nouveau nom est une première étape substantielle, mais le chemin est encore long! 



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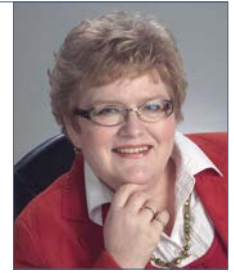


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Gerry Hansen, BA

Executive Director, CHICA-Canada

Where do we go from here?

At the 2013 Annual General Meeting, members voted to change the name of our association to **Infection Prevention and Control Canada (IPAC Canada)/Prévention et contrôle des infections Canada**. Members also accepted the Articles of Continuation and new By-laws. It is just a waiting game now as we anticipate Corporation Canada's approval of the Articles and the new name. Hopefully confirmation will come soon and we can start rebranding as IPAC Canada.

The new name and new by-laws place a challenging yet exciting burden on administration. Efforts are under way to plan a daily communication strategy to bring IPAC Canada into the minds of the Canadian public and foremost in the thoughts of those involved with infection prevention and control across the




continuum of care. A marketing consultant will be contracted to assist with the rebranding including communication of our changes, suggestion of a new logo and a new look for our printed and electronic materials. There will be dialogue with members around any proposed new logo. There will be discussion with our chapters around their own rebranding. Of course, there are all the legal notices required both for the national association and the chapters.

The new by-laws will create change in the way we elect our directors. The

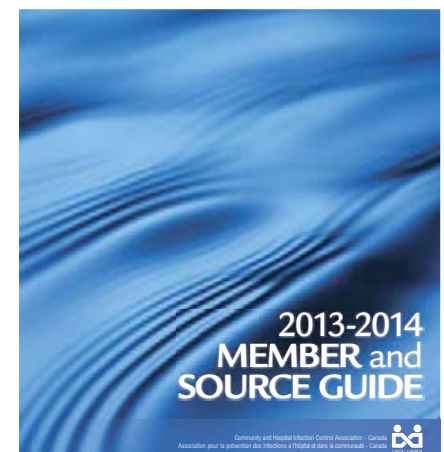
“Efforts are under way to plan a daily communication strategy to bring IPAC Canada into the minds of the Canadian public and foremost in the thoughts of those involved with infection prevention and control across the continuum of care.”

board is discussing its strategy to introduce the new regulations which prescribe election of directors at the annual general meeting, not online or by paper ballot as we are used to. Directors will now be elected because of their skills as leaders, not necessarily because of specific portfolios. The by-laws have also increased the term of the president and the president-elect to two years each. These positions have always been a four-year commitment when directors served as president-elect, president, immediate past president, and conference chair. The increased terms gives each of the incumbents a greater opportunity to become well versed in the operation of the association, and to expand on the development of important relationships with our partners and stakeholders. The positions of immediate past president and conference chair will be eliminated. The figureheads of the conference will be the president and president-elect while the scientific program chairs and committee continue to plan and facilitate an excellent educational event.

At the same time, the board is in the process of a major change in structure. Board members will no longer have individual portfolios but will instead under-

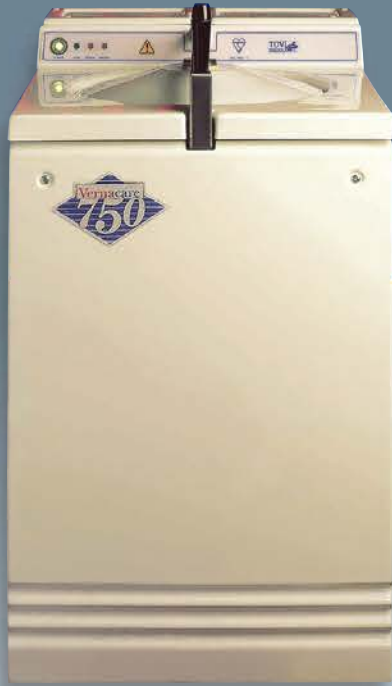
take higher level discussions and plan proactively to elevate both the association and its members in their vision to improve patient and staff safety in today's health-care environment. The important work of the committees will continue but will be managed differently. This is an exciting year and it is an important year for CHICA and its members. 

2013-2014 MEMBER AND SOURCE GUIDE



The 2013-2014 Member and Source Guide has been distributed. An online version can be accessed in the Members Area of www.chica.org.

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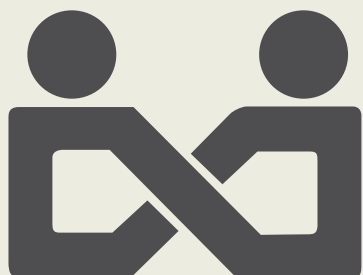


We thank the Public Health Agency of Canada for its support of the 2013 National Education Conference. Their partnership with CHICA is very evident through their financial support of the conference, their leadership in facilitating the half day symposium on Routine Practices Additional Precautions, and their proactive communication with delegates around the work of PHAC and its impact on best practices, and patient and staff safety.



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2013 National Education Conference Review

Thank you to everyone who attended the CHICA-Canada 2013 National Education Conference in Ottawa. From all reports, it was an exciting and dynamic education opportunity, often challenging the norms of practice. It was a great networking event and had a lot of fun as well. We are already planning for the CHICA-Canada 2014 National Education Conference to be held in Halifax, May 25-28, 2014. The Preliminary Program is posted to www.chica.org.

Here are some of our award winners:

3M CHAPTER ACHIEVEMENT AWARD CHICA Southern Alberta



CHICA Southern Alberta representatives with Kathie McGhie, 3M Canada (bottom right).

MOIRA WALKER MEMORIAL AWARD FOR INTERNATIONAL SERVICE



Natalie Bridger and Brenda Earles accept the 2013 Moira Walker Award from Bruce Gamage.

BEST FIRST TIME ABSTRACT

Jocelyn A. Srigley^{1,2}, Colin D. Furness^{2,3}, Michael Gardam^{1,2}

¹University Health Network, Toronto, ON, Canada, ²University of Toronto, Toronto, ON, Canada, ³Infonaut Inc., Toronto, ON, Canada

Description of Patient Hand Hygiene Behaviour in an Acute Care Hospital

2012 EDITORIAL AWARD

Shaunattonie Hudson-Henry RN, MN; Carly Rebelo, MSc, CIC; Camille Lemieux, BScPhm, ACPR, MD, CCFP, LLB; Michael Gardam, MSc, MD, CM, MSc, FRCPC and Jayvee Guerrero RN, BSc, CIC
University Health Network – Toronto General Hospital
Temporal Association between Influenza Burden and Increased Nosocomial Antibiotic Resistant Organism Cases in an Academic Teaching Hospital (Summer 2012)



Shaunattonie Hudson-Henry (centre) accepts the 2012 Editorial Award from Pat Piaskowski and Bruce Gamage.

BEST ORAL PRESENTATION

Barley Chironda, Stephen Cook, Yves Crehore, Jeff Powis
Toronto East General Hospital, Toronto, ON
Sodium Hypochlorite Versus Hydrogen Peroxide: Sure They Are Both Hospital Grade Disinfectants, But Are They Equal As Cleaning Products?

ASK THE MICROBIOLOGY EXPERT

Diane Wallace, Wellington Dufferin Guelph Public Health, Fergus, ON

2013 ECOLAB POSTER CONTEST

Eleanor Paget, London Health Sciences Centre, London, ON



Cheryl Tung accepts the 2013 Ecolab Poster Contest Award on behalf of Eleanor Paget (inset) from Bruce Gamage and Doug Hons (Ecolab).

BEST POSTER

Catherine Walker, Robyn Latendresse, Michelle Perfect
Elgin St. Thomas Public Health, St. Thomas ON
Managing Influenza Outbreaks in Retirement Home Settings: It's Not Like Long Term Care

EARLY BIRD REGISTRATION DRAW

Jennifer Joyal, Chapleau Health Services, Chapleau, ON

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2013 BOARD OF DIRECTORS



(Back Row) Jim Gauthier, Marilyn Weinmaster, Victor Leung, Bruce Gamage (Front Row) Mandy Deeves, Suzanne Rhodenizer-Rose, Judi Linden (Inset) Michael Gardam

2013 SCIENTIFIC PROGRAM COMMITTEE



(Back Row) Josée Shymanski, Krista Maxwell, Stacey Burns, Gary Garber, Colette Ouellet, Silvana Perna (Front Row) Dana Anderson, Donna Wiens, Alexis Silverman.

2013 Chapter Presidents



CHICA-Canada 2013 Chapter Presidents in attendance at the conference.

VIROX SCHOLARSHIP WINNERS



John Van Dyke and Nicole Kenny of Virox (left) and colleagues acknowledged the winners of the 2013 Virox Technologies Scholarship.

CBIC ACKNOWLEDGED ON 30TH ANNIVERSARY



At the Opening Ceremonies of the 2013 conference, Bruce Gamage acknowledged the Certification Board of Infection Control for its dedication to the high standards embodied in the CIC exam. After receiving an anniversary plaque from Bruce, CBIC President Craig Gilliam brought greetings from CBIC, noted that the CBIC Board met in Ottawa prior to the conference, and thanked CHICA-Canada for its long term support.



CBIC Executive Director Anne Krolikowski joined Bruce Gamage and Craig Gilliam in accepting the 30th anniversary plaque.

INTERNATIONAL GUESTS



CHICA welcomed guests from international partners. (Back Row) Marija Juraja, Australasian College for IPAC; Elaine Ross, Infection Prevention Society; Bruce Gamage (Front Row) Anne Krolikowski, CBIC; Craig Gilliam, CBIC; Patti Grant, APIC.

DIVERSEY EDUCATION BURSARY WINNERS



Carolyn Cooke (Back left) and Salah Qutaishat (Front Centre) acknowledged the winners of the first Diversey Education Bursary.

HONOURARY MEMBER



Pat Piaskowski was inducted as a Honorary Member in CHICA-Canada. With her is Sandra Callery who introduced Pat during the Opening Ceremonies, and Bruce Gamage.

GERRY HANSEN CELEBRATES 25 YEARS WITH CHICA

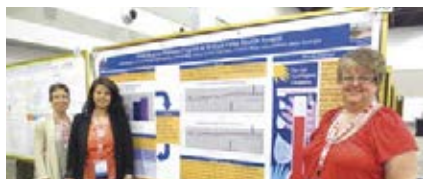


Executive Director Gerry Hansen was acknowledged and honoured for her 25 years of administrative and executive support for CHICA. Bruce Gamage thanked Gerry for her professionalism and expertise that is widely recognized in Canada and internationally.

O CHICA CANADA 2013 National Education Conference

ON GUARD FOR THEE

OTTAWA CONVENTION CENTRE, JUNE 1 - 5, 2013





8th Run for IFIC



The sun shone early in the morning and enthusiasm was high! The 8th Run for IFIC was another successful fundraiser for the CHICA Scholarship which supports under-resourced country representatives to attend the annual International Federation of Infection Control conference. Over 50 runners and walkers raised \$5,300 for the scholarship.


The individual winners of the day were:

Tara Donovan: Fastest Woman
Jim Gauthier: Fastest Man
Terrance Smith: Fastest Walker



CHICA Southern Alberta raised the largest amount of donations.

Our sincerest thanks go to organizers Jo-Anne Janigan and Michèle Laroque-Levac and the volunteers from CHICA Ottawa Region. We also thank Deb Canada and Diversey for their sponsorship of the run and breakfast.

Watch for information about the 9th Run or Walk for IFIC, which will be held in Halifax on Monday, May 26, 2014. Braveheart, Slayer of Germs is issuing a challenge to all participants to come out wearing their finest kilt! Hope it's not too windy. 



2014 National Education Conference



The Preliminary Program for the 2014 National Education Conference is available at www.chica.org.



CHICA 2013

(CD • MP3) ORDER FORM

CD MP3 PLENARY SESSIONS

- P1a,b,c Thinking Differently About IPAC (Including Panel) - Martin Wale (3CDs)
- P2 Hand Hygiene - The 100% Solution Yves Longtin
- P3 Public Health Agency Update - Howard Njoo
- P4 Engaging Senior Management in Quality and Patient Safety - Jack Kitts
- P5 Emotional Intelligence - How Competency Supports Change - Suzanne Rhodenizer
- P6 Evidence?? Screening and Isolating the Evidence on AROs - Joanne Archer
- P7 Hot Topics - Tough Choices and Changing Realities - Michael Gardam
- P8 Real Life, Real Story: A Survivor's Story Bill Beattie

CD MP3 PRE-CONFERENCE DAY, June 2

- PC1. Overview of CSA Z8000
- PC2 Reading Blueprints 101 for the ICP
- PC3 WASH: Waste, Air, Space, Hand Hygiene
- PC4a, b, c What's New in Healthcare Associated IP&C Surveillance at PHAC? (3CDs)
- PC5 Identifying Learning Needs
- PC6 Feedback that Heals
- PC7 What is Antibiotic Stewardship?
- PC8 Presenting Modules of Antibiotic Stewardship
- PC9 The Interface of Antibiotic Stewardship and IPAC

CD MP3 CONCURRENT SESSIONS

- C1 Immigration and TB Control
- C2 TB Testing
- C3 Influenza - 21st Century - Silent Plague
- C4 Vaccine Adjuvants
- C5 A Look in the Mirror - Comparing Rates Within
- C6 A Look Through the Window Comparing Infection Rates to Others
- C7 In the Emergency Department
- C8 Behavioural and Psychology Symptoms of Dementia
- C9 In the Operating Room
- C10 Communicating Surgical Site Infection Information to the Surgeon
- C11 Healthcare Workers Influenza Vaccination
- C12 GermSmart ® In Saskatoon Health Region

ORAL PRESENTATIONS

CD MP3 (in language of presentation only)

- O1 Antibiotic Resistant Organisms
- O2 Quality/Process Management
- O3 Environmental Cleaning & Disinfection
- O4 Outbreak Investigation
- O5 Surveillance
- O6 Education
- O7 Hand Hygiene
- O8 Community & Ambulatory Care

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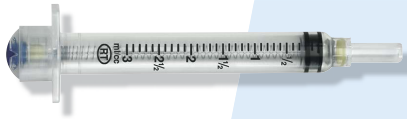
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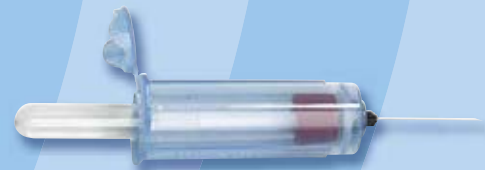


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Membership Fee Increase

The last increase to CHICA-Canada membership fees became effective January 1, 2012. As per discussions with membership which has requested small but regular increases, the Board of Directors has confirmed that fees will increase by 4% biannually. CHICA-Canada membership fees will increase as of January 1, 2014:

Individual	\$202
Institutional, First Representative	\$282
Institutional, Additional Representatives, each	\$122
Student Member	\$122
Retired Member	\$122

Fees for Corporate Membership will increase to \$2600.
GST/HST is not applicable on membership fees.

Each member is entitled to one complimentary chapter membership and complimentary membership in any of our interest groups. Additional chapters are \$25 each.

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 2013 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:

Marilyn Weinmaster, CHICA-Canada Membership Director

c/o CHICA-Canada Membership Services Office | chicacanada@mts.net | Fax: 204-895-9595

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CHICA-Canada member wins APIC Award



Candace Friedman

“Winner of the 2013 Carole DeMille Achievement Award is Candace Friedman, a long-time APIC and CHICA member.”

The Carole DeMille Achievement Award, the Association for Professionals in Infection Control and Epidemiology’s (APIC) lifetime achievement award, honours infection prevention and control professionals whose contributions have improved the practice of infection prevention through research, performance improvement, visionary leadership, and community service. Carole DeMille was known for her reverence of the past, vision of the future, and optimistic approach to present day realities.

Winner of the 2013 Carole DeMille Achievement Award is Candace Friedman, a long-time APIC and CHICA member.


Candy has worked in the health care field for over 40 years. She received her Bachelor of Science in Medical Technology and her Master of Public Health in Epidemiology degrees from the University of Michigan, Ann Arbor, Michigan.

She has broad experience practicing infection prevention and control and has published in this area. She has written articles, chapters in various books and co-authored a book, *Infection Control in Ambulatory Care*.

During her career, Candy served as an Infection Control Coordinator at Hutzel Hospital in Detroit, Michigan, and Infection Control Practitioner at the University of Michigan Health System (UMHS). She became Director of Infection Control and Epidemiology at UMHS in 1986. In 2012, Candy moved into a new field, becoming a project manager in the UMHS’ Office of Clinical Safety.

Candy has volunteered for various professional organizations. She served APIC in different capacities, including president. Candy was also a board member on the Certification Board of Infection Control and Epidemiology. She served on the board of the Michigan Society for Infection Control and was president of her local APIC chapter – Greater Detroit.

She has worked on toolkit projects for CHICA-Canada; topics include *C. difficile*, emergencies and disasters, and antibiotic-resistant Gram negatives. Candy is the publications chair for the International Federation of Infection Control, assisting with its newsletter and Basic Concepts manual updates.

CHICA-Canada congratulates Candy Friedman for her latest well-deserved honour. 

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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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Module 1

The Chain of Infection provides an overview of the chain of infection and how breaking any link in the chain can help prevent the transmission of infectious microorganisms.



Module 2

Routine Practices introduces Routine Practices and describes a point of care risk assessment, which is central to decisions about Routine Practices and shows how a point of care risk assessment can be applied.



Module 3

Hand Hygiene and Personal Protective Equipment explains when and how hand hygiene should be done. The module also describes how best to protect yourself and the patients in your care by using Personal Protective Equipment appropriately.



Module 4

Environmental Controls describes these elements and reviews strategies to reduce healthcare associated infections that are related to cleaning equipment, environmental cleaning, waste management, Sharps Safety and more.



Module 5

Source Control & Education describes the components of Source Control and explains how strategies improve patient flow, manage visitors and promote respiratory hygiene/cough etiquette that will help reduce healthcare associated infections.



Module 6

Health Care Worker Roles & Responsibilities How does the application of Routine Practices vary according to the nature, scope and duration of contact with patients? While the principles remain the same, healthcare workers with "high", "medium" and "low" patient contact will find that some elements are more applicable than others in their daily work.



SAVE THE DATE!

Antibiotic Awareness Week November 17-23, 2013

Use Antibiotics Wisely · When Needed · As Prescribed

Visit AntibioticAwareness.ca for other Canadian initiatives and resources.

Numerous Canadian health-related organizations have partnered in an effort to promote the prudent use of antibiotics and fight the threat of antibiotic-resistant bacteria.

They include:

- National Collaborating Centre for Infectious Diseases (NCCID)
- Public Health Agency of Canada (PHAC)
- Association of Medical Microbiology and Infectious Disease (AMMI) Canada (AMMI)
- Community and Hospital Infection Control Association (CHICA) Canada (CHICA)
- Canadian Foundation for Infectious Diseases (CFID)
- Canadian Paediatric Society (CPS)
- Do Bugs Need Drugs (DBND)
- Canadian Institute of Public Health Inspectors (CIPHI)
- Canadian Public Health Association (CPHA)
- Canadian Pharmacists Association (CPhA)
- Canadian Association for Clinical Microbiology and Infectious Diseases (CACMID)



MARQUEZ VOS AGENDAS

Semaine de sensibilisation aux antibiotiques le 17 du 23 novembre 2013

Utilisez les antibiotiques de façon mesurée . lorsque nécessaire . en suivant les directives

Visitez infoantibio.ca pour voir des initiatives et ressources canadiennes.

De nombreux organismes liés au domaine de la santé ont agi de concert pour promouvoir l'utilisation mesurée des antibiotiques et de lutter contre la menace représentée par les bactéries résistantes aux antibiotiques. Ils incluent :

- Centre de collaboration nationale des maladies infectieuses (CCNMI)
- Agence de la santé publique du Canada (ASPC)
- L'Association pour la microbiologie médicale et l'infectiologie Canada (AMMI)
- L'Association pour la prévention des infections à l'hôpital et dans la communauté – Canada (CHICA)
- Fondation canadienne des maladies infectieuses (FCMI)
- Société canadienne de pédiatrie (SCP)
- Des pilules contre tous les microbes
- L'institut canadien des inspecteurs en santé publique (ICISP)
- L'Association canadienne de santé publique (ACSP)
- Association des pharmaciens du Canada (APhC)
- Association canadienne de microbiologie clinique et des maladies infectieuses (CACMID)

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Antibiotic Awareness Week 2012 Report on Activities

The full report is available from CHICA-Canada

BACKGROUND

Antibiotic Awareness Week 2012 activities were developed by the Communication and Education Task Group on Antimicrobial Resistance (CETAR). Building upon messaging developed for Antibiotic Awareness Day 2010, and for Antibiotic Awareness Week 2011, the campaign continued to promote the prudent use of antibiotics in Canada. The third annual event was a week-long campaign held November 12-18, 2012. The timing of Antibiotic Awareness Week in Canada again corresponded with Antibiotic Awareness Day in the European Union (marked annually on November 18, 2012), Get Smart About Antibiotics Week in the United States (November 12-18, 2012) and Antibiotic Awareness Week in Australia (November 12-18, 2012). The Canadian campaign included webinars, and social media and e-blast messaging

to disseminate information and resources. Messaging again centered on Canadian public health issues in AMR with a specific focus on healthcare practitioners. All messages and communications were developed in both official languages.

KEY MESSAGES

The overarching message was that prudence be used when prescribing antibiotics and consuming antibiotics, and that increasing antimicrobial resistance puts us all at risk. The messages targeted healthcare professionals, with the understanding that through these key actors, the public would also be reached.

The key messages for Antibiotic Awareness Week 2012 in Canada included:

- Use antibiotics wisely – when needed and as prescribed.
- Antibiotic resistance is a threat to the health of Canadians.



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Campaign strategies and outcomes November 12-18, 2012

The following strategies were outlined in the Antibiotic Awareness Week 2012 (AAW) Action Plan.

1. Build awareness of AMR issues in Canada and around the world.	
Strategies	Outcomes
Coordinate with international campaigns.	ECDC, CDC, Canada (aa.ca), and Australia all highlighted each other's campaigns through our websites, as well as cross-promotion of each others' resources via Twitter.
2. Increase collaboration among national and international organizations to build public health awareness about antimicrobial resistance.	
Strategies	Outcomes
Bring organizations together to build common AMR messages, strategies, etc.	In addition to the collaborative promotional efforts by CETAR member organizations, the following organizations were among those that promoted Canada's AAW: <ul style="list-style-type: none"> • Get Smart about Antibiotics, Centers for Disease Control and Prevention • European Centre for Disease Control • PICNET Provincial Infection Control Network of British Columbia • National and Provincial CIPHI networks • BCCDC • National Collaborating Centres for Public Health (NCCPH) • Halton Health developed display in the main entrance of the Region of Halton administration building. (set up an Antibiotic Awareness Week display using AntibioticAwareness.ca resources) • International Centre for Infectious Diseases
3. Increase awareness among health care practitioners, animal health experts, patients and the general public about the prudent use of antibiotics.	
Strategies	Outcomes
Send out notices/reminders about Antibiotic Awareness Week, resources, links to <i>AntibioticAwareness.ca</i> website.	3 e-blasts served to notify/remind people of Antibiotic Awareness Week and promote the webinars. Member organizations included these notices in their e-newsletters and sent out email messages to their respective audiences.
Distribute resources.	3 new Antibiotic Awareness Posters were created, and available for download at <i>antibioticawareness.ca</i> . The four fact sheets featured on <i>AntibioticAwareness.ca</i> , and the prescription pads with the script, were highlighted via Twitter notices.
Hold webcasts during Antibiotic Awareness Week.	The following 2 webinars were held: <p>Wednesday, November 14, 2012 Donald Low, Chief of the Department of Microbiology, UHN and Mount Sinai Hospital</p> <p>Friday, November 16, 2012 PHAC:</p> <ul style="list-style-type: none"> • Marc Andre Gaudreau, Manager, Strategic Issues • Rita Finley, Senior Epidemiologist, Centre for Food-borne, Environmental and Zoonotic Infectious Diseases, Public Health Agency of Canada • Irene Martin, National Microbiology Laboratory • Thomas Wong, Director of Professional Guidelines and Public Health Practice Division

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“Antibiotic Awareness Week helped increase the exposure of the *AntibioticAwareness.ca* website as it garnered more mentions on partner websites, through social media, as well as doubling the amount of hits on *antibioticawareness.ca* from last year’s campaign.”

Three new posters promoting Antibiotic Awareness Week were created. The links were disseminated among CETAR partners and subsequently sent to their audiences. A “poster dissemination tips” sheet was added to the website to assist with promotion of the posters.




CONCLUSION

Building on the past two Canadian annual campaigns, Antibiotic Awareness Week 2012 continued to help build momentum for upcoming *AntibioticAwareness.ca* campaigns.

Antibiotic Awareness Week helped increase the exposure of the *AntibioticAwareness.ca* website as it garnered more mentions on partner websites, through social media, as well as doubling the amount of hits on *antibioticawareness.ca* from last year’s campaign. In addition, partnerships with international organiza-

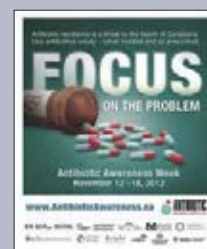
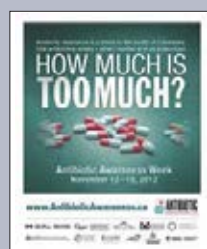
tions were further strengthened, providing a strong foundation for future campaigns with a global focus. CETAR will continue reaching out to national and international organizations in an effort to promote the prudent use of antibiotics.

Resources that were created will continue to be disseminated by CETAR member organizations during future campaigns and at upcoming conferences. CETAR will also look for ways to disseminate material and promote the message to “use antibiotics wisely” outside of Antibiotic Awareness Week campaigns. CETAR will continue to meet regularly to develop these ongoing initiatives and to plan for Antibiotic Awareness Week 2013. 

INITIATIVES

In the weeks leading up to November 12-18, 2012, CETAR used the *AntibioticAwareness.ca* website to promote Antibiotic Awareness Week messages and activities in Canada. As a result of promotional efforts to drive people to the *AntibioticAwareness.ca* website, there was a steady increase in the number of visits during the months of October and November. This was most evident during the week of November 12-18.

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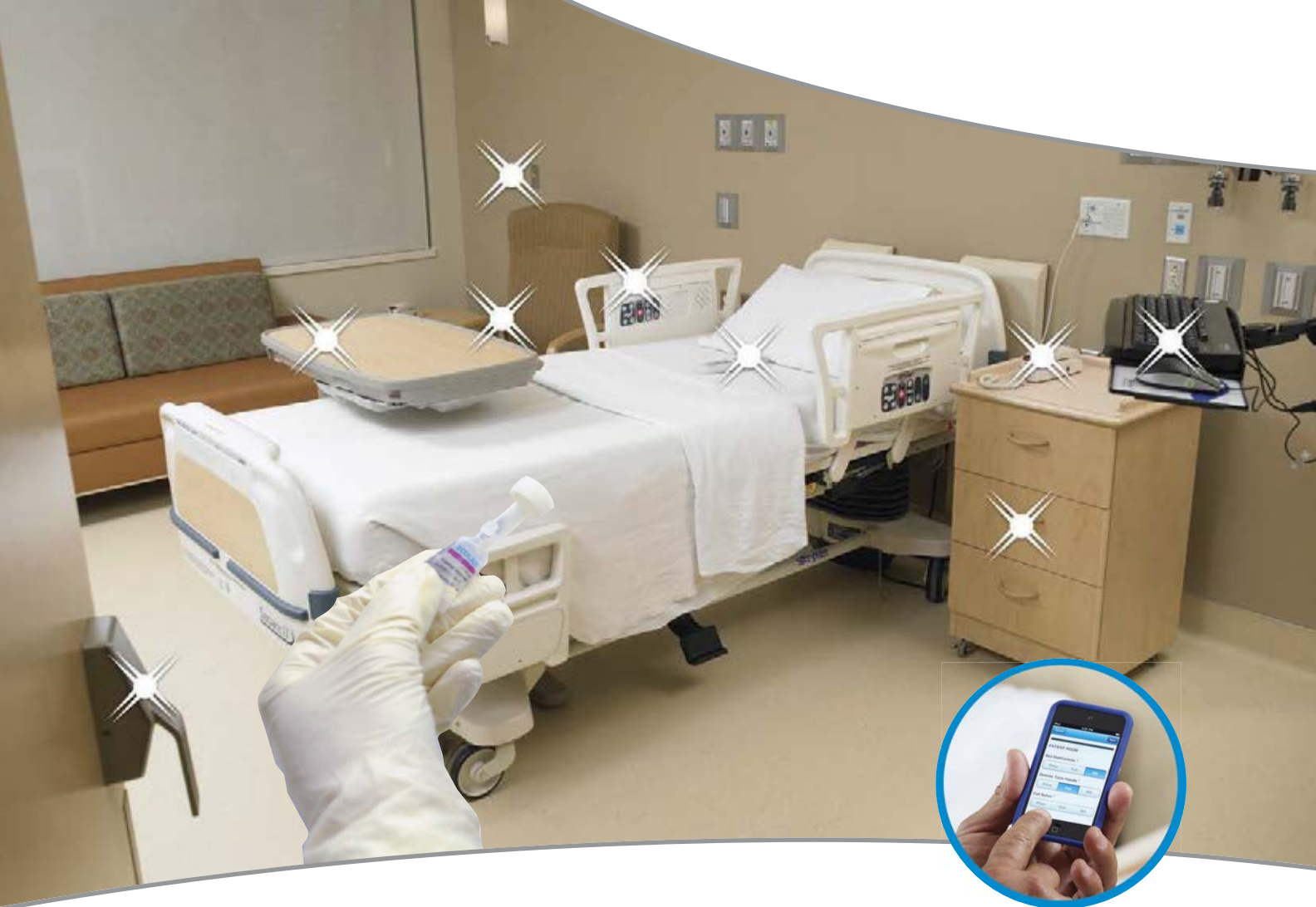
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Methods of using the DAZO fluorescent marking gel may be covered by one or more of US Patent Nos. 7,718,395; 7,780,453; and 7,785,109

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