Vol. 25 No. 2 Summer 2010

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

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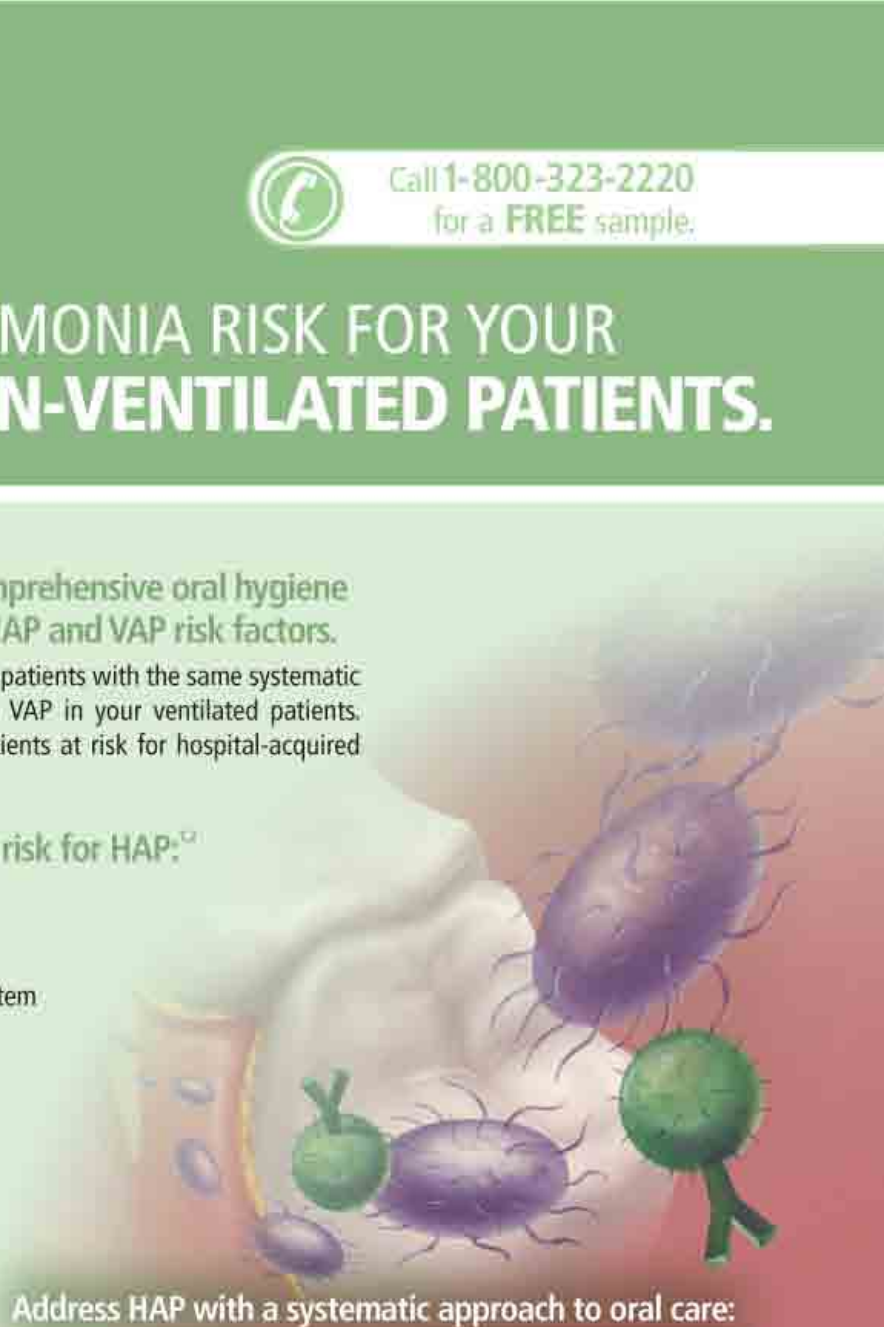

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Subscriptions are available from the publisher at the following rates: All Canadian prices include GST.
Prices are listed as personal/institutional.
Canada: $30/$38 (GST # 100761253); USA (in US funds): $28/$36; Other countries: $45/$60.

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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.

ISSN - 1183 - 5702

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

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Closing the loop:
the role of auditing in Infection Prevention and Control (IPAC)

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

Congratulations to CHICA-Canada and the Audit Tool Working Group for developing the valuable audit tool kit. This excellent resource is a must-have for all infection control professionals (ICPs) in all settings.

IPAC programs are one of the key quality improvement processes in any healthcare setting. Accreditation, government and patient safety bodies cite many examples of key IPAC indicators which should be monitored, trended, reported and, in some cases, publicly reported.

ICPs have all likely heard of the PDCA (or Plan-Do-Check-Act) cycles that are used in quality improvement processes. Audits represent the "C" or "check" step in this cyclical process. ICPs typically do very well at planning and doing and spend much of their time planning strategies and carrying them out. Considerable time is also spent writing, reviewing and revising policies and procedures to align with best practices, standards and other required practices. Following development of policies and procedures ICPs then engage in knowledge transfer activities, such as inservices, for staff and workers. These knowledge transfer activities serve to ensure that the staff and workers know the who, how, what, when, where and why of these policies and procedures. ICPs also (or should) conduct evaluations based on staff and worker feedback from these sessions following the presentations. ICPs also conduct surveillance of key infections and then report these findings and act as necessary to achieve improvement.

Given all this effort in *planning* and *doing*, ICPs may fall short in *checking*. This can happen when there is limited time or resources available to the IPAC program. It is seldom the people but rather the processes that impede achieving a quality outcome through completing the PDCA cycle.

As a first step in getting to the *check* step, ICPs need to ask the question: "How can we be sure that the right things are being done right?" Completing audits of our many and often complex IPAC processes in healthcare can help to identify or check if processes are being done correctly. It is not enough to have policies and procedures if there are no means to ensure that they are being followed or complied with. Ensuring that each process is done in the right way, with the right steps, at the right time and in the right order, is essential to ensuring quality and safe care and service for all clients, residents and patients, as well as staff and the general public.

Once the "check" step is complete, then the "act" step can be taken to correct any deficiencies. At this point the cycle begins again, thus closing the loop.

Remember, audits can be done by any trained member of the healthcare team. Closing the loop to achieve quality outcomes depend on everyone.

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1 Braden Scale for Predicting Pressure Sore Risk. Available at: www.bradenscale.com/braden.PDF. Accessed November 6, 2008.
2 Recommended practices for positioning the patient in the perioperative practice setting. In: *Perioperative Standards and Recommended Practices*. Denver, CO: AORN, Inc; 2008.

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A **multifaceted intervention** to address a case cluster of cellulitis associated with hypodermoclysis **in a geriatric complex** continuing care unit

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ABSTRACT

Purpose
To assess whether a multifaceted intervention can reduce the incidence of cellulitis in patients receiving hypodermoclysis on a complex continuing care unit in a geriatric facility.

Method
The multifaceted intervention consisted of the following: in-services on the safety engineered devices for nurses and education to reinforce best practice techniques; implementation of checklist auditing tool to monitor procedure, frequency and duration of hypodermoclysis; updating Baycrest nursing skills package; upgrading from 0.5% to 2% chlorhexidine gluconate skin preparation solution; switching from Y-adapter to a single-port system. The main outcome measure was the number of documented cellulitis cases on the unit post-intervention.

Results
From September 1 to November 30, 2008, 12 cases of cellulitis associated with hypodermoclysis were documented. Post-intervention, three case of hypodermoclysis-associated cellulitis were documented. The frequency of hypodermoclysis pre-intervention was 68.6 per 1000 patient days versus post-intervention at 63.1. The hypodermoclysis-related cellulitis incidence on the unit decreased significantly from 23.2 pre-intervention to 6.6 post-intervention per 1000 patient days ($p < 0.05$, chi-square analysis).

Conclusion
A multifaceted intervention was successful in reducing the incidence of cellulitis associated with hypodermoclysis on a complex and continuing care unit in a geriatric facility.

Key words: Hypodermoclysis, safety engineered devices, geriatric, complex continuing care, cellulitis, and multifaceted intervention

INTRODUCTION

The elderly are particularly vulnerable to dehydration due to decreased total body water content, diminished thirst response, dysphagia, dementia, and reduced kidney function (1-5). Furthermore, dehydration in the elderly can be a common complication of infection-related febrile episodes (1; 6). In geriatric settings, hypodermoclysis, a continuous subcutaneous infusion hydration technique, is often used as an alternative to intravenous rehydration for mild to moderate dehydration (1-3; 7-9). Infusion of fluids into the subcutaneous space is advantageous because of increased client comfort, ease of administration and few adverse effects (3; 8; 10-13). Moreover, hypodermoclysis can be administered in long-term care settings as it does not require a physician or intravenous team nurse to administer therapy and avoids the unnecessary costly transfer of patients to acute care (1-4; 7; 8; 13).

Favourable hypodermoclysis sites are areas where there is at least a one inch profusion of subcutaneous tissue, such as: anterior thighs, interscapular areas, abdomen, anterior or lateral pectoral region, upper arms and infraclavicular areas (3; 10; 14). According to Sasson and Shvartzman, adverse reactions are rare and can be avoided when hypodermoclysis is administered using aseptic technique, the appropriate solution, volume and flow rate (14). However, complications that can arise from hypodermoclysis include local edema, pain at infusion site, ecchymoses and cellulitis (14; 16-18).

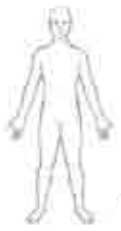
Figure 1: Hypodermoclysis initiation and maintenance checklist auditing tool

Hypodermoclysis Initiation and Maintenance Tool

Date initiated: _____

Name of Nurse: _____ **Unit:** _____ **Shift:** □ Days □ Evenings □ Nights

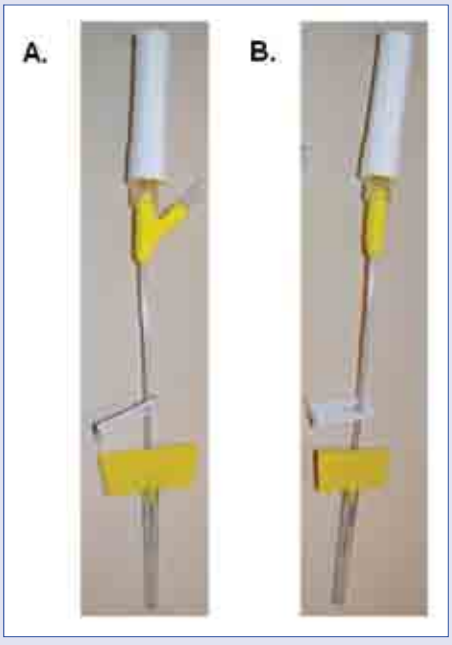
Residents Name: _____ **Room #:** _____

Steps	Completion?		Notes
Check physicians orders:	□Yes □ No		
Collection of necessary equipment:	Gloves	□Yes □ No	
	CSCI needle	□Yes □ No	
	CHG 2% swab	□Yes □ No	
	Sterile Tegaderm	□Yes □ No	
Lot # of Needle used:	Lot #:		
Change tubing when changing CSCI sites:	□Yes □ No		
Hand hygiene performed:	□Yes □ No		
Explained procedure to patient:	□Yes □ No		
Select appropriate site for insertion: **Recommended** • Abdomen • Thigh • Sub-clavicular chest wall • Lateral aspect upper arms/thigh **Unsuitable sites include** • Lymphodematous limbs • Sites over bony prominence • Previously irradiated skin area • Site near a joint or peripheral limbs e.g. below knee or below elbow.	Circle site on diagram 		
Hand hygiene performed:	□Yes □ No		
Gloves donned:	□Yes □ No		
Prepared site by scrubbing 2% CHG swab and allowed to air dry:	□Yes □ No		
Bevel facing upwards:	□Yes □ No		
Gently picked up skin and inserted needle at 30-45°	□Yes □ No		
Checked needle moves freely in subcutaneous space:	□Yes □ No		
Activated needless system and disposed in sharps container:	□Yes □ No		
Applied sterile Tegaderm over insertion site – dated, initialed	□Yes □ No		
Dead ender replaced with luer lock:	□Yes □ No		
Solution given: _____	Solution: _____		
Charted in meditech under progress notes including: • Time and date initiated • Site • Size and type of needle • Solution and rate • Condition of site • Client's response	□Yes □ No		

Hypodermoclysis Maintenance and Discontinuation

Time	Shift	Initial	Condition				Notes (indicate date and time of removal)
			Red	Pain	Pus	Irritation	
Day 1	Days						
	Evenings						
	Nights						
Day 2	Days						
	Evenings						
	Nights						
Day 3	Days						
	Evenings						
	Nights						

Figure 2: Closed IV Catheter System
The closed IV catheter system is a needle-less safety engineered device used for hypodermoclysis at Baycrest.
A. Y-adapter catheter system
B. Single-port catheter system



"Hollow-bore butterfly needles that remain in patients during hypodermoclysis can be uncomfortable and pose a risk of needle stick injuries to health care workers."

Hollow-bore butterfly needles that remain in patients during hypodermoclysis can be uncomfortable and pose a risk of needle stick injuries to health care workers. In August of 2007, Ontario amended its Occupational Health & Safety Act, mandating all Ontario hospitals to replace hollow-bore butterfly needles with safety engineered devices by September, 2008. In following this directive, Baycrest Geriatric Health Care System, a 772-bed chronic care facility, implemented the use of BD Saf-T-Intima™ (BD Medical, Sandy, Utah) safety engineered catheters facility wide. These needle-less safety systems, with removable inner metal insert, have been trialed for closed intravenous catheter use; however, many long-term care facilities and geriatric settings employ this system for hypodermoclysis. Upon switching to the needle-less system, a cluster of hypodermoclysis-related cellulitis cases developed over a three month period on a complex continuing care (CCC) unit. A quasi-experimental, interrupted time series design was used to evaluate the effects of a multifaceted intervention in reducing the incidence of hypodermoclysis-related cellulitis in residents of a CCC unit.

METHODS

Study population and design

The study was approved by the research ethics board at Baycrest Geriatric Health Care System, and the requirement for written informed consent was waived.

The study was conducted in a 34-bed CCC unit at Baycrest, from September 1, 2008 to February 28, 2009. A retrospective chart review, completed in November 2008, of 29 patients on the CCC unit revealed 12 cases of documented hypodermoclysis-associated cellulitis following implementation of the needle-less safety system. Two patient groups were included in this study: the pre-intervention included all patients on the unit between September 1, 2008 to November 30, 2008; the post-intervention group included all patients on the unit between December 1, 2008 to February 28, 2009. All data was collected retrospectively for both groups. Cellulitis infections meet at least one of the following two criteria: 1. Cellulitis documented by the health care provider OR 2. Two or more of the following five systemic/topical signs or symptoms, with no other recognized cause: a) fever b) pain OR tenderness c) localized swelling d) redness e) heat/warmth.

Interventions

During the pre-intervention period, the infection prevention and control team collaborated with the unit manager and nursing team leaders to identify possible practice issues, review best practice guidelines and available literature regarding hypodermoclysis and cellulitis prevention. The following key interventions were introduced:

Nursing educational in-services: education sessions for all nursing staff on the CCC unit was provided by a multidisciplinary task force, which included the safety engineered needle-less device specialist from BD Medical, the unit manager as well as two infection control practitioners. The in-service consisted of a 30-minute lecture given by the product specialist outlining proper subcutaneous infusion initiation guidelines. Nurses were asked to practice insertion and activation of the safety device in order to ensure

"Nursing staff was instructed to fill out a checklist whenever a new site was initiated. This checklist outlined the optimal technique for selecting subcutaneous sites."

proper technique was adhered to. Special emphasis was made on ensuring nurses performed hand hygiene, donned gloves, prepped the site, and used bevel up technique. Between the infection control team and the CCC unit manager, a 15-minute review followed, outlining appropriate site maintenance and discontinuation. Finally, nurses were asked to identify possible practice issues and knowledge deficits regarding hypodermoclysis initiation, maintenance and discontinuation for incorporation into the auditing tool.

Initiation, maintenance and discontinuation checklist auditing tool: a hypodermoclysis initiation, maintenance and discontinuation checklist was implemented on the CCC unit (Figure 1 on page 102). Nursing staff was instructed to fill out a checklist whenever a new site was initiated. This checklist outlined the optimal technique for selecting subcutaneous sites. Maintenance and condition of the site was to be recorded by each shift for a total of 72 hours (the maximum recommended device dwell time).

Updating nursing skills package: the infection prevention and control team along with the nursing professional practice leader reviewed and updated the hypodermoclysis nursing skills package to reflect best practice changes. Such updates included the following additions and/or changes:

- Site selection: ensuring the site does not increase the risk of infection - e.g. skin folds or under incontinence briefs
- Equipment: gloves must be donned for the procedure
- Site preparation: clip the hair at the site (do not shave), if necessary
- Site maintenance: write the date and the time that hypodermoclysis was started and initial the dressing
- Site rotation: the hypodermoclysis site can be maintained for a maximum of 72 hours if the system is aseptically capped; however, the tubing must be discarded and new tubing used when infusion is restarted.
- The updated nursing skills package was sent to all unit managers to inform staff of the updated version and ensure it was reviewed.

Upgrading to 2% chlorhexidine gluconate (CHG) skin preparation solution: a 2% CHG solution with 70% isopropyl alcohol was introduced, replacing the previously used 0.5% CHG solution with 70% isopropyl alcohol for skin antisepsis.

Switching from Y-adapter to a single-port system: upon introduction into Baycrest only the Y-adapter needle-less safety engineered catheter was available. The Y-adapter has two ports. Since hypodermoclysis does not require two ports, a single-port system was phased in to avoid the need for recapping the unused second port with a luer lock (Figure 2 on page 103).

Study outcomes

The infection control team performed active surveillance for cellulitis attributable to hypodermoclysis. This was monitored retrospectively through patient charts and the checklist audit tool completed by nursing staff on a daily basis. The main outcome measure included the number of documented cellulitis cases on the unit post-intervention.

Statistical analysis

Each hypodermoclysis initiated pre- and post-intervention was counted along with each cellulitis case. Data was analyzed using the SPSS program (SPSS Inc., Chicago, IL). We considered p values < 0.05 to be statistically significant. The study periods were compared using a chi-square test.

Table 1: Demographic data of geriatric patients residing on complex continuing care unit during pre- and post-intervention study periods

Period	Admissions	Avgerage Census	Age, median (IQR†), y‡	Patient-Days	Clysis frequency (per 1000 patient days)	Device-Days
Pre-intervention	1	29	84 (80-89)	2564	68.6	516
Post-intervention	5	30	83 (79-88)	2454	63.1	449

† IQR, Inter-quartile range
‡ y, age in years

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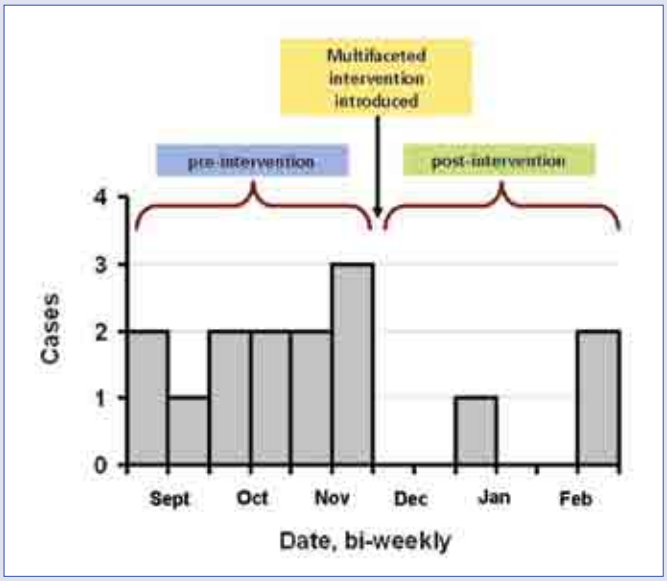
Figure 3: Epidemic curve representing date of hypodermoclysis-associated cellulitis onset, bi-weekly for pre- and post intervention study periods



RESULTS

During the pre-intervention period from September 1 to November 30, 2008, there was one admission to the CCC unit and a total of 2564 patient-days. Post-intervention, December 1, 2008 to February 28, 2009, there were 5 admissions and a total of 2454 patient days. Demographic data for both periods are presented in Table 1 (see page 104).

There was a total of 176 hypodermoclysis infusions initiated for a total of 516 device days in the pre-intervention group, and 155 were in place for total of 449 device days post-intervention. There were 12 documented cases of cellulitis identified due to hypodermoclysis pre-intervention. Post-intervention, three case of hypodermoclysis attributed cellulitis were documented (Figure 3). No specimens suitable for microbiological diagnosis of cellulitis were collected for culture. The frequency of hypodermoclysis initiated pre-intervention was 68.6 per 1000 patient days versus post-intervention at 63.1. The hypodermoclysis-attributed cellulitis incidence on the unit decreased significantly from 23.2 pre-intervention to 6.6 post-intervention per 1000 device days ($p < 0.05$, chi-square analysis).

DISCUSSION

Studies have examined the utility of and complications associated with hypodermoclysis in the elderly (1; 2; 7; 13; 15; 19). To our knowledge, there are no studies examining the effectiveness of a multifaceted intervention in reducing the incidence of adverse events, specifically cellulitis, in geriatric patients who receive hypodermoclysis. The use of multiple interventions simultaneously to reduce infections related to centrally inserted catheters and peripherally inserted central lines has generated many evidence-based strategies that could practically be applied to hypodermoclysis initiation and maintenance (20-25). Such strategies included re-education of nursing staff, educational feedback, checklist audits and the use of 2% CHG skin antisepsis (23; 24).

The interventions selected for this study addressed individual practice factors (i.e. education, feedback groups, and checklists) and facility wide factors (i.e. 2% CHG upgrade and single port catheter use). Nursing education was likely vital to the success of the overall initiative, as it identified and corrected for knowledge deficits in practice. The small focus groups, following nurse education sessions, identified several areas for technique improvement, including the need to perform hand hygiene, donning gloves, appropriate site selection, site rotation, bevel-up insertion and the dating and initialing of sites. Updating and disseminating the nursing skills package was equally important to reaffirm the changes in best practice for hypodermoclysis. The checklist audit tool ensured best practice was adhered to by nursing staff and also assisted the infection prevention and control team in monitoring frequency of hypodermoclysis.

Changes in system factors addressed the need to upgrade to 2% CHG skin antisepsis. Safer Healthcare Now recommends the use of 2% CHG skin antisepsis for central line insertion (26); however, Baycrest adopted this recommendation for all skin preparation prior to any invasive procedure, including hypodermoclysis. In addition, a single port catheter system was deemed more appropriate for hypodermoclysis as there were reports of incidences where dead-enders were not replaced with luer locks. Therefore, ensuring that only a single port system was used reduced the chances of having a portal of entry due to an open system.

Limitations

We acknowledge there may have been specific patient-related risk factors that could have rendered one more susceptible to cellulitis (i.e. body mass index or severity of illness); however, patient demographics (Table 1 on page 104) appeared similar for both the pre- and post-interventions. Secondly, compliance with the interventions was assessed intermittently and informally during the post-intervention only; thus, we cannot determine the relative importance of each intervention in reducing the incidence of cellulitis due

to hypodermoclysis. Finally, the interrupted time series design is useful for examining observational data; however, a randomized control trial is the most robust method for controlling for confounding variables.

Conclusion

In this study, we established that the systematic implementation of multiple evidence-based interventions was associated with a significant decline in hypodermoclysis-associated cellulitis cases among geriatric patients.

REFERENCES

1. Rochon PA, Gill SS, Litner J, Fischbach M, Goodison AJ, Gordon M. 1997. A systematic review of the evidence for hypodermoclysis to treat dehydration in older people. J Gerontol A Biol Sci Med Sci 52(3):M169-176.
2. Worobec G, Brown MK. 1997. Hypodermoclysis therapy. In a chronic care hospital setting. J Gerontol Nurs 23(6):23-28.
3. Remington R, Hultman T. 2007. Hypodermoclysis to treat dehydration: a review of the evidence. J Am Geriatr Soc 55(12):2051-2055.
4. Xiao H, Barber J, Campbell ES. 2004. Economic burden of dehydration among hospitalized elderly patients. Am J Health Syst Pharm 61(23):2534-2540.
5. Schols JM, De Groot CP, van der Cammen TJ, Olde Rikkert MG. 2009. Preventing and treating dehydration in the elderly during periods of illness and warm weather. J Nutr Health Aging 13(2):150-157.
6. Weinberg AD, Pals JK, Levesque PG, Beal LF, Cunningham TJ, Minaker KL. 1994. Dehydration and death during febrile episodes in the nursing home. J Am Geriatr Soc 42(9):968-971.
7. Hussain NA, Warshaw G. 1996. Utility of clysis for hydration in nursing home residents. J Am Geriatr Soc 44(8):969-973.
8. Dasgupta M, Binns MA, Rochon PA. 2000. Subcutaneous fluid infusion in a long-term care setting. J Am Geriatr Soc 48(7):795-799.
9. Frisoli Junior A, de Paula AP, Feldman D, Nasri F. 2000. Subcutaneous hydration by hypodermoclysis. A practical and low cost treatment for elderly patients. Drugs Aging 16(4):313-319.
10. Barua P, Bhowmick BK. 2005. Hypodermoclysis--a victim of historical prejudice. Age Ageing 34(3):215-217.
11. O'Keeffe ST, Lavan JN. 1996. Subcutaneous fluids in elderly hospital patients with cognitive impairment. Gerontology 42(1):36-39.
12. Slesak G, Schnurle JW, Kinzel E, Jakob J, Dietz PK. 2003. Comparison of subcutaneous and intravenous rehydration in geriatric patients: a randomized trial. J Am Geriatr Soc 51(2):155-160.
13. Mei A. 2009. Hypodermoclysis: maintaining hydration in the frail and elderly. Annals of Long Term Care 17(5):28-30.
14. Sasson M, Shvartzman P. 2001. Hypodermoclysis: an alternative infusion technique. Am Fam Physician 64(9):1575-1578.
15. Brown MK, Worobec, F. 1997. Hypodermoclysis: another way to replace fluids. Nursing2000 30(5):58-59.
16. Schen RJ, Singer-Edelstein M. 1981. Subcutaneous infusions in the elderly. J Am Geriatr Soc 29(12):583-585.
17. Fainsinger RL, MacEachern T, Miller MJ, Bruera E, Spachynski K, Kuehn N, Hanson J. 1994. The use of hypodermoclysis for rehydration in terminally ill cancer patients. J Pain Symptom Manage 9(5):298-302.
18. Molloy DW. 1992. Hypodermoclysis in the care of older adults. Canadian Family Physician 38:2038-2043.
19. Barton A, Fuller R, Dudley N. 2004. Using subcutaneous fluids to rehydrate older people: current practices and future challenges. Qjm 97(11):765-768.
20. Costello JM, Graham DA, Morrow DF, Potter-Bynoe G, Sandora TJ, Laussen PC. 2009. Risk factors for central line-associated bloodstream infection in a pediatric cardiac intensive care unit. Pediatr Crit Care Med 10(4):453-459.
21. Mermel LA, Farr BM, Sherertz RJ, Raad, II, O'Grady N, Harris JS, Craven DE. 2001. Guidelines for the management of intravascular catheter-related infections. Clin Infect Dis 32(9):1249-1272.
22. Racadio JM, Doellman DA, Johnson ND, Bean JA, Jacobs BR. 2001. Pediatric peripherally inserted central catheters: complication rates related to catheter tip location. Pediatrics 107(2):E28.
23. Tian G, Zhu Y, Qi L, Guo F, Xu H. 2009. Efficacy of multifaceted interventions in reducing complications of peripherally inserted central catheter in adult oncology patients. Support Care Cancer.
24. Berenholtz SM, Pronovost PJ, Lipsett PA, Hobson D, Earsing K, Farley JE, Milanovich S, Garrett-Mayer E, Winters BD, Rubin HR, Dorman T, Perl TM. 2004. Eliminating catheter-related bloodstream infections in the intensive care unit. Crit Care Med 32(10):2014-2020.
25. Harako ME, Nguyen TH, Cohen AJ. 2004. Optimizing the patient positioning for PICC line tip determination. Emerg Radiol 10(4):186-189.
26. SaferHealthCareNow. 2009 How-to Guide: prevent central line infections.

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The audit process: Part II Setting the audit criteria

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ABSTRACT

Infection prevention and control process audits are an important element in the achievement of a healthcare setting's patient safety goals. The successful audit can result in enhanced partnerships between infection control professionals and other departments and services in the organization, facilitates change implementation and lead to continuing improvement in outcomes for patients/residents and staff. In this second part of the audit process, selecting the audit criteria or elements for an audit tool and designing a data collection form are described.

Key words
Audit; infection control; quality; patient safety; audit criteria; data collection form

Acknowledgements
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INTRODUCTION

A clinical audit is *"a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change"* (1). In Part I of this series, *The Audit Process: Part I Pre-audit Preparation* (2), the need for process audits in infection prevention and control (IP&C) was discussed. IP&C audits assist with IP&C policy and procedure development; guide staff educational programs; and further a climate of safer healthcare in the facility or healthcare setting. Infection control professionals (ICPs) who undertake audits act as role models and change agents (3).

Stages in the audit process include setting standards, testing practice against these standards, providing results and constructive feedback to those audited, correcting practice where it falls short and re-testing to ensure that the standards are now being met. In this instalment of the audit process, choosing the elements of the audit tool (i.e., the criteria to be audited) and developing a data collection form will be discussed.

METHODS

The audit process fills the gap between policy and practice (4). Before carrying out the audit, an auditor must be chosen (and trained if necessary) and the area or department to be audited is determined; an approved audit method is established; and the criteria to be audited are selected. Criteria (or elements) of the audit tool are based on accepted standards and best practices in the area to be audited. Once these steps have been completed, the audit may be administered (Figure 1). Following the audit, modification of practice and subsequent demonstration of improvement in practice through re-auditing closes the audit loop (see Part III of this series) (1,5).

Setting the criteria to be audited

A criterion is *"a systematically developed statement that can be used to assess the appropriateness of specific healthcare decisions, services and outcomes"* (6). The criteria of an IP&C audit are the elements that the auditor will observe and evaluate. Examples of these are workplace practices, infection prevention and control practices, staff education/knowledge assessment, physical environment and facility engineering controls.

Audit criteria are classified as structure, process or outcome:

- **Structure criteria** refer to the availability and organization of resources, including personnel (e.g., provision of alcohol-based hand rub at point-of-care; availability of IP&C guidelines for each procedure)
- **Process criteria** refer to what is done with the healthcare setting's resources (e.g., compliance with hand hygiene protocols; IP&C practice follows facility guidelines)
- **Outcome criteria** measure the effect of the activities on the client/patient/resident (e.g., infection rates).

Before developing the criteria for a specific process audit, the audit topic must be selected. This audit selection will be based on the type of audit to be carried out. Infection prevention and control audits may include:

- Audits identified by regulatory bodies as necessary to be performed (e.g., hand hygiene)
- Audits that seek to ensure high-risk, high-volume health care activities (e.g., surgical site infections)
- Audits that seek to ensure that specific IP&C activities are being put into practice within various healthcare delivery settings (e.g., operating room, hemodialysis, endoscopy, community centres, first response settings)
- Audits that seek to review IP&C professional readiness and preparation (e.g., self-audits of practice)
- Audits that seek to evaluate the comprehensiveness of IP&C program components (e.g., allocation of budget and personnel resource audits).

In the past, IP&C activities have focused primarily on outcome audits, i.e., surveillance activities aimed at generating infection rates. Measuring structure or process criteria that have been proven to affect outcome may be a more cost-effective and sensitive measure of the quality of care (1).

Audit criteria are evaluated against existing standards, guidelines, best practices and/or literature reviews, such as:

1. National standards (e.g., Canadian Standards Association – CSA)
2. Provincial regulations (e.g., Occupational Health and Safety regulations, regulations for hospitals/nursing homes)
3. National guidelines (e.g., Public Health Agency of Canada infection control guidelines, CHICA-Canada position statements)
4. Provincial best practices (e.g., Ontario's Provincial Infectious Diseases Advisory Committee – PIDAC, Manitoba Health Communicable Disease Control, Provincial Infection Control Network of British Columbia - PICNet)
5. International guidelines (e.g., World Health Organization – WHO, Centers for Disease Control and Prevention – CDC, Association for Professionals in Infection Control and Epidemiology - APIC)
6. Recognized IP&C texts and the published literature.

Achievement of a standard or target requires compliance with the criteria grouped together under the standard (1) and reflects the care or practices that are required. Standards can be set either as a target percentage to be achieved or as 100% compliance. Compliance less than 100% will require follow-up. The urgency of follow-up will depend on the level of risk assessed for the deficiency. Determining the level of risk will be discussed further in Part III of this series, *Closing the Loop*.

If performance targets are set according to appropriate criteria, the attainment of these targets should result in improved care. In contrast, if quality of care is assessed against inappropriate criteria, then resources may be wasted on making changes which are unlikely to result in improvement.

Audit criteria must be (7):

- measurable
- observable by the auditor
- evidence-based
- explicit vs. implicit
- related to important aspects of care
- linked to health outcomes which are clear, influenced by process and occur within a short period.

Designing a data collection form/tool

Data collection forms should be standardized so that consistent terminology and definitions are used; consistent scoring methods are applied; and the appearance of the forms are similar so that users become familiar with the various components of the form. An audit form should not take more than 60 minutes to complete.

The simplest type of audit tool to administer is one which has a quick and easy scoring system requiring ticks to yes/no-type observations or questions. IP&C audit elements should be worded in a manner that will result in a positive (or "*yes*") response if the criteria is met, indicating that a particular standard of practice is in effect.

The following guidelines will assist in translating audit process and structure criteria into audit tool elements:

- Include the title and date of the audit, for easy identification
- Include contact details of the auditor
- Include instructions for completing the form; if you offer options, give instructions such as "tick the box" or "circle the appropriate answer"
- Include instructions for returning the form
- Audit elements should be clear and unambiguous; the inclusion of a standardized glossary may be helpful
- Clarify what format you want the data to be in (e.g., time of admission expressed using 24-hour clock)
- Audit elements should be well spaced out to prevent the form from becoming cluttered
- Choose an appropriate font size that will be easy for the auditor to read
- If you want auditor opinions or comments, allow space for these
- Keep elements as succinct as possible.

Validating the audit tool

The final steps in the development of an audit tool should be done in collaboration with stakeholders and key experts.

Figure 1: Setting the audit criteria

This can be achieved by:

- Involving area staff, managers, CHICA-Canada chapter members and those recognized as experts in the area to review the audit tool
- Piloting the tool to ensure that all criteria are captured and that the tool is easy to understand and use
- Revising the tool based on stakeholder, expert and piloting feedback
- Ensuring that all references used in the development of the tool are included
- Reviewing the audit tool on a regular basis to ensure it continues to address IP&C best practices.

DISCUSSION

The development of an audit tool is a lengthy process that cannot be rushed. Each tool will require a rigorous review process involving content experts and stakeholders to ensure that the tool is robust and current. Validation of audit tools is required to be sure that the audit criteria accurately reflect the concept that they are intended to measure. Before putting an audit tool into practice, it should undergo expert review from individuals or groups that are knowledgeable about the subject matter of the audit tool.

The audit tool should also be trialed by users in a real-life situation to be sure that the criteria are **reliable** (*"accurately and consistently identify the events they are designed to identify across multiple health care settings"*) and **reproducible** (*"findings can be repeated consistently when applied to new populations, to different facilities or by different individuals"*) (8). Finally, an ongoing review process for audit tools should be determined once they are put into use. Review is based on a pre-set schedule. The release of new guidelines or best practices should also trigger a review.

CHICA-Canada has developed a number of audit tools for members utilizing this rigid, exacting review process. CHICA-Canada audit tools have been subjected to intensive review by the Audit Tool working group, CHICA-Canada's Standards and Guidelines Committee (S&G) and CHICA-Canada interest groups with expertise in a particular area (e.g., dialysis audit tools were reviewed by the Dialysis Interest Group). Audit tools were also sent to professional organizations or external experts in the subject matter (e.g., operating room tools were reviewed by the Operating Room Nurses Association of Canada).

If you are using the CHICA-Canada Audit Toolkit, CHICA-Canada has:

- Developed the auditing criteria on selected subject areas for you based on Canadian standards and best practices; these criteria may be adapted for other locations where there are differences in national guidelines
- Provided the data collection form for you
- Made provisions for an ongoing review process of all audit toolkit components available to CHICA-Canada members on the website so that they are up-to-date and reflect current IP&C best practices.

REFERENCES

1. Hay A. Audit in infection control. J Hosp Infect 2006;62(3):270-7.
2. Bialachowski A, Clinker K, LeBlanc M, McDonald S. The audit process: Part I. Pre-audit preparation. Can J Infect Control;25(1):68-70.
3. Millward S. Using Infection Control (IC) Link Practitioners to audit IC standards in the Independent Healthcare sector and provide robust evidence of practice. J Hosp Infect 2006;64 Suppl 1:S91.
4. Friedman C, Richter D, Skylis T, Brown D. Process surveillance: auditing infection control policies and procedures. Am J Infect Control 1984;12(4):228-32.
5. French GL. Closing the loop: audit in infection control. J Hosp Infect 1993;24(4):301-8.
6. Institute of Medicine. Guidelines for clinical practice: from development to use. Washington, DC: National Academic Press; 1992.
7. National Institute for Clinical Excellence. Principles for best practice in clinical audit. Oxford: Radcliffe Medical Press. 2002.
8. Nadzam DM, Soule BM. Performance Measures. In: APIC Text of Infection Control and Epidemiology. Washington, DC: Association for Professionals in Infection Control and Epidemiology, Inc.; 2009.

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DIG screening recommendations for routine surveillance of methicillin-resistant *Staphylococcus aureus* and vancomycin-resistant enterococci in the hemodialysis setting

By CHICA-Canada Dialysis Interest Group[1]

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BACKGROUND

Hospital-acquired infection (HAI) is a major concern in healthcare facilities today. According to Zoutman et al. (1), it is estimated 220,000 occurrences of HAI result in over 8,000 deaths annually in Canadian hospitals. Furthermore, opportunities for transmission of methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant enterococci (VRE) have moved beyond acute care facilities as more patients move between acute care and ambulatory and/or chronic care (3).

Literature indicates high risk patients are more inclined to acquire MRSA and VRE. Patients vulnerable to colonization and infection include those with severe disease (e.g., renal disease, cardiac disease, diabetes), especially those with compromised host defences. In addition to co-morbidities, medical interventions such as central venous catheter usage, antibiotic usage, admission to hospital, and recent surgery have been associated with the acquisition of MRSA and VRE. As the hemodialysis patient is at significant risk for acquiring MRSA and VRE, it is in the best interest of key stakeholders to ensure all appropriate strategies are in place to prevent further transmission within our hemodialysis settings (2).

Preventing the transmission of MRSA and VRE depends on timely detection in the hemodialysis setting. Screening for these organisms allows early identification of colonized and/or infected patients. The magnitude of the problem within each setting across Canada varies. Consequently, the approach to screening of MRSA and VRE must be tailored to the specific needs of the high-risk, hemodialysis population and individual institution. The management of those patients identified as MRSA or VRE positive should be guided by the epidemiology of the local community.

RECOMMENDATIONS

Routine surveillance screening will assist to identify patients who are asymptomatic and colonized with MRSA or VRE. Furthermore, surveillance will aid the dialysis unit/program to monitor trends while ensuring the appropriate preventive practices are in place (3).

It is the responsibility of each hemodialysis unit/program to develop, implement, and maintain a policy/procedure on surveillance and management of MRSA and VRE that reflects the epidemiology of these organisms in the unit/program and local community.

Admission of any patient to the hemodialysis unit/program should NOT be denied based solely on MRSA or VRE status.

1. Routine Practices should be consistently used for all patients regardless of diagnosis, and tailored to the characteristics of the patients and their environment. Patients known or suspected to be infected or colonized with certain organisms will require additional precautions based on the modes of transmission of these organisms.
2. Frequency of screening shall be tailored to meet the needs of each dialysis program as determined by the pressure of MRSA or VRE within the unit/program and the region.
3. Routine screening should include:
   a. Unit/Program Admission:
      i. All new patients admitted to the hemodialysis unit/program should be screened for antibiotic-resistant organisms (AROs) according to unit/program policy to ensure an ARO baseline status on admission.
   b. Transfer from Another Unit/Program:
      i. Screen patients within seven days prior to commencing hemodialysis treatment. Indicate whether

the patient has taken antibiotics within 48 hours of specimen collection.

ii. Frequency of repeat screening should be determined by unit/program policy.

Note: Specimens may show a false negative result if the patient is on an antibiotic to which the organism is sensitive. MRSA may not show up on specimens taken from patients who have recently had an antimicrobial bath. Surveillance specimens should be taken once the antibiotic has been discontinued for 48 hours (4).

The screening protocol of each individual dialysis unit/program will determine what sites are cultured for MRSA and VRE. If results of screening are not available at the commencement of hemodialysis, consider placing such patients on additional precautions until the results of screening tests are available.

c. Contact follow-up: A contact is defined as an individual who is exposed to a person colonized or infected with an antibiotic resistant organism in a manner allowing transmission to occur (4).

i. All patients identified as a MRSA or VRE contact per unit/program policy require at least one set of screening specimens post exposure to a known case of MRSA or VRE. Indicate whether the patient has taken antibiotics within 48 hours of specimen collection.

d. Travel:

i. Patients should be screened within seven days prior to arrival at visiting unit, and managed according to results of these cultures. If results are not available, patients should be managed with additional precautions or per unit/program policy. MRSA or VRE positive status is not an indication to deny admission.

ii. If the visiting patient has not been screened before arrival to the unit and, is going to be in the unit for only one visit or for less than a week, it is reasonable to implement additional precautions for this patient instead of screening.

iii. Screen patients for MRSA and VRE when returning to their home unit after travel to another dialysis unit outside their jurisdiction. While awaiting results, manage patients on additional precautions for MRSA and VRE or as directed by the unit/program. Additional precautions and supplementary culturing may be required, per unit/program policy and/or infection prevention and control direction.

4. Sites to be screened for MRSA may vary depending on local epidemiology provincial guidelines. At a minimum, screening should include:

- Swab from anterior nares
- Swab from all open wounds
- Additional sites according to site/program policy

5. Sites to be screened for VRE may vary depending on local epidemiology/provincial guidelines. At a minimum, screening should include:

- Rectal/ostomy swab (fecally stained)
- Additional sites according to site/program policy

6. Point prevalence: Prevalence screening of MRSA and VRE should be performed when there is evidence of ongoing transmission. Frequency of prevalence screening should be based on local and/or provincial incidence and prevalence statistics. Regular prevalence screening (at a minimum annually) may assist in monitoring trends and guide management decisions. Screening intervals may need to be altered related to the amount of activity in the area (3).

REFERENCES

Zoutman, D. E., Ford, B. D., Bryce, E., Gourdeau, M., Hebert, G., Henderson, E., & Paton, S. (2003). The state of infection surveillance and control in Canadian acute care hospitals. *American Journal of Infection Control [AJIC], 31* (5), 266-273.

Health Canada. Laboratory Centre for Disease Control, Division of Nosocomial and Occupational Infections. Infection Control Guidelines. Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health Care. *Canada Communicable Disease Report*. 1999; Volume 25S4.

Siegal, J.D., Rhinehart, E., Jackson, M., Chiarello, L., & the Healthcare Infection Control Practices Advisory Committee [HICPAC] (2006). *Management of multidrug-resistant organisms in healthcare settings.* Available from The Centers for Disease Control & Prevention Web site: http://www.cdc.gov/ncidod/dhqp/pdf/ar/MDROGuideline2006.pdf

Provincial Infectious Diseases Advisory Committee [PIDAC] (2007). *Best practices for infection prevention and control of resistant Stapahylococcus aureus and Enterococci in all healthcare settings.* Available from Ministry of Health and Long-Term Care Web site: http://www.health.gov.on.ca/english/providers/program/infectious/diseases/best_prac/bp_staff.pdf

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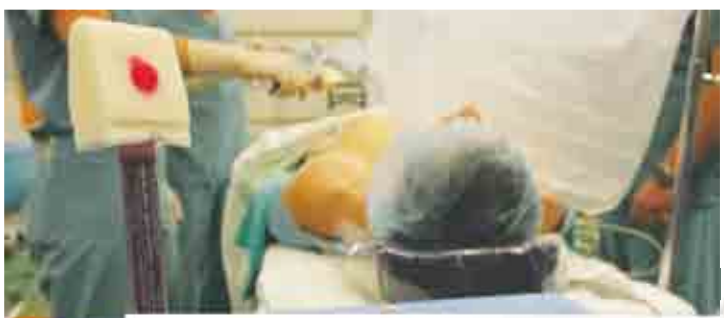

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-New England Journal of Medicine, January 2010

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[1] Darouiche, R.O., Wall, M.J., & Kamal, M.F. et al. (2010). Chlorhexidine-Alcohol versus Povidone-Iodine for Surgical-Site Antisepsis. New England Journal of Medicine, 362, 18-26.

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Golden opportunities seized

Anne Bialachowski, RN, BN, MS, CIC
President, CHICA-Canada

Our 2010 National Conference in Vancouver was an incredible success and I would like to thank the organizing committee for all of their hard work. I would also like to extend a heartfelt thank-you to CHICA-BC, the host chapter. They helped behind the scenes in countless ways and ensured visiting delegates felt welcome.

The work of so many selfless volunteers was led by our very capable Executive Director Gerry Hansen and her assistant Kelli Wagner. I am certain that if you asked any of the volunteers they would agree that developing the program, running the event and/or assisting with the many tasks was an opportunity they would not have missed. As stated by Thomas Edison, "Opportunity is missed by most people because it is dressed in overalls and looks like work." It can also be said that out of work comes tremendous rewards.

There were an unprecedented number of poster and oral poster submissions this year. Choosing a winning poster or oral presentation from so many high caliber presentations was a real challenge.

Our corporate partners, conference sponsors, and many exhibitors filled the exhibit hall to capacity and they took the opportunity to educate attendees about new and existing products. The Virox Technologies Partners Scholarship became more accessible to new practitioners with changes to the application and adjudication process. A total of 18 new and seasoned ICPs were able to benefit from the education and networking. The impact of these scholarships in nuturing the growth and development of ICPs cannot be understated.

Dr. Maureen Cividino nominated Dr. Mary Vearncombe for the inaugural Champions of Infection Prevention and Control award, sponsored by 3M Canada, and then provided a moving presentation when Mary was selected as the first winner. I think there were many teary eyes in the room that morning. We thank 3M for sponsoring an award which showcases excellence in IPAC practice.

Dr. Dick Zoutman received an honourary membership for his many years of dedicated service to CHICA-Canada as the physician director. He played a large role in building CHICA into the organization it is today. For those of you hoped to get a glimpse of him in costume were not disappointed when he attended the Sock Hop as a greaser, a.k.a. The Fonz.

The 5th annual run for IFIC drew more runners and walkers than ever before. Our colleagues from the Infection Prevention Society in the UK will be sponsoring a similar run at their conference in the fall. As president, I will be attending their conference and plan to participate in their run for IFIC. I just wish I didn't dislike running so much.

For the first time, an interactive lunch was held during the practitioner day workshops. Members of the board, chapter presidents and other CHICA leaders hosted tables and attendees sat at pre-assigned tables. There was resoundingly positive feedback from these lunches and they will be included in future conferences. The social events were all well attended. There were some really great costumes at the Sock Hop! We laughed and danced until our sides hurt.

As current economic challenges across the globe continue, we will need to be able to quantify the opportunities available through CHICA. IPAC employers' support is critical to the ongoing development of our membership. The value of attending conferences and participating in CHICA-Canada chapters, committees and activities must be clearly communicated so organizations can understand the benefits that their support can and will reap.

Des occasions en or saisies

Anne Bialachowski, RN, BN, MS, CIC
Présidente, CHICA-Canada

Notre congrès national 2010 à Vancouver est une véritable réussite et j'aimerais remercier le comité organisateur de son travail remarquable. Je remercie chaleureusement aussi la section de la Colombie-Britannique de l'Association pour la prévention des infections à l'hôpital et dans la communauté (CHICA), qui était l'hôte du congrès. Ces gens se sont acquittés d'innombrables tâches en coulisses et ont fait en sorte que les participants se sentent bien accueillis.

Les nombreux bénévoles altruistes œuvraient sous la direction de notre très compétente directrice générale Gerry Hansen et de son assistante Kelli Wagner. Je suis convaincue que tous vous diraient que l'élaboration du programme, le déroulement du congrès et les nombreuses tâches accomplies constituaient autant de belles occasions à ne pas manquer. Citons Thomas Edison : « La plupart des gens ratent des occasions parce que celles-ci se présentent vêtues d'une salopette et sont perçues comme des corvées. » [Traduction] Il est utile d'ajouter que le travail apporte de formidables gratifications.

Citons Thomas Edison : « La plupart des gens ratent des occasions parce que celles-ci se présentent vêtues d'une salopette et sont perçues comme des corvées. » [Traduction] Il est utile d'ajouter que le travail apporte de formidables gratifications.

Fort heureusement, de nombreux autres participants au congrès ont saisi eux aussi les occasions qui se présentaient. Cette année, il y a eu un nombre sans précédent de présentations sur affiche et de présentations orales. Choisir parmi cette profusion de communications de grand calibre représentait un véritable défi.

Le salon des exposants était bondé grâce à nos entreprises partenaires, aux commanditaires du congrès et aux nombreux exposants; les participants on pu y prendre connaissance de produits nouveaux et existants. Les bourses d'études Virox Technologies et partenaires sont devenues accessibles à de nouveaux professionnels à la suite de changements apportés au processus de présentation des demandes et d'attribution. En tout, 18 professionnels en PCI nouveaux et chevronnés ont pu bénéficier d'une formation et du réseautage. Les effets que peuvent avoir ces bourses d'études sur l'évolution et le perfectionnement des professionnels en PCI sont inestimables.

La D^re^ Maureen Cividino a présenté la candidature de la D^re^ Mary Vearncombe pour l'attribution du premier prix des défenseurs de la prévention et du contrôle des infections, une commandite de 3M

Canada, puis elle a fait une touchante présentation de Mary lorsque cette dernière s'est vue décerner le prix. Je pense que ce matin-là, de nombreuses personnes dans l'assistance ont essuyé une larme. Nous remercions 3M de commanditer un prix mettant de l'avant l'excellence dans les mesures de prévention et de contrôle des infections.

Le Dr Dick Zoutman a reçu le titre de membre honoraire pour ses nombreuses années de dévoués services à titre de médecin-chef de CHICA-Canada. Il a joué un rôle important dans la consolidation de l'organisation qu'est devenue aujourd'hui CHICA. Ceux d'entre vous qui aviez hâte de le voir déguisé n'ont certainement pas été déçus lorsqu'il s'est présenté à la soirée rétro « Sock Hop » en « The Fonz », le rocker rebelle de l'émission de télévision Happy Days.

La 5e course annuelle au bénéfice de l'IFIC a attiré des coureurs et des marcheurs en plus grand nombre que jamais. Nos collègues de l'Infection Prevention Society au Royaume-Uni organiseront une course semblable à leur congrès de l'automne. En qualité de présidente, j'assisterai à leur congrès et j'ai l'intention de participer à la course pour l'IFIC. Si seulement je ne détestais pas autant courir!

> « La situation économique mondiale étant toujours difficile, nous devrons être en mesure de quantifier les retombées des occasions offertes grâce à CHICA. »

Pour la première fois, il y a eu un lunch interactif pendant la journée consacrée aux ateliers des praticiens. Des membres du conseil d'administration, des présidents des sections régionales et d'autres leaders de CHICA assuraient l'animation aux tables et les participants occupaient des places désignées à l'avance. Les réactions ont été extrêmement positives, si bien que cette activité sera intégrée aux futurs congrès. Il y a eu une forte participation à toutes les activités sociales. Il y avait vraiment de beaux déguisements à la soirée « Sock Hop »! Nous avons dansé et ri à nous tenir les côtes.

La situation économique mondiale étant toujours difficile, nous devrons être en mesure de quantifier les retombées des occasions offertes grâce à CHICA. Le soutien des employeurs des professionnels en PCI est essentiel à la poursuite du perfectionnement de nos membres. Or, afin que les organisations puissent se rendre compte des avantages que leur soutien peut procurer et procure effectivement, il faut leur communiquer clairement la valeur ajoutée que représente la participation aux congrès ainsi qu'aux sections régionales, aux comités et aux activités de CHICA-Canada.

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Growing chapters growing association

Gerry Hansen, BA
Executive Director, CHICA-Canada

CHICA-Canada has just welcomed its 21st Chapter. CHICA Peel Region received its charter at the Opening Ceremonies during the Vancouver conference. Chapter President Alexis Silverman proudly accepted the charter, saying that this was not the end of hard work, but just the beginning in creating a strong and proactive chapter.

As the 21st Chapter, CHICA Peel Region has a lot of CHICA-Canada chapter history to emulate. The Toronto Practitioners in Infection Control (now Toronto Professionals in Infection Control (TPIC)) was the first chapter, chartered in 1980. They are now the largest chapter, having 321 members (April 2010), and have a strong educational and networking program in place. They have hosted the CHICA-Canada conference four times, interestingly for the first time in 1979 before they were officially a chapter! TPIC will co-host for the fifth time in 2011. The smallest CHICA chapter in terms of membership is CHICA Renfrew County with 25 members (April 2010). This small but mighty chapter is increasing its membership along with its programs.

In May 2010, three chapters were acknowledged as having the largest percentage of membership increase in 2009/2010. CHICA Newfoundland Labrador, an extraordinarily active chapter, had a phenomenal 91% increase during the period; CHICA Central East Ontario had a 62% membership increase, and CHICA Renfrew County is in the top three with a 56% increase in membership.

How does a chapter increase membership? More importantly, how does a chapter maintain membership?

Membership will increase as word spreads in the IP&C community about the value of belonging to a chapter of a national organization which itself is growing and gaining in profile. The value to the chapter member is in useful and innovative education programs, which may be one or two hours at the end of a chapter meeting, or a full day of education at a regional chapter conference. The value to the member is in discussion with peers about practice issues and collaboration on projects to enhance their practice. The value to the member is constant communication from the chapter about issues, resolutions, questions and answers. The value to the member is membership in a national organization that has become the voice of infection prevention and control in Canada and represents its members at all levels of government and external agencies.

> The 2010/2011 Member and Source Guide has been delivered. Change for the 2011/2012 publication must be received by December 31, 2010. If you are a CHICA-Canada member and did not receive the 2010/2011 directory, please contact CHICA-Canada.

Membership will be sustained through creative chapter programs and active communication. A review of the CHICA-Canada journal, the website, and the annual report will show current and potential members, as well as their employers, that CHICA-Canada and its chapters are resolved to increase the profile of Infection Prevention and Control Professionals and decrease the instances of healthcare acquired infections through education, networking and collaboration.

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Photos by Dave Roels, Vancouver

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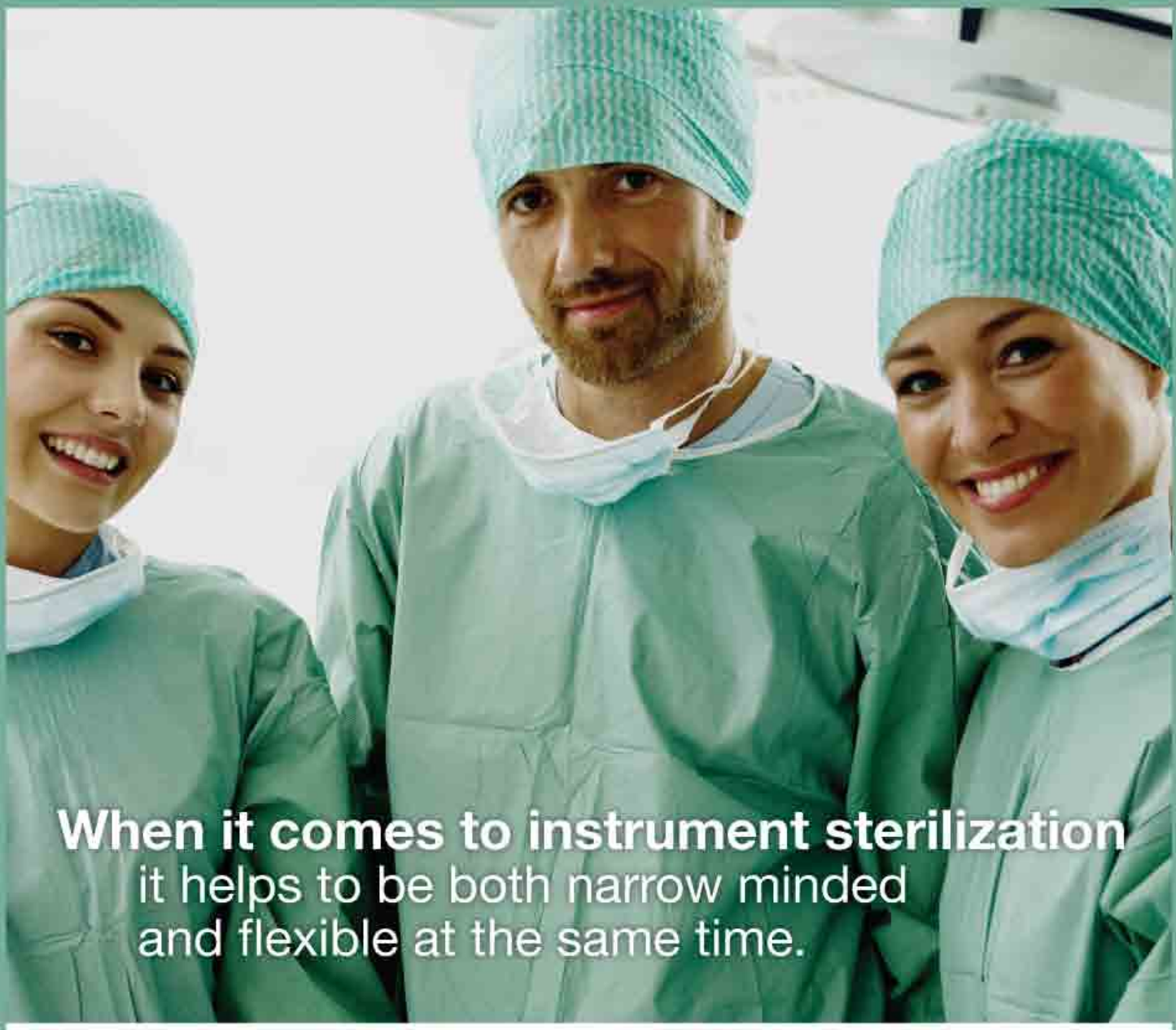

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PRESTIGIOUS HONOURS IN VANCOUVER

Dr. Mary Vearncombe and Dr. Dick Zoutman have been recognized with two of CHICA-Canada's top honours. The awards were presented at the Opening Ceremonies of the Vancouver conference.

Dick Zoutman, Anne Bialachowski, Mary Vearncombe

Dr. Vearncombe has been named the 2010 Champion of Infection Prevention and Control. A tireless advocate for infection prevention and control in all healthcare settings, a mentor to many practitioners, and a nationally recognized expert in infection control issues, Dr. Vearncombe has been recognized for her extraordinary service to the profession. She is the first recipient of the award, sponsored by 3M Canada. At the Breakfast of Champions, Dr. Vearncombe was introduced by Dr. Maureen Cividino who delivered an emotional, and often humorous, overview of Mary's intense dedication, along with a whimsical glimpse into how young Mary inadvertently predicted her adult calling. Dr. Vearncombe followed with an inspirational yet humble overview of the activities and philosophies which resulted in her award.

Dr. Dick Zoutman was inducted as an Honourary Member of CHICA-Canada. During Dr. Zoutman's 12 years as the Physician Director of CHICA-Canada, he was instrumental in the evolution of the profession and the association. As Physician Director of CHICA-Canada, Dr. Zoutman was active in the establishment of a working relationship with Accreditation Canada and the Canadian Patient Safety Institute. He also developed the model for the Corporate Membership policy and Corporate Relations Committee.

THE FOLLOWING IS A MESSAGE FROM DR. DICK ZOUTMAN ON THE OCCASION OF BEING INDUCTED AS AN HONOURARY MEMBER OF CHICA-CANADA:

Dear Madam President, *Members of the Board, and fellow CHICA Members*
I wish to express my heartfelt gratitude for being bestowed an Honourary Membership in CHICA Canada.

CHICA is a very special organization. It is THE national, international and local voice of infection prevention and control. It has been a special privilege to see CHICA enter the 21st century and its quarter century as a vibrant and growing professional association. Membership in CHICA provides us with so much. From our terrific website with so much current information to wonderful audit tools, special interest groups spanning all areas of infection prevention and control, training opportunities and endless professional development resources such as the world-class scientific meetings each year.

I strongly encourage all members to participate fully in the work of CHICA, be it in your local chapter, special interest groups, projects, committees, and service on the board. The strength and influence of our profession and CHICA depends upon the commitment of its members to the mission.

I am deeply grateful for the opportunity I have had to serve you on the board and the many committees.

Thank you for making me an Honourary Member of CHICA Canada.
– Sincerely, Dick Zoutman, MD, FRCPC

Anne Bialachowski, Maureen Cividino, Mary Vearncombe, Christian Blyth (3M Canada)

Anne Bialachowski and Alexis Silverman, President of CHICA Peel Region

2010 Scientific Committee: Louise Holmes, Linda Kingsbury, Pamela Kibsey, Zahir Hirji, Amanda Knapp, Jim Gauthier, Lee Hanna, Marion Yetman, Molly Blake. Inset: Gerry Hansen

CHICA PEEL REGION The 21st Chapter!

CHICA-Canada's 21st chapter has been presented with its charter. Alexis Silverman, President of CHICA Peel Region, accepted the charter from President Anne Bialachowski. This moment marked dedicated efforts from Peel Region ICPs to form the newest chapter. Membership in the chapter is rising steadily, with representation from all health care settings, including strong representation from Public Health and EMS.

Many Thanks

CHICA-Canada thanks the 2010 Scientific Program Committee for developing a strong educational program for the 2010

Photos by Dave Roels, Vancouver

conference. The work of the nationally pointed committee is 18 months of planning that culminates in a program that addresses the IP&C issues in all health care settings. This year's program was innovative and included both new and emerging educational issues.

The organization of a national conference would not be possible without the support of the local chapter. CHICA-Canada thanks CHICA British Columbia for its support during the planning process, for facilitation of the volunteer staff, and above all for its warm hospitality and good humour, especially during the "sauna" days of the conference. Special thanks go to Robyn Hunter, Gail Busto, Jacqueline Hlagi and Bev McCarthy. Thank you, CHICA BC!

IN THE EXHIBIT HALL

CHICA-Canada would like to thank the many exhibitors and not-for-profit associations who participated in the 2010 Industry Showcase. The Exhibit Hall, Foyer and Registration Area were filled with activity. Attendees were able to meet directly with the suppliers of products and services for infection prevention and control. Exhibitors were able to meet with representatives of all healthcare settings, and all provinces and territories of Canada, as well as guests from the United States, Saudi Arabia, India, Denmark and the United Kingdom.

The Exhibit Passport was a fun event that encouraged exhibitor and attendee participation. The winners were:
Webcam: Janice Banford, Ottawa, ON
Portable DVD Player:
Jessica Ip, Richmond, BC
Kindle: Erin McFarland, Barrie, ON

Photos by Dave Roels, Vancouver

2010 ECOLAB POSTER CONTEST WINNER

Melody Cordoviz of Alberta Health Services, Royal Alexandra Hospital in Edmonton is the winner of the 2010 Ecolab Poster Contest. Her winning entry is a simple child's chalkboard drawing showing the theme "Infection Control – It's Simple!" Sponsored annually by Ecolab Healthcare, the poster contest generates many great entries. All who submitted their creative ideas for this year's poster are appreciated for their support.

2010 National Infection Control Week (NICW) is October 18-22. The 2010 theme will be used in institutions throughout Canada to encourage good hand hygiene and other infection prevention and control safe practices. NICW 2010 is co-hosted by CHICA Newfoundland Labrador.

Watch for the announcement of the 2011 Poster Contest in the autumn issue of the journal. **The 2010 poster is available to members as a free download from www.chica.org**

VIROX SCHOLARSHIP BRINGS 18 ATTENDEES TO VANCOUVER

Through the support of Virox Technologies and its partners, Deb Canada, Johnson-Diversey, Steris Corporation, and Webber Training, 18 attendees received funding to attend the conference. This year's winners

are not only geographically diverse but also are representative of Novice, Intermediate, and Advanced Practitioners. The increased 2010 scholarship was able to provide funding to an extended group of ICPs with various levels of experience.

2010 WINNERS ARE:

Janice Briggs, Winnipeg, MB
Cassandra Brubacher, London, ON
Susan Cooper, Kingston, ON
Debbie Demizio Fonthill, ON
Sylvia Eaton, Prince George, BC
Debra Foster, Prince Rupert, BC
Lola Gushue, Gander, NL
Danielle Henry, Berwick, NS
Sally Martin, Tillsonburg, ON
Bev Morgan, Hanover, ON
Lyndsay O'Hara, Vancouver, BC
Kathie Pender, Yellowknife, NT
Patsy Rawding, Halifax, NS
Shelly Rempel, Steinbach, MB
Alexis Silverman, Brampton, ON
Angela Thomas, Halifax, NS
Mary Vachon, Nanaimo, BC
Amber-Leah Wolfe, Edmonton, AB

Sandra Callery accepts the 2009 Editorial Board Award from Anne Bialachowski (left) and Pat Piaskowski, Clinical Editor (right). The award was made to authors Victoria Williams, Sandra Callery, Mary Vearncombe, Andrew Simor for their article *Utility of environmental sampling for the prevention of transmission of Vancomycin resistant enterococci (VRE) in hospitals* (Williams, Callery, Vearncombe, Simor; Canadian Journal of Infection Control Vol. 24 No. 2, Summer 2009).

2010 Virox Technologies Partnership Scholarship winners and sponsors.

CHICA-CANADA
www.chica.org

WATCH FOR THE 2011 VIROX SCHOLARSHIP APPLICATION AT WWW.CHICA.ORG.

DEADLINE DATE FOR APPLICATIONS: JANUARY 31, 2011.

CHICA-Canada 2010 Board of Directors: Anne Bialachowski, President; Donna Wiens, President-elect; Judi Linden, Director of Finance; Jennifer Grant, Director of Standards and Guidelines; Michael Gardam, Physician Director; Cathy Munford, Past-President; Karen Clinker, Director of Programs and Projects; Bern Hankinson, Secretary/Membership Director; Donna Moralejo, Director of Education

Karen Clinker, Director of Programs and Projects; Amber-Leah Wolfe, accepting for winning poster submitter Melody Cordoviz; Doug Hons, Ecolab Healthcare; Anne Bialachowski, President, CHICA-Canada. Inset: Melody Cordoviz

CHICA Southwestern Ontario is the winner of the 2010 3M Chapter Achievement Award. Chapter members and sponsors gathered for a photo.

CHICA-Canada 2010 Chapter Presidents

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Photos by Dave Roels, Vancouver

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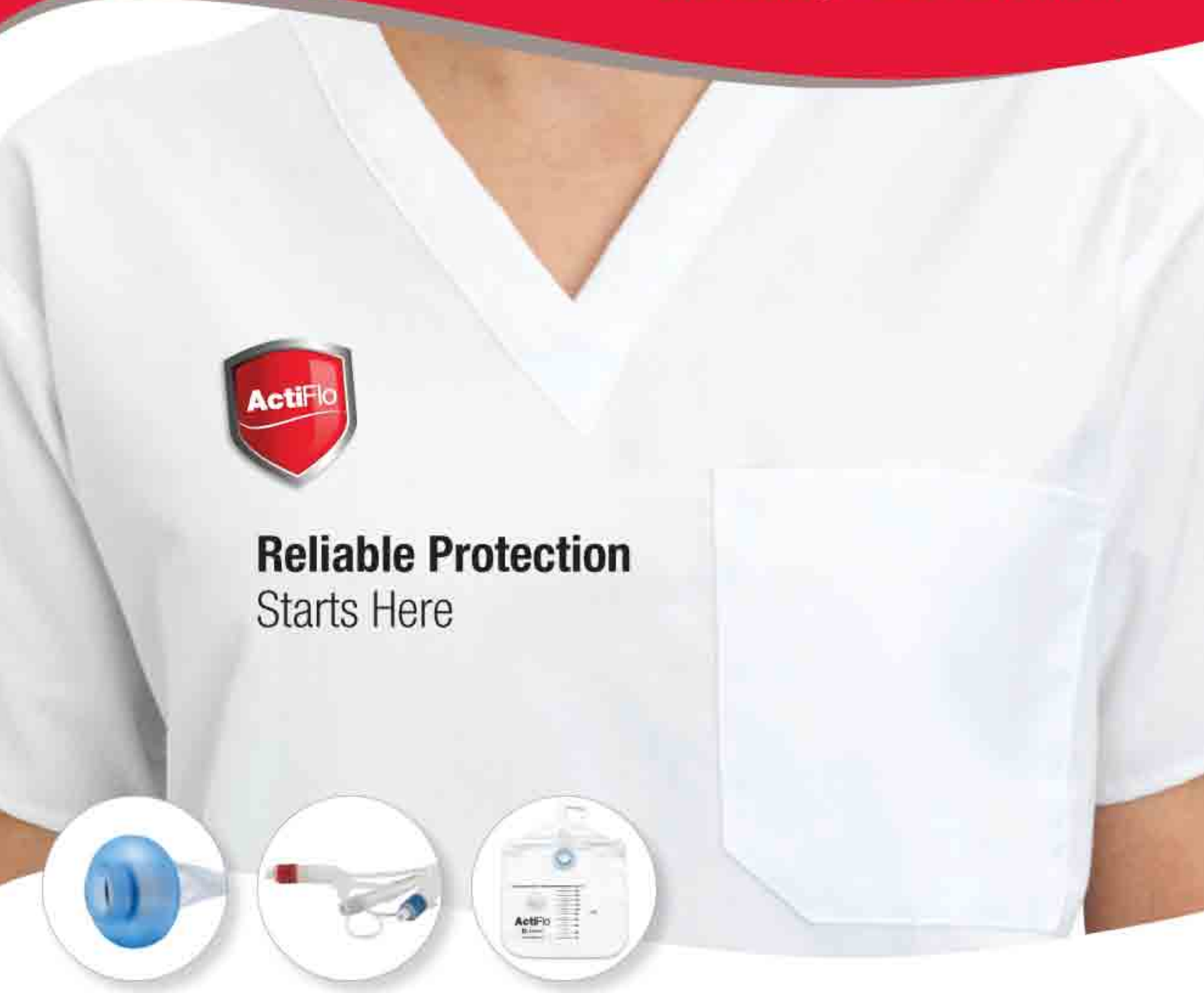

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1. Keshava A, Renwick A, Stewart P, Pilley A. A nonsurgical means of fecal diversion: the Zassi Bowel Management System. *Dis Colon Rectum*. 2007; 50:1017-1022.

AWARDS AND PRIZES

3M Chapter Achievement Award
CHICA Southwestern Ontario

Ecolab Poster Contest
Melody Cordoviz,
Alberta Health Services, Edmonton

Strut Your Stuff! Breakfast (2011 Membership)
Linda Borycheski, Mississauga, ON

Early Bird Registration Draw (2011 Conference Registration)
Mary Vachon, Nanaimo, BC

I thought you'd never ask
Melanie Barbascy, Kingston, ON

Best Oral Presentation: *Academic Resource Kit For Infection Prevention And Control: Putting The Current Resources In The Hands Of Instructors Educating Healthcare Students*
Laurie Boyer, North Bay, ON
Laurie Boyer[1], Isabelle Langman[1], Carolyn Inglis[2]
[1]*Northeastern Ontario Infection Control Network, Ontario, Canada,*
[2]*Canadore College, North Bay, Ontario, Canada*

Best Poster: *Partnerships And Collaboration Between Infection Prevention and Control Professionals and Environmental Services*
Helen Gibson, Nicki Saunders, Teri Murduff, Mike Cabral
Lakeridge Health, Oshawa, Ontario, Canada

Best First Time Abstract: *Friends Helping Friends: Peer Auditing In The Central Supply Area: A Non-Biased Approach To Auditing The Central Sterile Supply Room*
Linda Howard[1], Mona Williams[1], Barbara Dowdall[2], Sue Hemeon[2], Colette Ouellet[3]
[1] *Carleton Place & District Memorial Hospital, Carleton Place, Ontario*
[2] *Perth & Smith Falls District Hospital, Smiths Falls, Ontario*
[3] *Champlain Infection Control Network, Ottawa, Ontario*

2009 Editorial Award: *Utility of environmental sampling for the prevention of transmission of Vancomycin resistant enterococci (VRE) in hospitals (Williams, Callery, Vearncombe, Simor; Canadian Journal of Infection Control Vol. 24 No. 2, Summer 2009)*

Exhibit Passport Prizes
Webcam: Janice Banford, Ottawa, ON
DVD Player: Jessica Ip, Richmond, BC
Kindle: Erin McFarland, Barrie, ON

CHICA Songs & Games Submitter
Susan Lim, Chilliwack BC
(sponsored by Ecolab Healthcare)

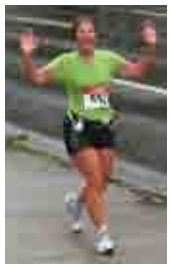
2011 Roulette Draw for 2011 Registration:
Joanne Baines, Victoria, BC
Christine Franic, Nanaimo, BC
Azra Sharma, Vancouver, BC

Chapters with highest increase in 2009/2010 membership (one complimentary 2011 membership):

- CHICA Newfoundland Labrador (91%)
- CHICA Central East Ontario (62%)
- CHICA Renfrew County (56%)

2010 RUN FOR IFIC

1st overall	Natalie Hiltz
2nd overall	Andrea Enns
3rd overall	Jayvee Guerrero
1st ICP	Jim Gauthier
1st Physician	Diane Roscoe
Most money raised	Diane Roscoe



Many thanks to Bev McCarthy of CHICA BC and her volunteers for organizing a beautiful run through downtown Vancouver. Thanks also to the Running Room for their support and to Deb Canada for its sponsorship of the event.

The following abstract was revised after printing in the spring 2010 CJIC. The revised abstract was presented as a poster presentation in Vancouver:

EVALUATION OF THE EVOTECH® ENDOSCOPE CLEANER AND REPROCESSOR (ECR) BY SIMULATED-USE AND CLINICAL-USE TESTING

Alfa MJ [1,2], Olson N[1], Fatima I[1], DeGagne D[2]
[1]St. Boniface Research Centre, Microbiology Research Lab, Winnipeg, MB.
[2]St. Boniface General Hospital, NFA Endoscopy Department, Winnipeg, MB.

Background: The EVOTECH® ECR has received FDA clearance for cleaning claims. Despite this, the SGNA alerted users in 2007 and 2009 to continue with manual cleaning of endoscopes until clinical testing data was available to confirm the ECR could provide adequate cleaning without full manual cleaning. The objective of this study was to perform simulated-use as well as clinical testing of the ECR cleaning cycle to determine if the cleaning was effective.
Methods: The benchmarks for effective cleaning of all channels and surfaces were: < 6.4 ug/cm2 of protein, < 1.8 ug/cm2 of hemoglobin and < 4 log10 viable bacteria/cm2. For simulated-use testing, all scopes channels and two surfaces were inoculated with Artificial Test Soil (ATS) containing 8 Log10/mL of Enterococcus faecalis, Pseudomonas aeruginosa and Candida albicans. Soiled scopes were put through a "clean only" ECR cycle (detergent only). Colonoscopes, duodenoscopes and bronchoscopes were included in the simulated-use testing phase and each lumen and two surface sites were tested in triplicate for bioburden and protein. A clinical study was also performed on 15 patient-used bronchoscopes, and 20 each of; duodenoscopes, colonoscopes and gastroscopes. Surface (2 sites) and all channels of each patient used scope were tested after a "clean only" ECR cycle to quantify residual bioburden, protein and hemoglobin.
Results: In the simulated-use phase, for all scope types and channels tested the protein reduction achieved was >99% and the bioburden reduction factor (RF) was > 4 logs (i.e. met all benchmarks). In the clinical phase, of 55 scopes (130 lumens) tested post-cleaning, only 1/130 (< 1%) had 4.47 Log10 cfu/cm2 residual bioburden (i.e. slightly above benchmark). All 108 surfaces met the bioburden benchmark. All channels and surfaces met the benchmarks for hemoglobin and only 4/108 surfaces (3.6%) slightly exceeded the protein benchmark.
Conclusions: The EVOTECH® ECR provides reliable organic and bioburden removal from channels and surfaces of endoscopes without manual cleaning.

The following abstract was inadvertently withdrawn from publication. It was presented as a poster presentation in Vancouver.

BUILDING A CASE FOR ADDITIONAL CLEANING STAFF

Zahir Hirji, Karen Foster, Barb Paul
Bridgepoint Health, Toronto, Canada

Issue: Bridgepoint Health is a rehabilitation/complex care hospital. Our physical layout doesn't support proper infection control practices. Evidence suggests that controlling organisms in the environment can contribute to decreased transmission. Project: Build a business case for additional cleaning staff. Information utilized included:
Rates for organisms
Length of stay statistics
Environmental service staffing changes
Environmental cleaning audit results
Cleaning routines from PIDAC Best Practices for Environmental Cleaning
Workload measurements from the Ontario Healthcare Housekeepers Associations
Internal review of practices
Results: MRSA nosocomial rate in 2008 was 27.4 per 100000 patient days. 75% occurred on the medical rehabilitation/activation unit, including 100% of the hospital's VRE transmission. Admissions increased 40% in complex care and 25% in rehab. No environmental services staffing changes since 2005. Cleaning audits illustrated many sites were not clean after one pass. Best practice guidelines identified surfaces that were not being cleaned routinely. Workload measurements reflected a 1.4 FTE deficit for one unit. The internal review estimated 22.5 hours that could be reallocated. Cleaning staff were added in May 2009 to the MRA unit. Since adding the staff 4 events of nosocomial transmission occurred in 7 months compared to 43 in the previous 18 months.
Lessons Learned: AROs continue to increase. Maintaining a clean environment is imperative, especially in poorly designed areas. Using best practices and workload measurements can assist in identifying efficiencies. Aligning our recommendations with the hospital's vision and mission demonstrated the importance of cleaning to senior management, who have preliminary approved the additional resources.

Ontario Hospital Association: A viewpoint
How patients got involved in infection control

By Tom Closson

In 1999, the Institute for Medicine published a report which revealed the shocking statistic that 44,000 to 98,000 people die annually due to errors in inpatient hospital treatment in the U.S.

In May 2004, a Canadian Adverse Events Study (1) concluded that the Canadian incidence of adverse events was not much better; of the almost 2.5 million annual hospital admissions in Canada, about 185,000 involved an adverse event, and nearly 70,000 were potentially preventable.

Despite the statistics, the Canadian general public still held little interest in patient safety and adverse events. In December 2004, the Ontario Hospital Association (OHA) conducted patient focus groups to talk to patients about their involvement in their health care. When asked about "patient safety," patients focused on elements of personal safety (e.g., theft, patient-to-patient aggression, etc.), and while important, patient safety entails much more.

Since then, hospitals have worked diligently to embed patient safety into all aspects of hospital operations. But, it wasn't until 2008, when the rate of *Clostridium difficile* (C. difficile) and deaths associated with C. difficile gripped media headlines that the general public became interested in patient safety.

In the spring of 2008, the OHA conducted another series of focus groups and found a heightened awareness of healthcare-acquired infections and their connection to patient safety. In other words, patient safety had finally permeated into the public's psyche – not through the route of medication safety or wrong site surgery, but rather through the lens of infection prevention and control.

"In the spring of 2008, the OHA conducted another series of focus groups and found a heightened awareness of healthcare-acquired infections and their connection to patient safety. In other words, patient safety had finally permeated into the public's psyche – not through the route of medication safety or wrong site surgery, but rather through the lens of infection prevention and control."

Infection prevention and control continues to be a key area of interest for both patients and professionals alike. In fact, as the ultimate symbol of public sanction, the March 2010 issue of *Consumer Reports* highlighted the issue of Central Line Infections (CLI) and went so far as to rank hospitals by their infection rates. Imagine that – from stereos to CLIs!

But, consumers' interest in monitoring infections is extremely good news. It is good that the public understand the importance of infection prevention and control. It is equally good that the public know they have a role to play in their own healthcare. Campaigns such as the OHA's "Your Healthcare – Be Involved", "Clean Hands Protect Lives" (available at **www.oha.com**) and others actively encourage patient engagement in their care.

And new legislation, particularly in Ontario, has also been helping to further involve patients in their own care. Ontario's newly introduced *Excellent Care for All Act* specifically builds in measures to address patient, client and caregiver relations and ensure processes are in place to assess and act on patient satisfaction.

Improving the quality of the patient experience is the focus for every hospital and health care provider; it's also, now, more than ever, a major focus for patients too.

1. Baker, R. and Norton, P., et.al. "The Canadian Adverse Events Study: the incidence of adverse events among hospital patients in Canada". *Canadian Medical Association Journal*. 170(11). May 25, 2004.

OUR CONCERN FOR THE ENVIRONMENT IS MORE THAN JUST TALK

As we continue to deliver valuable information through the pages of this magazine, in a printed format that is appealing, reader-friendly and not lost in the proliferation of electronic messages that are bombarding our senses, we are also well aware of the need to be respectful of our environment. That is why we are committed to publishing the magazine in the most environmentally-friendly process possible. Here is what we mean:

- We use lighter publication stock that consists of recycled paper provided by an FSC Certified supplier. This Forest Stewardship Council (FSC) standard ensures that our paper comes from efficiently managed forests with proper replanting programs that make this a RENEWABLE and SUSTAINABLE resource.
- Our computer-to-plate technology reduces the amount of chemistry required to create plates for the printing process. The resulting chemistry is neutralized to the extent that it can be safely discharged to the drain.
- We use vegetable oil-based inks to print the magazine. This means that we are not using resource-depleting petroleum-based ink products and that the subsequent recycling of the paper in this magazine is much more environment friendly.
- During the printing process, we use a solvent recycling system that separates the water from the recovered solvents and leaves only about 5% residue. This results in reduced solvent usage, handling and hazardous hauling.
- We ensure that an efficient recycling program is used for all printing plates and all waste paper.
- Within the pages of each issue, we actively encourage our readers to REUSE and RECYCLE.
- In order to reduce our carbon footprint on the planet, we utilize a carbon offset program in conjunction with any air travel we undertake related to our publishing responsibilities for the magazine.

So enjoy this magazine...and KEEP THINKING GREEN.

Perspectives on certification in infection prevention and control

By Fran Feltovich,
RN, MBA, CIC, CPHQ,
2010 CBIC President

Have you ever asked why we go through the preparation and process of becoming certified? Why we strive to take the next step in our education, experience or careers? Why do so many employers require or prefer a certified infection prevention and control (IP&C) professional? What value does the certification hold for this professional?

Certification validates our knowledge and indicates a certain level of competency. IP&C professionals who have made the effort to become certified and maintained certification, demonstrate they are competent to practice and are dedicated to the profession. Additionally, the CIC® credential provides employers with assurance of their IP&C professional's competency and demonstrates the individual's personal commitment to excellence. Certification increases your credibility within your facility, among your peers and with the public. The IP&C professional also finds personal and professional value in achieving certification and in maintaining it.

Consumers of healthcare rely on licensure and certification to identify healthcare professionals who have the qualifications and competence to provide care. "As time passes, a license or certification must be renewed. What assurance is there that the public's confidence in the ongoing competence of the certified professional is justified? What requirements are in place that the certification renewal processes offer meaningful protection for the public and other stakeholders? The public's confidence depends on demonstrating the appropriate rigor in the certification renewal process" (1).

Accredited certification process

The CBIC certification program is accredited by the National Commission for Certifying Agencies (NCCA). The NCCA's mission is to "help ensure the health, welfare, and safety of the public through the accreditation of certification programs that assess professional competence" (2). To maintain NCCA accreditation, CBIC must demonstrate compliance with all 21 NCCA standards. NCCA accreditation signifies the highest standards for establishing that a valid, reliable and secure certification process has been fulfilled. These standards address five major areas: 1) purpose, governance and resources; 2) responsibilities to stakeholders; 3) assessment instruments; 4) recertification; and 5) maintaining accreditation.

CBIC must have policies and procedures in place to address complaints concerning "conduct harmful to the public or inappropriate to the discipline (e.g., incompetence, unethical behavior, or physical/mental impairment affecting performance). These policies and procedures must ensure appropriate treatment of sensitive information and fair decision making" (2). CBIC has such policies in place. What follows summarizes CBIC's policy on inappropriate use of the CIC® designation.

Sanctions for inappropriate use of the CIC® designation

CIC® is a federally registered trademark and property of the Certification Board of Infection Control and Epidemiology, Inc. Persons who may use the CIC® designation are those who have successfully passed the computer-based examination (CBT) or the web-based Self-Achievement Recertification Examination (SARE) within the previous five (5) years.

No other person or persons are permitted to use the CIC® designation including, but not limited to persons who fail to pass either the CBT or SARE. Individuals discovered using the designation and misrepresenting themselves as certified in IP&C may have the following sanctions imposed upon them:

- Issuance of a "Cease and Desist" order by the Massachusetts Federal District Court which may include:
- A minimum statutory fine of $1000
- Payment of all court costs for trademark owner
- Deemed untrustworthy or unethical and permanently denied the opportunity to attempt the CBT or SARE and the use of the CIC®.
- Deemed untrustworthy or unethical and denied use of the CIC® even with a passing examination score if the use of the CIC® was made prior to the announcement of the passing grade and awarding of the CIC® by CBIC.

Other sanctions not named above may be imposed by the CBIC Board of Directors with guidance from CBIC legal counsel.

Becoming certified and maintaining certification demonstrates a commitment to our professional growth. Demonstrate your personal commitment to excellence by becoming certified and maintaining your Board Certification in Infection Control. Proudly display your CIC® credential.

References

Henderson, JP National Organization for Competency Assurance: Practices and Requirements of Renewal Programs in Professional Licensure and Certification, November 11, 2008

National Commission for Certifying Agencies, Standards for the Accreditation of Certification Programs, November 2006

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