

# Canadian Healthcare Facilities

JOURNAL OF CANADIAN HEALTHCARE ENGINEERING SOCIETY

Volume 36 Issue 4

Fall/Automne 2016

## A MATTER OF HONOUR

CHES recognizes 2016 awards  
recipients for outstanding achievements



Energizing Wastewater  
New Patient Hoist Guidelines  
Ultraviolet Germicidal Irradiation



## ASCO invites you to explore 3 to 18 cycle and 30 cycle power transfer switches

### 88%\* of engineers agree — Selective coordination requires choice, not compromise

Selective coordination demands the ability to choose. After all, since no two emergency and backup power systems are alike, why settle for a cookie-cutter selective coordination design?

#### ASCO Power Transfer Switches:

- Achieved industry first 3-cycle rating
- Qualified 18-cycle performance on core 3-cycle switch, another industry first
- Satisfy the demands of unique applications with a 30-cycle option
- Truly optimize selective coordination for what the application requires (typically an 18-cycle transfer switch)
- Provide a cost effective solution by utilizing 3 to 18 cycle ratings
- Are certified to UL-1008, 6th edition (April, 2011) test criteria

Compare power transfer switches for selective coordination applications. Then, select ASCO.

[www.EmersonNetworkPower.com/ASCO](http://www.EmersonNetworkPower.com/ASCO), (800) 800-ASCO (2726), [ascoapu.com](http://ascoapu.com), [customer-care@asco.com](mailto:customer-care@asco.com)

\* Results reflect the opinions of more than 300 engineers polled in a recent Webcast exit survey.

#### ASCO Power Switching & Controls

Just another reason why Emerson Network Power is a global leader in maximizing availability, capacity and efficiency of critical infrastructure.

# ASCO®



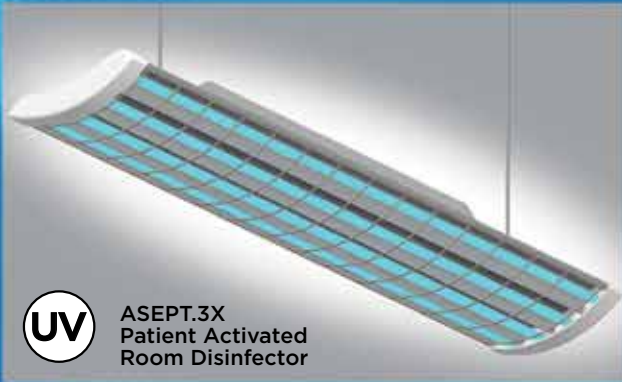
**EMERSON™**  
Network Power

Emerson and ASCO are trademarks of Emerson Electric Co. or one of its affiliated companies. ©2015 Emerson Electric Co. CS101 ASCO Power Technologies

**EMERSON. CONSIDER IT SOLVED.™**

# CAN YOU IMAGINE A HOSPITAL THAT PROVIDES A SAFE HAVEN FOR YOUR PATIENTS?

A hospital room that can be disinfected by a patient at the push of a button.



**UV** ASEPT.3X  
Patient Activated  
Room Disinfector

A patient bathroom that disinfects itself.



**UV** ASEPT.1X  
Automatic Bathroom / Utility Room  
/ Equipment Room Disinfector

A sink without biofilm or risk of CPE outbreaks.



**O<sub>3</sub>** SmartFLO<sub>3</sub>  
Ozonated  
Water Hand  
Hygiene Sink

A toilet seat that reduces bacteria almost on contact.



**Cu** BioFree  
Copper-coated  
Toilet Seat

A mobile disinfection system that provides Log 6 reduction in just 5 minutes.




**UV** ASEPT.2X Mobile Room Disinfection

**Dr William Rutala:**

“Prevent all infectious transmission associated with the environment in 5 years via research/technology/automation/competency.”

APIC 2016 Plenary Presentation

1.800.242.9723  
info@class1inc.com  
www.class1inc.com  
 @Class1inc

**CLASS1 INC.**  
Building Better Healthcare™

Proud to be a founding member [chaircanada.org](http://chaircanada.org)



# CONTENTS



14

## DEPARTMENTS

- 6 Editor's Note
- 8 President's Message
- 10 Chapter Reports
- 12 CHES Gallery

## CHES AWARDS

- 14 Wayne McLellan Award
- 16 Hans Burgers Award
- 18 President's Award

## SUSTAINABLE HEALTHCARE

- 20 **A Matter of Waste**  
Energy exchange opportunities leveraging building, municipal sewage water
- 24 **Pathways to Green Engagement**  
PHSA committed to embedding sustainability in organizational culture

## INFECTION PREVENTION & CONTROL

- 26 **Seeing the Light**  
UVC light engineer's weapon in battle against superbugs
- 30 **An Engineered Intervention**  
VGH undertakes clinical investigation of bone marrow transplant unit in hopes of reducing HAIs

## REGULATORY UPDATE

- 34 **A Standard Boost**  
New patient hoist guidelines almost ready for lift off

## PATIENT PERSPECTIVE

- 36 **Bridging the Divide**  
E-health information sharing platform connects clinicians, improves access to patient data

## CANADIAN HEALTHCARE FACILITIES

Volume 36 Issue 4

**PUBLISHER/ÉDITEUR** Kevin Brown  
kevinb@mediaedge.ca

**ASSOCIATE PUBLISHER/  
ÉDITRICE ASSOCIÉE** Stephanie Philbin  
stephaniep@mediaedge.ca

**EDITOR/RÉDACTRICE** Clare Tattersall  
claret@mediaedge.ca

**SENIOR DESIGNER/  
CONCEPTEUR  
GRAPHIQUE SENIOR** Annette Carlucci  
annettec@mediaedge.ca

**PRODUCTION MANAGER/  
DIRECTEUR DE  
PRODUCTION** Rachel Selbie  
rachels@mediaedge.ca

**CIRCULATION MANAGER/  
DIRECTEUR DE LA  
DIFFUSION** Maria Siassini  
marias@mediaedge.ca

CANADIAN HEALTHCARE FACILITIES IS PUBLISHED BY MediaEdge UNDER THE PATRONAGE OF THE CANADIAN HEALTHCARE ENGINEERING SOCIETY.

SCISS JOURNAL TRIMESTRIEL PUBLIE PAR MediaEdge SOUS LE PATRONAGE DE LA SOCIÉTÉ CANADIENNE D'INGÉNIERIE DES SERVICES DE SANTÉ.

## CHES SCISS

**PRESIDENT** Mitch Weimer  
**VICE-PRESIDENT** Preston Kostura  
**PAST PRESIDENT** Peter Whiteman  
**TREASURER** Craig, B Doerksen  
**SECRETARY** Sarah Thorn  
**EXECUTIVE DIRECTOR** Donna Dennison

## CHAPTER CHAIRS

Newfoundland & Labrador: Colin Marsh  
Maritime: Helen Comeau  
Ontario: Roger Holliss  
Manitoba: Reynold J. Peters  
Saskatchewan: Alan F. Krieger  
Alberta: Tom Howard  
British Columbia: Steve McEwan

## FOUNDING MEMBERS

H. Callan, G.S. Corbeil, J. Cyr, S.T. Morawski

## CHES

4 Cataragui St., Suite 310, Kingston, Ont. K7K 1Z7  
Telephone: (613) 531-2661 Fax: (866) 303-0626  
E-mail: ches@eventsmgt.com [www.ches.org](http://www.ches.org)

Canada Post Sales  
Product Agreement No. 40063056  
ISSN # 1486-2530



Committed to service excellence

- Structural Restoration
- Structural Engineering
- Building Science
- Parking Facility Design

Read Jones Christoffersen Ltd. Engineers

[rjc.ca](http://rjc.ca)



# FACT:

## Always Compliant.

EZ-Path® Fire-Rated Pathways are the **ONLY** cable firestop devices that are exempt from maintenance\* and do not require annual inspection. Unlike other sleeves, **ONLY** EZ-Path® Pathways have no moving parts and require no action to activate the internal sealing mechanism, letting you remotely pull cables through multiple barriers at once. **ONLY** EZ-Path® Pathways are always compliant — eliminating downstream costs to continuously save you time and money.



\*The UL® Evaluation Service Report (ESR) for EZ-Path confirms the maintenance-free nature of the product by clearly stating, "The EZ-Path® Series 22, 33, and 44+ Fire-Rated Pathways do not require regular maintenance when properly installed as outlined above. Each device remains maintenance free following installation, aside from any necessary repairs due to damage or alteration to the device."

## **EZ-Path®** Pays for Itself. FIRE RATED PATHWAY

### Notable EZ-Path® Fire-Rated Pathway Projects

- ▶ McCaig Tower Medical Centre, Alberta Health Services – Calgary, AB
- ▶ Calgary South Health Medical Center – Calgary, Alberta
- ▶ Children's Hospital – Calgary AB
- ▶ Winnipeg Womens' Hospital – Winnipeg, MB
- ▶ Centre Hospitalier de l'Université de Montréal (CHUM) – Montréal, Québec
- ▶ Kelowna General Medical Centre – Kelowna, BC
- ▶ Vernon Jubilee Medical Centre – Vernon, BC
- ▶ Regina Qu'Appelle Health Region – Regina, SK
- ▶ SickKids Hospital – Toronto, Ontario
- ▶ Humber River Regional Hospital – Toronto, Ontario



Specified Technologies Inc. [stifirestop.com](http://stifirestop.com)

**GET THE FACTS ▶**

Scan to learn more about the  
**UL® Evaluation Service Report**  
Or visit [www.stifirestop.com/esr](http://www.stifirestop.com/esr)



# HAIL TO THE VICTORS



**FALL KICKS OFF AWARDS SEASON** for the film and television industry, beginning with the Emmys. Though the CHES awards, also presented in September, wane in comparison to the glitz and glamour of the primetime Emmys, they are no less important.

Recognizing the outstanding contributions to healthcare facilities management and engineering, this year's Wayne McLellan and Hans Burgers award recipients are the Horizon Health Network and Mike Hickey, respectively, both of which were honoured at the 2016 CHES National Conference gala banquet. Not to be forgotten is the Ontario chapter, which nudged out six other CHES chapters to win the much-coveted President's award. You can read all about the victors beginning on pg. 14.

From here we turn our attention to sustainability and Canada's healthcare system, which was a topic discussed by many at this year's National conference. To begin, we delve into energy exchange opportunities leveraging building and municipal wastewater. Then we look at the great work the Provincial Health Services Authority has done, and continues to do, to raise the bar in environmental awareness amongst its employees.

Healthcare acquired infections (HAIs) continue to be a hot topic. *Seeing the Light* explores the efficacy of ultraviolet C (UVC) light systems in reducing patients' risk of acquiring a HAI. *An Engineered Intervention* details a clinical study of the bone marrow transplant unit at Vancouver General Hospital. The research project was undertaken to better understand the interactions of microbes, patients, their healthcare workers and the environment, which will inform and improve infection control practice, ultimately reducing HAIs.

Rounding out this issue is our regulatory update. In this CHES member Q&A, Andrea Holbeche of the CSA Group provides insight into a new standard — Z10535.2, Lifts for the Transfer of Persons: Installation, Use and Maintenance. We also look at ConnectingGTA, a system that allows health service providers to securely share patient information across local health networks, and its implementation at Markham Stouffville Hospital.

Clare Tattersall  
claret@mediaedge.ca

Reproduction or adoption of articles appearing in Canadian Healthcare Facilities is authorized subject to acknowledgement of the source. Opinions expressed in articles are those of the authors and are not necessarily those of the Canadian Healthcare Engineering Society. For information or permission to quote, reprint or translate articles contained in this publication, please write or contact the editor.

**Canadian Healthcare Facilities Magazine Rate**

Extra Copies (members only)	\$25 per issue
Canadian Healthcare Facilities (non members)	\$30 per issue
Canadian Healthcare Facilities (non members)	\$80 for 4 issues

A subscription to Canadian Healthcare Facilities is included in yearly CHES membership fees.

La reproduction ou l'adaptation d'articles parus dans le Journal trimestriel de la Société canadienne d'ingénierie des services de santé est autorisée à la condition que la source soit indiquée. Les opinions exprimées dans les articles sont celles des auteurs, qui ne sont pas nécessairement celles de la Société canadienne d'ingénierie des services de santé. Pour information ou permission de citer, réimprimer ou traduire des articles contenus dans la présente publication, veuillez vous adresser à la rédactrice.

**Prix d'achat du Journal trimestriel**

Exemplaires additionnels (membres seulement)	25 \$ par numéro
Journal trimestriel (non-membres)	30 \$ par numéro
Journal trimestriel (non-membres)	80 \$ pour quatre numéros

L'abonnement au Journal trimestriel est inclus dans la cotisation annuelle de la SCISS.

IS YOUR BOTTOM LINE  
FEELING THE HEAT?



TAKE AIM ON ENERGY AND HEAT LOSS.

Properly installed mechanical insulation saves energy and tons of money. Schedule an energy audit with one of our techs.

We can quickly show you the savings and payback using data from the thermal imaging gun which is uploaded to the 3e Plus Energy Software.

IS YOUR FACILITY WASTING MONEY?  
PAYBACKS IN AS LITTLE AS 3 MONTHS!  
WE'RE SHOVEL READY TO SAVE, ARE YOU?



The **ISAVE** Team



## A WALK TO REMEMBER



**AS A RESIDENT OF GREATER VANCOUVER**, I was thrilled to welcome attendees from across Canada to CHES's 36th annual conference at the Vancouver Convention Centre, Sept. 11-13. The National conference is the highlight of the year for many and the culmination of a lot of hard work on behalf of the planning committee. This year was no exception as we saw the fruits of its labour in another amazing event. I would like to personally thank the planning committee for all the time and effort it put into organizing the conference over the past 18 months.

While at the conference, I hope everyone had a chance to enjoy some West Coast culture and see "Super Natural B.C." We were blessed with great weather, an outstanding venue on the waterfront and a breathtaking setting, which was filled with seaplanes and cruise ships coming and going. As I was walking around Canada Place early one morning, I was hailed by a CHES friend from Ontario who was aboard a docking cruise ship. He had voyaged from Alaska. Now that's arriving in style.

The CHES National conference is an opportunity to meet colleagues (both new and old) from across the country, as well as see the latest and greatest from exhibitors and sponsors that support the event year after year. The trade show was well put together and featured a variety of informative booths. The standout education program offered a broad spectrum of topics based around this year's theme, 'Risky Business: Is Healthcare Sustainable?'. The final plenary session allowed attendees to rub shoulders with two of Canada's pre-eminent healthcare codes and standards gurus, Gordon Burrill and Richard Dixon, who discussed the top 10 lessons learned from the conference. I am confident the sessions helped attendees continue their education journey and learnings will be converted into actions at home. Following the conference, we held a well-attended two-day Canadian Healthcare Construction Course (CanHCC) workshop.

I would like to congratulate the winners of the 2016 CHES awards. This year, the deserving recipients are the Horizon Health Network (Wayne McLellan Award of Excellence in Healthcare Facilities Management), Mike Hickey (Hans Burgers Award for Outstanding Contribution to Healthcare Engineering) and the Ontario chapter (President's Award).

As we move through fall into winter, we continue to work with our CHES members in Quebec as they take the next steps in forming a chapter. I would like to challenge members from coast-to-coast to look into the Canadian Certified Healthcare Facility Manager (CCHFM) program to see if you have what it takes to obtain certification.

I want to take this opportunity to thank each one of you for everything you've done to make CHES strong, and for the tremendous effort you put into your job to create a healthcare system that is admired around the world. Never forget the positive impact you can have on the outcomes of patients, visitors and staff every day.

Mitch Weimer  
President, CHES National

### EARN CONTINUING EDUCATION CREDITS FROM CHES

Members of the Canadian Healthcare Engineering Society can earn free continuing education units (CEU) by reading the Fall 2016 issue of *Canadian Healthcare Facilities* and passing a quiz based on its articles. Once you've read the issue from cover to cover, simply go online to [www.surveymonkey.com/r/FTF9TH7](http://www.surveymonkey.com/r/FTF9TH7) to take the quiz. CHES members who pass the quiz will be able to claim one contact hour (0.1 CEU) on their CanHCC or CCHFM certificate renewals.



# MACH-ProView™

Celebrating

# 30

YEARS

of EXCELLENCE



STATview



SPACEview

LISTview

people and technology you can rely on.™

Celebrating thirty years of building automation excellence, Reliable Controls unveils the new MACH-ProView™ controller. This freely programmable, combination BACnet® building controller (B-BC) and BACnet operator display (B-OD) resides on Ethernet, Power over Ethernet, Wi-Fi or EIA-485 networks. Backed by an industry-recognized 5 year warranty and a nation-wide network of certified Authorized Dealers, the new MACH-ProView will empower you to stay in touch with your building's performance.

Member of  
**BACnet**  
International



ISO  
9001  
14001  
QUALITY  
MANAGEMENT  
ASSURANCE

[www.reliablecontrols.com/MPV](http://www.reliablecontrols.com/MPV)

**Reliable**  
controls

## CHAPTER REPORTS

### ONTARIO CHAPTER

---



Approximately six small working groups from the technical subcommittee on medical gases met throughout summer to have a final set of changes to Z7396-12, Medical Gas Pipeline Systems - Part 1: Pipelines for Medical Gases, Medical Vacuum, Medical Support Gases and Anesthetic Gas Scavenging Systems, ready for committee-wide review immediately following the 2016 CHES National Conference in September. The goal was to collectively agree to all changes for the release of the next version of the standard in early 2017. At this time, the technical subcommittee is on track to having the recommended revisions ready for public review before year's end.

Now that the 2016 CHES National Conference is behind us, the planning committee has begun the long series of meetings to flesh out the details of next year's event, to be held at the Scotiabank Convention Centre in Niagara Falls, Ont., Sept. 17-19.

—Roger Holliss, Ontario chapter chair

### NEWFOUNDLAND & LABRADOR CHAPTER

---



The Newfoundland & Labrador chapter has seen some changes at the executive level. Brian Kinden has stepped aside as chair after serving several years in the role, and I have accepted the position.

The chapter is actively seeking a replacement for my former role as vice-chair, as well as a new treasurer — Bill Squires has served in the position since 2009 — and someone to liaise with the CHES National board on the 2018 National conference in St. John's, Nfld. Other executive members include Randy Cull (secretary), Wayne Stokes (chapter representative on CHES National professional development committee) and Alphonsus Hanlon (chapter representative on CHES National partnerships and advocacy committee).

The professional development day was once again a great success. Approximately 60 attended the event, held at the Capital Hotel in St. John's, Nfld. For a second year in a row, the chapter had to turn away vendors that wanted to participate due to overwhelming demand. Seven vendors presented on a variety of topics, including: BOMA BEST; the challenges associated with biological control in cooling systems; specification and installation of resilient flooring in a healthcare environment; guaranteed energy performance contracting and the latest trends in healthcare; legionellosis risk management; inspecting and cleaning HVAC systems; and the importance of quality and details of the building envelope.

For the very first time, the chapter sent five members to the CHES National conference. Four attendees were from the executive team. The fifth was randomly drawn from the paid membership.

Bill Squires and I recently met with CHES executive director Donna Dennison and conference coordinator Jenny Oh to discuss the 2018 CHES National Conference. Representatives from Tourism St. John's were also in attendance. They provided a tour of the city's new convention centre. The venue is booked.

We are sitting in a solid financial position with approximately \$50,000 in the bank.

Chapter membership has been consistent. Presently, there are 37 active members. We continue to seek new membership.

—Colin Marsh, Newfoundland & Labrador chapter chair

### MARITIME CHAPTER

---



Planning is well underway for this year's education day, which will be held Nov. 22, at the Best Western Glengarry Hotel in Truro, N.S.

The 2017 CHES Maritime Chapter Spring Conference & Trade Show will be held at the Delta Halifax hotel, May 14-16. The planning committee is already hard at work, eager to surpass the success of this year's conference in Moncton, N.B.

Some of the revenue generated from the 2016 Maritime conference went toward covering the travel expenses of two members of the chapter executive to the CHES National conference in Vancouver. We felt that it would be an excellent learning and networking opportunity that would benefit the entire executive team and assist with leadership growth.

The vice-chair for Nova Scotia unexpectedly stepped down from his role due to a career change. Denis Pellichero has stepped up and accepted the position. Denis previously served as the Nova Scotia representative on the executive team.

The chapter is able to balance its books while offering several financial incentives to its members in the way of student bursaries, contributions to Canadian Certified Healthcare Facility Manager (CCHFM) exam fees, webinars, the fall education day and other rebates. The present bank balance is approximately \$56,000.

—Helen Comeau, Maritime chapter chair

### MANITOBA CHAPTER

---



The Manitoba chapter sponsored a session again at the Manitoba Building Expo. This year's event was held Oct. 4, at the Victoria Inn Hotel and Convention Centre in Winnipeg.

The cost to attend the session — From Conception to Delivery: The Women's Hospital Redevelopment Project — and trade show was covered by the chapter for all Manitoba CHES members.

The CHES Manitoba 2017 Education Day is scheduled for April 27. It will take place again at the Canad Inns Destination Centre Polo Park in Winnipeg. The chapter will send out an online survey this fall to obtain session topic suggestions.

—Reynold J. Peters, Manitoba chapter chair

### ALBERTA CHAPTER

---



The Alberta chapter has opted to move its annual Clarence White Conference & Trade Show to early spring from late fall, so there is no conference this year. The planning committee is starting to work on next year's event. Details with exact dates to come in December.

2016 is an election year for the chapter executive. If you are interested in sitting on the executive or expanding your role in CHES, please contact me or any member of the executive team.

The Alberta chapter will be working with CHES National staff on educational opportunities before year's end. We are always looking for suggestions or groups interested in providing learning opportunities. If you have any or you'd like to contribute in some way, please contact me to discuss further.

—Tom Howard, Alberta chapter chair

## SASKATCHEWAN CHAPTER

The 2016 CHES Saskatchewan Chapter Annual General Meeting, Conference & Trade Show will be over by the time the journal is published. While I'll have more to say on the conference in the Winter 2016/2017 issue, I did want to note that we decided to test drive a new format for our evening entertainment on Oct. 24, to create a more value-added event. The Monday reception will have been held in the same area as the trade show immediately following its closing. As a result, delegates, vendors and sponsors wouldn't have had to leave the venue.

The 2019 CHES National Conference will take place Sept. 22-24, at TCU Place in Saskatoon. Detailed conference planning has not yet started but will soon. We will strive to live up to the high standards set by other chapters.

—Alan F. Krieger, Saskatchewan chapter chair

## BRITISH COLUMBIA CHAPTER

It has been a busy year with the planning of the 2016 CHES National Conference in Vancouver. The conference planning committee and all subcommittees delivered a very successful event. The conference exceeded all expectations with more than 960 attendees, 331 delegates, 146 booths and a banquet of 625 guests. In support of the conference, the executive team sponsored more than 100 healthcare staff under the chapter's grassroots program. I would like to personally thank the organizing committee for all its hard work: conference chair Norbert Fischer, Sarah Thorn, Steve McTaggart, Mitch Weimer, Mark Swain, Ken Van Aalst, Arthur Buse, Wendy MacNicol, Kent Waddington, Preston Kostura, Jenny Oh and Donna Dennison.

Although the chapter executive has been fully committed to planning this year's National conference, it has started making preparations for the 2017 provincial conference in Penticton, B.C. To be held May 28-30, the theme of the conference is, 'Transforming Healthcare's Aging Infrastructure, Facilities and Workforce.' The call for education abstracts will be posted in November.

2016 was an election year for the B.C. chapter. The results are as follows: Steve McEwan (chair), Norbert Fischer (vice-chair), Mitch Weimer (past chair), Ken Van Aalst (treasurer), Sarah Thorn (secretary), Arthur Buse (membership), Mark Swain (communications) and Rick Molnar (education).

I would like to thank Steve McTaggart for all his years of service on the chapter executive. Steve has held many positions, including chair, vice-chair and, most recently, director of education. Of his notable achievements, Steve was the driving force behind the 2010 CHES National Conference in Whistler, B.C., which unquestionably was one of most successful and memorable national conferences to date.

—Steve McEwan, British Columbia chapter chair



Vancouver Convention Centre



## CuraFlo Fire-Sprinkler System Restoration



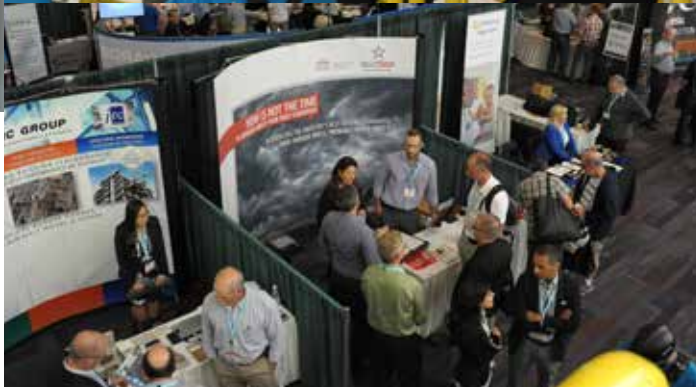
**The CuraFlo-FS pipe lining system is a long-term, cost-effective solution to aging and/or failing sprinkler systems piping.**

- **Specially formulated** for lining fire sprinkler systems.
- **Permanently seals** pinhole leaks and cracks.
- **Prevents all forms of corrosion**, including MIC, in wet, dry and deluge systems.
- **Tested to 400°F**, approved to meet the guidelines for Internal Pipe Coating for Fire Protection Piping established by the City of Los Angeles' Mechanical Laboratory.
- **Pressure tested** to withstand 275psi.
- **Improves water flow** to sprinkler heads.
- **Minimal structural access** or system disruption. Eliminates expensive, time-consuming and messy repiping. The **CuraFlo-FS** pipe lining system requires little cutting or opening of walls or ceilings, keeping residents inconvenience and waste to a minimum.



**Call 604.298.7278 to discuss how CuraFlo-FS can solve your Fire Sprinkler Systems problems.**

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



## B.C. RAISES THE BAR FOR CHES NATIONAL CONFERENCE

**CHES COULDN'T HAVE ASKED** for better weather to usher in its 36th annual National conference. Held at the Vancouver Convention Centre Sept. 11-13, in the world's third most livable city, it was a success from start to finish. The Great CHES Golf Game kicked off the three-day event, which attracted more than 960 attendees and 331 delegates — a significant increase in attendance over last year. The sold-out trade show floor boasted 146 booths, and the educational program covered a wide variety of topics based around the conference theme, 'Risky Business: Is Healthcare Sustainable?'. Conference highlights included: the keynote address by retired president and CEO of London Health Sciences Centre, Tony Dagnone; the gala banquet and presentation of this year's CHES awards; and the wrap-up session, which brought together industry thought leaders and delegates to share ideas and learn how to turn them into actionable steps to move Canada's healthcare system in a positive direction.



## HealthAchieve 2016

November 7–9, Metro Toronto Convention Centre  
healthachieve.com



#healthachieve

# Remember the Last Time You Felt Inspired? We Do.

Let us inspire you with a fresh lineup of compelling speakers



### Séan McCann

*Feature Breakfast*  
Monday, November 7

Founding member of the hit band Great Big Sea and addiction survivor, Séan will share his inspiring story on how music can help you find balance and meaning in your life – to connect, heal and bring happiness.

\*Ticketed Event



### Amy Cuddy

*Official Opening*  
Monday, November 7

Social psychologist and professor at Harvard Business School, Amy is a world renowned expert on how our body language can change our thoughts, feelings, behaviors, and physiology, impacting how well – or how poorly – we perform.



### Don Tapscott

*eHealthAchieve Keynote*  
Monday, November 7

As one of the world's leading authorities on innovation, media, and the economic and social impact of technology, Don argues that the second era of the Internet has profound implications for health care.



### Raymond Wang

*Innovative Environmental Sustainability*  
Monday, November 7

In the world of climate change, energy crisis, and natural resource shortages, the up-and-coming generation of youth is not one to sit passively. As the founder of Sustainable Youth Canada (SYC), Raymond shares SYC's founding story and aim of creating a national identity for youth to unite for sustainability.



### Rudyard Griffiths

*Financial Management Breakfast*  
Tuesday, November 8

A highly sought after commentator on global economics, geopolitics and corporate decision making, Rudyard never shies away from discussing the big issue of the day.

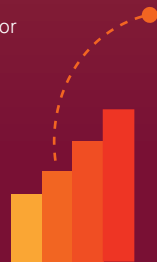
\*Ticketed Event



### Christine Elliott

*Small, Rural and Northern Health Care*  
Tuesday, November 8

Recently appointed by the provincial government as the first Patient Ombudsman, Christine has been an advocate for vulnerable people for many years and has served as a volunteer with many community organizations, including the Grandview Children's Centre and Durham Mental Health Services, which named one of their homes in her honour.



Don't miss your chance to be inspired by these incredible speakers. For more information about HealthAchieve and to register today, visit [healthachieve.com](http://healthachieve.com).

# HealthAchieve

A PROGRAM OF  
 ONTARIO  
HOSPITAL  
ASSOCIATION



Honeywell's Luis Rodrigues with Kate Butler, Bill Goobie and Blaine Lynch, who accepted the award on behalf of the Horizon Health Network.

# LEADING THE CHARGE

## Horizon's Energy Network makes health authority greener, leaner

**H**ospitals devour more energy than any other commercial building, with the exception of food and beverage stores. This is largely because of their operating hours, number of occupants and the sophisticated equipment needed for patient care.

In an effort to curb consumption at its 12 hospitals and more than 100 medical facilities across New Brunswick, the Horizon Health Network established the Energy Network in 2013. The standing committee is made up of full-time staff volunteers with varied backgrounds — from engineering and energy management to plant operations — all of

which are passionate, dedicated and intrinsically motivated to improving energy performance.

To date, the Energy Network has achieved measurable and significant reductions in energy usage — 39 million equivalent kilowatt hour (kWh). It has cut greenhouse gas emissions by 9,500 tonnes and achieved \$3.23 million in actual energy cost avoidance. This outstanding success is one of the reasons the health authority earned this year's Wayne McLellan Award of Excellence in Healthcare Facilities Management.

"It's a real honour to have the work we're doing recognized," says Horizon's

regional director of facilities, engineering and property management, Blaine Lynch, who oversees the Energy Network. "We were glowing with enthusiasm and 'energy' when we accepted the award, which has since lit a greater fire under us."

The six-member Horizon Energy Network team includes Lynch, committee chair Bill Goobie (manager of major construction, Moncton), Todd Bryenton (chief engineer and energy coordinator, Miramichi), Ralph Mayfield (director of physical resources, Saint John), Dean Lake (manager of plant operations and energy management, Fredericton) and Kate Butler, energy manager with health

services at Service New Brunswick (formerly Facilicorp NB).

A driving force and leader in energy efficiency, Butler attributes the success of the Energy Network to its collaborative and continuous improvement approach to energy management. This process involves benchmarking facilities, including normalization for weather, identifying and analyzing energy projects (large and small), requesting funding, assisting in implementation and then monitoring projects for expected energy savings and other benefits. Results are reported and communicated. Successful projects are then rolled out to other facilities.

“We’re always going through this plan-do-check-act framework,” says Butler, who adds that the introduction of an energy management information system (EMIS) in winter 2014, has been crucial in effectively measuring, verifying and managing energy consumption.

The EMIS monitors energy consumption in real-time and compares it to a baseline. This helps the network determine where energy is being wasted, either by human misjudgment, maintenance issues or technological reasons. The outcome is a continual ability to better manage energy use, which results in a reduction of energy consumption and, subsequently, operational costs.

For example, modifications and optimizations at Saint John Regional Hospital to use a heat recovery chiller as the base load chiller instead of the older, less efficient chiller, along with the installation of variable speed drives (which allow pumps to modulate on load demand), has resulted in maximum heat recovery and a reduction in carbon dioxide by 1,435 tonnes annually.

The tool has brought big benefits to Miramichi Regional Hospital, too. Through its use, the hospital has reduced

## SUPERIOR SAVINGS

To date, the Energy Network has achieved \$3.23 million in actual energy cost avoidance, cut greenhouse gas emissions by 9,500 tonnes and reduced energy consumption by more than 39 million equivalent kWh, which is equal to the energy used by 6,600 vehicles in one year. Last year alone, the Energy Network reduced greenhouse gas emissions by 3,800 tonnes and found more than \$220,000 in no cost operational improvements.

Miramichi Regional Hospital has made significant improvements over the past three years to its wood boiler plant, reducing oil consumption by 240,000 litres annually. This is a cost savings of \$306,000 per year. The hospital has also decreased water consumption by more than 15 million litres annually, and achieved more than \$60,000 in annual energy cost avoidances by increasing air handling unit supply temperatures by 2 C.

More than \$3.3 million in upgrades has been implemented throughout Horizon since the inception of the Energy Network. Projects include LED lighting retrofits at five hospitals, reducing energy consumption by more than 433,000 kWh per year (\$43,300 in annual savings); introduction of occupancy sensors, resulting in 45,000 kWh and \$4,000 in annual savings; and enhanced air handling units, which have reduced energy consumption by 2 million equivalent kWh annually, resulting in \$280,000 in cost savings per year.



water consumption by more than 15 million litres annually. The biggest reduction to date has been through the reduction of steam production due to improved plant efficiencies. In another instance, the EMIS helped building operators quickly identify an abnormal increase in water consumption — approximately 45,000 litres per day. Through investigation, they were able to pinpoint the culprit (a broken timer) and rectify the situation. This has helped sell the addition of water meters and the EMIS to other healthcare facilities.

Communication among Energy Network team members and across Horizon has also played a key role in energy savings successes. The network meets six times a year to discuss energy efficiency initiatives and uses a variety of

tools to engage staff, including training sessions; energy management plans and annual reports detailing energy consumption, benchmarks, energy savings and projects completed; Horizon Connects, the public corporate newsletter; Connects Extra, the internal blog page; and the department page on Skyline. These resources provide tips to staff and share ongoing successes regarding environmental stewardship and energy reduction initiatives.

“The openness and collaboration of the team allows the network to move ideas to business case development and then implementation, provided the projects are viable and funding is available,” says Butler. “This also shows great leadership and how effective leadership can result in energy efficiency success.” ■

# REWARD OF SERVICE

## Longtime member honoured for devotion to CHES, healthcare industry

**F**or many years, Mike Hickey has attended the CHES National conference gala banquet where he has watched friends and colleagues accept the Hans Burgers Award for their outstanding contribution to healthcare engineering. This year, however, he was on the receiving end of the prestigious tribute.

“It was a very significant moment for me,” says Hickey. “When you look at the list of people who have won before me, it is a truly an honour and privilege to be in their company.”

Hickey’s accolade couldn’t have come at a more appropriate time. The very first award was presented posthumously to Hans Burgers, for whom the award is named, 12 years ago in B.C. Hickey was not only a member of the team that selected Burgers as the inaugural recipient, but he was the one who put forward the motion to name the award after the former CHES National president.

“I watched with great pride that very emotional presentation as chair of the B.C. chapter,” recalls Hickey. “Little did I know at the time I would go on to serve at the national level and then receive this award.”

Hickey joined CHES in 1999, after leaving his job with the Healthcare Corporation of St. John’s and moving to Prince George, B.C., where he assumed the role of regional director of facilities management and support services for Northern Health — a position he held for more than 14 years. He was introduced to CHES via his predecessor who happened to be the director of membership for the B.C. chapter. Hickey took over that position and three years later he was elected chapter chair, which he served for two consecutive terms from 2002-2006. From there, it was only natural for Hickey to move on to the national level. In 2008, he became vice-president; however, his stint in the role was short-lived. In fall of that year, CHES National president Wayne McLellan passed away suddenly, leaving a sizeable hole in the organization and the hearts of its staff and membership. Struggling with the death like so many others,



Johnson Controls' Tim Walden with Mike Hickey.

Hickey redirected his affection for his lost friend to CHES and fulfilling McLellan’s mandate. In 2009, he stepped into the leadership position and steered the organization through the next three years. One of his more pressing goals was the creation of the Newfoundland & Labrador chapter — a success he celebrated at the first-ever CHES National conference in his hometown of St. John’s, Nfld.

“It was bittersweet,” says Hickey. “I was saddened that Wayne wasn’t there to finish the great work he had started but was proud I could carry on the legacy and bring the Newfoundland & Labrador chapter into the organization’s fold.”

During his time as CHES National president, Hickey also played a pivotal role in further developing partnerships with the American Society for Healthcare Engineering (ASHE), Canadian Standards Association (now the CSA Group), Canadian College of Health Service Executives (now the Canadian College of Health Leaders) and Canadian Coalition for Green Health Care (CCGHC). He was involved in the planning of the first-ever CHES National conference in Quebec, and witnessed the tremendous growth of CHES to more than 1,000 members. He was also instrumental in the development and delivery of the Canadian Healthcare Construction Course (CanHCC).

Once ‘out of office,’ Hickey continued his tireless work for CHES. He was a driving force in the development of board support for

the Canadian Certified Healthcare Facility Manager (CCHFM) program, which launched in 2015. Over the years, he has helped develop the education programs for many CHES National conferences. He is currently an active member on the partnerships and advocacy committee, and one of five faculty members that teach CanHCC.

Outside the organization, Hickey volunteers his time with a variety of CSA standards committees. He is a faculty member of the CSA’s Infection Control during Construction, Renovation and Maintenance of Health Care Facilities program, as well as an active member of the Energy and Environmental Stewardship Award team with CCHL. Hickey also recently served as president of the board of directors for the Prince George Hospice Society. He currently travels the country as a consultant in the field of healthcare engineering under the name of MF Hickey Consulting — the vocation he pursued after retiring in April 2013, from his 35-year storied career in the facilities management side of healthcare.

“I’m living the dream,” says Hickey, 58. “I have a beautiful wife and daughter who support me, an amazing job that I enjoy tremendously and I’m part of an organization that has changed my life. I couldn’t have written my life course any better. I am truly blessed.” ■





# HEALTHCARE VENTILATION SYSTEMS

## What's really in yours?

We are pleased to announce that Ventcare now monitors **100 plus hospitals** in the Ontario region.

Labour Canada has fully “acknowledged” the scope of work provided in the semi-annual inspection program. In addition, the written documentation contributes greatly to the hospital accreditation programs.

Further we are always pooling the knowledge resources of Infection Control and Engineering Groups like CHES, the ventilation inspection program is in a constant evolution to meet future healthcare needs for patients and staff.



The location and inspection of the hospital ventilation fire dampers may be part of your building audit this year. Some of you have already taken advantage of our new software program which in conjunction with our patented robotics, allows us to minimize ceiling access requirements.

To date, of the thousands of fire dampers inspected approximately 30% are not humanly accessible from traditional ceiling access points. Our patented robot overcomes this obstacle, allowing complete documentation of all fire dampers within the ventilation system. Further, of the total, 15% have been found defective, blocked with wood, wired up, or simply closed shutting off airflow.

## “Setting the Standard for Commercial Ventilation Care”



**Bandy II**



**Ventilation Monitoring**



**Fire Dampers Inspection**

# A WELCOME RELIEF

## Ontario chapter beats stiff competition to nab President's Award

In the months leading up to the 2016 CHES National Conference, the Ontario chapter executive was on tenterhooks waiting to find out if it had nabbed the much-coveted President's Award. Finally, just weeks out from the annual event, the chapter's chair, Roger Holliss, received the phone call he'd anxiously been anticipating.

"It was such a relief to hear we won," says Holliss, who accepted the award on behalf of the Ontario chapter at the conference gala banquet Sept. 12. "The chapter executive knew its submission was strong but wasn't sure if it was good enough to win, so it was great to receive the news honouring the team's hard work and unwavering commitment over the past year."

The President's Award is presented annually to the CHES chapter that demonstrates its commitment to education, administration and representation in the activities of the chapter and National board. The winner is awarded two CHES National conference registrations and expenses to a maximum of \$2,500 each, as well as a trophy engraved with the executive team's names.

Since the crowning of last year's award winner, the chapter executive has made a concerted effort to foster engagement and encourage participation in committee work. The Ontario chapter now has a representative on each CHES National committee and subcommittee, which Holliss acknowledges is a difficult feat for chapters with less members.

"The Newfoundland & Labrador chapter, for instance, has substantially fewer members than the Ontario chapter, which means a higher percentage of its membership must volunteer its time," he explains. "Our chapter has more than 200 members, so it has more volunteers to draw upon."

On the education front, the executive team pulled off one of the most successful chapter conventions to date despite having to scramble to sort out logistical issues associated with the hotel and conference centre not being in walking distance from each other. Held in Kitchener, Ont., it was attended by



138 delegates and boasted 70 exhibitors, one-third of which were first-timers to the annual spring conference and trade show. The chapter also hosted a CSA standard training session on Z8002, Operation and Maintenance of Health Care Facilities, in late winter. The education day was so well-attended and received that the chapter executive is considering making it a regular session.

With existing CSA standards being updated at least every five years, the executive team has launched a pilot project whereby a hired consultant will provide a synopsis of proposed changes to Z317.13, Infection Control during Construction, Renovation and Maintenance of Health Care Facilities. A simple-to-read spreadsheet will soon be posted to the Ontario chapter website, saving members the time and effort required to read two substantial documents — the existing standard and the one in the public review stage — and glean the differences.

"Depending on the reception, the chapter executive might make this a regular practice for all CSA healthcare-related standards going forward," notes Holliss.

Furthering its commitment to professional development, the chapter executive has created a new bursary program that awards \$1,000 scholarships to sons, daughters and grandchildren of Ontario chapter members (regular and associate). The bursaries are currently limited to five per year. Members'

kin must be enrolled in a full-time post-secondary technology program in the province to be eligible.

The Ontario chapter has continued to extend financial support beyond its membership to the Canadian Coalition for Green Health Care (CCGHC) and Health Energy Leaders Ontario (HELO). The organizations have received \$30,000 collectively in the past two years to assist with programs that will help healthcare facilities across the province participate in energy-saving initiatives.

The chapter executive has also pursued a new relationship (Firestop Contractors International Association) while fostering another (Infection Prevention and Control Canada) for the benefit of its membership. Earlier this year, Holliss along with two CHES members presented at IPAC Canada's national education conference. The Ontario chapter has since extended an invitation to IPAC to take part in the 2017 CHES National Conference in Niagara Falls, Ont., which it has accepted.

"Hospital facility managers, engineers and infection prevention and control practitioners share the same space and deal with the same issues so it makes sense for us to come together outside the work environment and learn from one another," explains Holliss. "The next CHES National conference provides the perfect venue to do just that." ■

# We Design · We Build · We Deliver



Smart Switchgear &  
Transfer Switch Solutions  
since 1973

We customize, manufacture and service  
Power Generation Switchgear, providing a complete  
integrated control and power switching solution.

**REGAL**

**Thomson Power Systems**  
Quality · Reliability · Commitment

[WWW.THOMSONPS.COM](http://WWW.THOMSONPS.COM)

1.888.888.0110



# A MATTER OF WASTE

Energy exchange opportunities leveraging building, municipal sewage water

By Rick Lawlor



## Make your audience intelligence count

By Steven Chester

Now that we've identified your social media goals, it's time to figure out which platform is best for you.

Start with the big three: Facebook, Twitter, and LinkedIn. Using the search feature, look into each platform and search out industry terms, names of companies you're interested in, clients, and especially your competitors.

Here are some tips to make that audience intelligence count:

- Are there lots of active Twitter conversations for your search term? Take a look at those conversations, are you noticing recurring hashtags? Then dig a little deeper, and take note of those hashtags and what they mean – you'll need them later.
- With LinkedIn, search out companies and check out what's being said via their profile page. But don't forget Groups – LinkedIn may have discussion groups related to your business interests with tens of thousands of participants already chiming in. Join the groups and look at the participants – see anyone you want to connect with?
- If you think Facebook is just a way to connect with friends and see what your teenaged niece ate for lunch, think again. Search terms via Facebook will dig up company pages, news feeds, comments from users, photos, places and events, all related to that search term.

Now gauge which platform has the most of the above, then rank which platform(s) deserve the most attention.

Next up, we'll talk about that all-important content strategy.

---

*Steven Chester is the Digital Media Director of MediaEdge Communications and helps companies expand their reach through social media and other digital initiatives. To contact him directly, email [gosocial@mediaedge.ca](mailto:gosocial@mediaedge.ca) or call 416.512.8686 x224.*

**W**aste water, derived from stand-alone and aggregate buildings and, optionally, municipal sewage infrastructures, is a new-found viable and credible means of delivering stable and predictable thermal energy exchange in the challenging arena of HVAC system performance. This concept is leading to improvements in building owners' energy and environmental bottom line.

Building and municipal wastewater has traditionally been ignored as a heat transfer medium despite its attractive source temperatures, typically between 65 F and 75 F. New technologies are available that facilitate the opportunity to exploit this medium as both a heat source and a heat sink, reliably and economically. Conventional commercial mechanical HVAC equipment and systems, when coupled with this technology, can: lower heating and cooling operational costs; deliver environmentally beneficial, green HVAC system installations; facilitate viable and scalable energy recovery or energy rejection opportunities; and reduce or eliminate carbon-based fuel dependency. A wide array of building and mechanical system applications are in a position to take advantage of this development, including multi-unit residential, commercial, educational, healthcare, recreational and industrial facilities, as well as district energy and geothermal systems.

### A SECOND LOOK

Three realities are driving support for re-examination of wastewater.

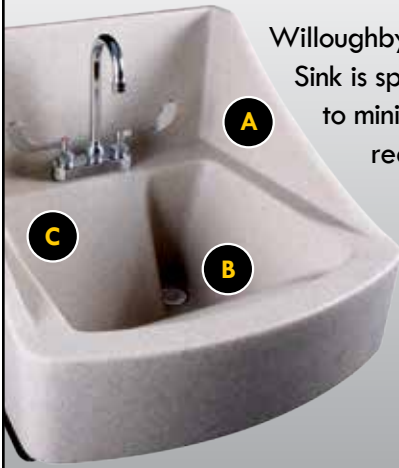
The U.S. Department of Energy (USDOE) has determined that in excess of 12 billion therms of energy is released annually from single and multi-unit residential buildings to municipal sewage systems. This represents approximately a \$10 billion US annual heat energy dump that until very

recently has basically been ignored. Commercial and industrial wastewater thermal energy dump data are not factored into these figures, supporting the theory that the actual energy recovery opportunity is significantly greater than current USDOE estimates.

HVAC cooling industry statistics indicate, on average, 150 billion gallons of water per day is consumed in North America for the purpose of rejecting air conditioning loads through evaporative cooling systems (cooling towers and fluid coolers). Using a typical blended cost of \$1.50 per 1,000 gallons consumed, this represents an annual water expenditure exceeding \$82 billion US. Factoring in the costs of tower/cooler electrical energy, chemical treatment, legionella mitigation, maintenance and repairs completes the picture of owning and operating a water-driven evaporative cooling system. In essence, staying cool in summer places massive demand on water and energy resources.

As the now popular saying goes, "There is no planet B." The number of organizations willing to underwrite the risk of ignoring the impact of human activity, vis-a-vis global carbon emissions, is non-existent. However, status quo behaviour stands as a bet against glacial melting, atmospheric temperature increase, rising sea levels, increase in severe weather patterns, and the list goes on. Consider the daily human activity of domestic hot water (DHW) usage. A typical 350-bedroom multi-unit residential building in Canada has traditionally delivered the DHW needs of occupants via a natural gas-fired DHW system. Presuming a heating plant combustion efficiency of 90 per cent and industry-acknowledged annual water consumption data, this building would emit approximately 148,000 pounds of carbon dioxide annually.

# Stop the Spread



Willoughby's Infection Control Sink is specifically designed to minimize splashing and reduce the spread of infectious disease.

◀ WILLOUGHBY WICS SERIES



CSA Z8000 compliant!

- A Oversized backsplash** has coved edges and helps to keep water contained and flowing toward drain.
- B Offset drain position** keeps water from splashing directly into drain and the contents of the trap from aerosolizing.
- C Sloped rear basin wall** minimizes splashing of water stream and creates circuitous flow to drain.

Aquasurf® solid surface color options:



© 2016 Willoughby Industries, Inc.



## WILLOUGHBY

COLONY - ON - US

Now we're even easier to specify:

Product MasterSpec



Sweets™



AUTODESK REVIT

Info sheets, REVIT files, and 3-part specs available at our website.

1.800.428.4065 TOLL FREE | [www.willoughby-ind.com](http://www.willoughby-ind.com)

An alternative to this approach is to capture the wasted heat energy from a building's sewage discharge and use high-efficiency heat pump technology to reduce the building's annual carbon dioxide emissions by more than 75 per cent. This result is now not only possible but also likely to be mandated as efficiency regulations, building codes and energy policies are re-written to reflect the advancement of thermal technologies, and to acknowledge the carbon footprint attributable to human activity.

### LEADING BY EXAMPLE

A testimony to the wastewater energy recovery/DHW concept is found at a small project in North Vancouver, known as Seven35. An independent third party consultant retained by the condominium project's developer post-startup confirmed a 75 per cent reduction in energy usage compared to a natural gas solution.

The single stand-alone application of Seven35 is a micro example of the energy exchange opportunity that is available from site generated sewage. On a macro level, multiple building applications lend themselves well to larger-scale versions of the Seven35 site energy recovery solution. The thermal concepts remain the same and the opportunity is leveraged to achieve larger-scale results and meet broader application needs.

Such a macro scenario is depicted in the Gateway Theatre in Richmond, B.C. The performing arts centre represents an example of the opportunity that wastewater presents as both an energy heat source in winter, and an energy heat sink in summer. The facility's HVAC system is comprised of multiple water-to-air heat pump units that are connected to a piping distribution water loop, which allows the units to deliver cool or warm air year-round. The building's original water loop was equipped with a boiler and cooling tower to inject or reject energy, respectively, as needed throughout the year. When equipment was facing end-of-life in 2012, the theatre's tower and boiler were taken out of commission. The sewage lift station adjacent to the property facilitated the concept of a sewage energy exchange system that leveraged the flow and temperatures to deliver energy to, or take energy away from, the building's water-cooled heat pump system.

### ROAD TO RECOVERY

Healthcare facilities lend themselves well to wastewater energy exchange opportunities for heat recovery and heating-cooling applications.

As an example, large laundry loads coupled with high domestic and process hot water demands can present a strong case for energy recovery. A hospital application under consideration in Quebec includes the addition of high-capacity site laundry equipment. The initiative requires a DHW plant that produces approximately 60,000 gallons of DHW per day for 70 per cent of the year. A wastewater energy recovery solution tailored to the project has the capacity to deliver approximately 60 per cent of the domestic water heating load, return the capital investment in approximately six years and reduce carbon dioxide emissions by 850,000 pounds annually, compared to a natural gas-fired DHW system. ■

Rick Lawlor, P. Eng., is the sales manager, Eastern North America, for International Wastewater Systems Inc. He is a 35-year HVAC industry veteran whose expertise includes optimization of HVAC system components, system controls and system energy usage.

# STAPLES

Business Advantage™ | Premium



## Save thousands for your business. Join the Premium Program.

Staples Business Advantage™ is the business-to-business division of Staples. We work with organizations to develop customized programs with specialized pricing while providing dedicated account management, and a complete assortment of products and services for your business needs.

A Staples Business Advantage™ **Premium** membership gives you access to exclusive discounts and promotions that can save you thousands.

# FREE



Get a **#FREE** Keurig® OfficePRO® Brewing System when you open a Staples Business Advantage Premium account today!

Visit [StaplesPremium.ca](http://StaplesPremium.ca)

Offer valid from September 1 – October 31, 2016. New Staples Business Advantage accounts only. Not valid on Premium Programs opened prior to September 1, 2016. Cannot be combined with any other offers.

†Prices displayed will reflect your Premium Program discounts. \*Additional savings on our top products over standard Staples nationally advertised pricing.

\*\*\$50 minimum order size or \$5 "50 Green" charge applies.



# PATHWAYS TO GREEN ENGAGEMENT

## PHSA committed to embedding sustainability in organizational culture

By Glen Garrick

**A**t a time when many people are increasingly concerned about the planet's health, the Provincial Health Services Authority (PHSA) has taken a leadership role in creating a culture of environmental stewardship. This has earned the B.C. health service provider the designation as one of Canada's Greenest Employers for five consecutive years. The annual competition, arranged by the Canada's Top 100 Employers project, recognizes organizations that lead the nation in putting green strategies into action through corporate and employee-led initiatives.

### POSITIVE IMPACTS

In 2010, four Lower Mainland health organizations consolidated their efforts towards environmental sustainability. This led to the creation of the PHSA-supported Energy and Environmental Sustainability (EES) team and, in turn, a GreenCare initiative to further the greening of healthcare. With successful Green+Leaders and Clean Commuter and Wellness programs, and the GreenCare Community website, PHSA staff have shown outstanding dedication to making positive green impacts at work and beyond.

PHSA's Green+Leaders program engages staff across the organization to

'green' their workspace. It focuses on energy conservation, recycling promotion, active and clean transportation, and social engagement. To date, the EES team has trained more than 250 staff across Lower Mainland health organizations as role models for environmental sustainability, to support behavioural change and to improve processes for a culture of environmental health and wellness.

In 2012, PHSA rolled out its Clean Commuter and Wellness campaign to encourage staff to forgo their single-occupancy vehicle commute in favour of ride-sharing, taking transit or cycling to reduce carbon dioxide emissions. This





challenge is promoted in May/June, and approximately 200 staff participate each year. In 2016, PHSA staff cycling rates increased by 18 per cent, transit use increased by 10 per cent and carpooling increased by 21 per cent.

For the past five years, PHSA's GreenCare Community has engaged healthcare staff at all levels of the organization in sustainability and environmental conservation issues. The online social networking hub helps staff find out what is happening in their workplace, share stories about internal green initiatives, tools and resources, and connect with others through discussions and campaigns. Since the 2010 launch, more than 4,500 healthcare

staff across the Lower Mainland have registered to access the website.

#### **EARTH-FRIENDLY IDEAS**

PHSA continues to seek out transformative and innovative initiatives to encourage staff to be environmental stewards of health and wellness. Last year it launched the Green Initiatives Fund, which offers staff the opportunity to win \$500 to use toward a project that enhances PHSA's commitment to a green culture. PHSA employees surpassed expectations for creative ideas in 2015. Winning submissions included: a bike repair workshop at B.C. Children's and B.C. Women's hospitals; revitalization of the 'vintage fruit' trees at

Sunny Hill Health Centre using non-stinging, pollinator Mason bees; a series of hands-on repair events at B.C. Clinical and Support Services' corporate office, where staff could bring in broken items, such as bicycles that needed new brake pads or damaged headphones, and learn how to fix them; and the establishment of rooftop vegetable gardens at PHSA corporate offices in Vancouver, to promote healthy eating habits, urban gardening and food sustainability. ■

*Glen Garrick is the sustainability manager, transformation and innovation, with facilities management on the Energy and Environmental Stewardship team.*



# SEEING THE LIGHT

## UVC light engineer's weapon in battle against superbugs

By Barry Hunt

**T**he science is in. The long debated and previously underappreciated link between the physical environment and healthcare acquired infections (HAIs) has been established. When pathogenic bacteria and viruses are shed in close proximity to susceptible patients, HAIs occur. Eliminating the reservoir reduces transmission. Reducing bioburden in the right place at the right time can best be done through design, technology and automation.

### BODY OF EVIDENCE

Beginning in 2011, studies showed a significant reduction in bioburden when patient rooms were disinfected with mobile ultraviolet C (UVC) light devices operated by environmental services at terminal discharge. By 2013, studies indicated significant reductions of HAIs, some up to 50 per cent or more.

Earlier this year, the Association for Professionals in Infection Control and

Epidemiology (APIC) recognized Dr. Deverick Anderson of Duke University with its Distinguished Scientist Award for his contribution to infection prevention science. This includes the first study undertaken to prove that transmission of multi-drug resistant organisms (MDRO) occurs from the hospital environment and enhanced cleaning can reduce the risk of that transmission. Adding UVC to quaternary cleaning compounds (quats) or bleach

# Integrated Healthcare Communications



OUR INTEGRATED HEALTHCARE COMMUNICATION SOLUTIONS INCREASE SAFETY, SECURITY AND EFFICIENCY



**Come see us at the  
Health Achieve Show  
Booth 1326,  
Toronto Convention  
Centre**

From reception to maintenance, in the emergency room or at an off-site location, Motorola is helping healthcare providers work more safely and efficiently in the most demanding environments and challenging situations.

## **SPECIAL CALL FEATURES TAILORED TO MEET THE NEEDS OF HEALTHCARE**

Healthcare centers constantly face the challenge of quickly reacting to unpredictable situations and still providing patients with seamless and discrete operations. Trying to look for medical staff using PA speakers, using cell phones with poor signal coverage, calling department extensions that are occupied, or physically having to look for someone to help, can be frustrating and disrupting for both medical staff and patients.

## **SMALL AND EASY TO USE, OUTSTANDING RANGE**

Immediate patient attention requires multiple interactions and coordination among doctors, nurses and technicians, as well as administrative staff and cleaning services. range coverage of 300K sq ft /20 floors, allows medical staff to easily wear the radio on their belt, uniform or in pocket.

## **DURABLE, ANTIMICROBIAL RADIO HOUSING MATERIAL**

The DLR radio's tough polycarbonate housing contains built-in antimicrobial materials that inhibit the growth of bacteria and mold on radio surfaces making it ideal for healthcare applications.



Distributed by Lenbrook Canada Solutions  
Come see us at the Health Achieve Show – Booth 1326  
or call 1 800 263 4666 x5102



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

### THE TIME TO DISINFECT A ROOM DEPENDS ON THE SIZE OF THE ROOM, NUMBER OF DEVICES (ONE OR TWO), AMOUNT OF ENERGY EACH DEVICE PRODUCES AND DISTANCE OF EACH DEVICE TO THE FURTHEST TARGET SURFACE.

reduces a patient's risk of acquiring a HAI by 32 to 37 per cent, when the prior occupant has had a MDRO, such as MRSA, VRE or *C. difficile*.

#### ILLUSTRIOUS ENERGY

UVC penetrates the cell membranes of viruses and bacteria and attacks their DNA, terminating their ability to spread. Unlike chemical disinfectants, bacteria and viruses have not been shown to systematically develop further resistance to the UVC light.

UVC disinfection constants have been published for most organisms, allowing easy calculation of time and distance required for deactivation. In general, bacteria and viruses have little protection from UVC and may be deactivated in seconds; however, deactivation of bacteria in a spore state takes much longer than when in a vegetative state. For example, *C. difficile* spores require 15 times more UVC energy than *Klebsiella pneumoniae*.

UVC disinfection time varies depending on the light intensity and distance between the light source and target. It takes 400 millijoules per square centimetre (mj/cm<sup>2</sup>) of 254 nanometre (nm) UVC energy to eliminate 99.9999 per cent (or 6 log) of *C. difficile* spores. The time to disinfect a room depends on the size of the room, number of devices (one or two), amount of energy each device produces and distance of each device to the furthest target surface.

#### THE ROOM BEYOND

Disinfecting patient rooms with UVC

once a week prior to each new occupant makes sense and appears to be effective in reducing risk to patients.

But does this approach go far enough?

After all, patient rooms are cleaned every day. And they may not be the only areas that would benefit from daily UVC disinfection.

*C. difficile* and VRE are intestinal bacteria associated with explosive diarrhea. A 2012 study published in the *American Journal for Infection Control* showed flushing releases infectious toilet aerosols that float for up to 90 minutes, contaminating the air and settling on nearby surfaces. *C. difficile* can also be cultured 30-centimetres above the bowl with every flush. Armed with this information, Canadian researchers are looking at whether bathrooms could benefit from UVC disinfection with every use.

Last year, a study at St. Mary's General Hospital in Kitchener, Ont., examined the usability and effectiveness of an automated UVC disinfection device. Findings included: UVC significantly reduced bioburden; equipment and utility rooms may be accessed as much as 100 times per day, providing a nexus for cross-contamination; and each room has a unique biological fingerprint.

That is, culture plates taken daily from the same surfaces without UVC disinfection grow the same organisms day after day. As well, culture plates are virtually clean when UVC is switched on; however, they return to normal appearance 24 hours after UVC disinfection is switched off.

The study also found that despite signage, staff and patients don't always close bathroom and utility room doors after use. On average, doors were closed 32 per cent of the time during the study period. This led to an average bioburden reduction of 65 per cent. While this reduction in contamination is significant, compliance and effectiveness could be increased further with the use of automatic door closers for spaces with automatic UVC disinfection devices.

In a second study, Lion's Gate Hospital evaluated the effectiveness of an automated UVC disinfection device in reducing bioburden in a bathroom, where the door was closed 100 per cent of the time after use. Researchers found that use of this device resulted in a 97 and 95 per cent reduction in contamination of the toilet and sink, respectively. The contamination in the air was also reduced by 65 per cent.

The in-patient tower at Lion's Gate Hospital in North Vancouver features floors that include up to three wards of four patients each who share a single bathroom. Following the bioburden study, the hospital installed 10 automatic UVC disinfection devices into the shared bathrooms as part of an overall strategy to reduce persistent *C. difficile* rates as high as 13 to 15 cases per month. Other mitigation strategies employed included leadership, training, mindfulness, decluttering and improved cleaning processes. Since the introduction of the devices in April, the hospital's *C. difficile* rates have dropped to just one case per month. ■

Barry Hunt is president and CEO of Class 1 Inc., a leading provider of medical equipment and systems, including UVC room disinfection. He is also chair of the Coalition for Healthcare Acquired Infection Reduction (CHAIR) Canada.

# Rx FOR HOSPITAL SECURITY

Protect your hospital environment. Keep your patients, property, staff and visitors safe with Commissionaires team of dedicated security professionals.

Commissionaires offers:

- Security guarding
- Parking control
- Mobile patrol
- Access control/reception
- Courteous, professional customer assistance

You can count on Commissionaires. Many are former military and ex-RCMP, superbly trained and experienced to respond to your security needs.

**CALL COMMISSIONAIRES TODAY**

877 322 6777 | [commissionaires.ca/healthcare](http://commissionaires.ca/healthcare)



**COMMISSIONAIRES**

TRUSTED · EVERYDAY · EVERYWHERE



## CALL FOR NOMINATIONS FOR AWARDS

### 2017 Hans Burgers Award

**For Outstanding Contribution to Healthcare Engineering**

**DEADLINE: April 30, 2017**

**To nominate:** Please use the nomination form posted on the CHES website and refer to the Terms of Reference.

**Purpose:** The award shall be presented to a resident of Canada as a mark of recognition of outstanding achievement in the field of healthcare engineering.

Award sponsored by



### 2017 Wayne McLellan Award of Excellence

**In Healthcare Facilities Management**

**DEADLINE: April 30, 2017**

**To nominate:** Please use the nomination form posted on the CHES website and refer to the Terms of Reference.

**Purpose:** To recognize hospitals or long-term care facilities that have demonstrated outstanding success in completion of a major capital project, energy efficiency program, environmental stewardship program, or team building exercise.

Award sponsored by

**Honeywell**

For Nomination Forms, Terms of Reference, criteria, and past winners [www.ches.org](http://www.ches.org) / About CHES / Awards

Send nominations to: CHES National Office [ches@eventsmgt.com](mailto:ches@eventsmgt.com) Fax: 613-531-0626



# AN ENGINEERED INTERVENTION

**VGH undertakes clinical investigation of bone marrow transplant unit in hopes of reducing HAIs**

By Richard Dixon

**V**ancouver Coastal Health (VCH) has earned a nation-wide reputation as a leader in the prevention and control of healthcare acquired infections (HAIs), so it is no wonder the health authority has taken innovative steps in the battle against bacteria and viruses.

In partnership with Genome British Columbia, the B.C. Centre for Disease Control and the Coalition for Healthcare

Acquired Infection Reduction (CHAIR) Canada, VCH embarked on a clinical study of the bone marrow transplant (BMT) unit at Vancouver General Hospital in 2014. One of the highest risk groups for infection in a hospital setting is BMT patients. Therapy removes their innate, humoral and cellular immunity, leaving them highly vulnerable to infections until the immune system recovers. For this reason, monitoring the

bacterial communities of BMT patients, their primary caregivers and immediate environment can inform and improve infection control practice, ultimately reducing HAIs. In addition, because the patients are in a highly controlled environment, it is an ideal opportunity to re-engineer the setting and then assess the results of this intervention against microbial populations in regular patient rooms.



### THE GOODS

CHAIR Canada facilitated management of the project, called GEnBMT (genomics and engineering for bone marrow transplant), in collaboration with the grant team, BMT unit staff and VCH facility maintenance. Its member organizations donated engineered materials and labour for installation in three BMT unit rooms. The logistics of re-engineering the rooms were

considerable. All parties worked around patient admissions and discharges to avoid affecting patient care.

Copper-nickel coating was added to high-touch surfaces, such as bathroom sinks, toilet seats, and bathroom and main bedroom electrical switch plates. Solid copper-nickel fixtures and surfaces were also installed in place of 'traditional' bathroom grab bars, bathroom and main door hardware, wardrobe handles,

toilet flush levers, door handles, and over bed and bedside table surfaces. A unique clamp-on copper-nickel surface was added to all bed rails and various chair arm rails. It can be easily removed for furniture replacement and maintenance.

Copper alloy has been approved for use by Health Canada as an antimicrobial product that kills 99.9 per cent of bacteria within two hours. In addition to

its self-sanitizing qualities, copper alloy does not scratch or tarnish easily and it's less susceptible to theft than pure copper because of its stainless steel appearance.

A wall-mounted ultraviolet C (UVC) light system was installed in each patient room bathroom, cycling on for five minutes when unoccupied. Specific security features include a door contact system and motion sensors that trigger the UVC system to turn on/off when required. Multiple studies have shown that UVC systems kill bacteria on surfaces and viruses in the air within minutes of use, including *C. difficile*.

Titanium dioxide was painted on bathroom and patient room walls, and headwalls. The chemical has antimicrobial features as well as a unique ability to reflect UV light, which helps the light rebound around the room into shadow areas.

No-touch sink faucets, paper towel dispensers and gel/soap dispensers were also installed in the three re-engineered rooms. All sinks and faucets conform to CSA standards, and faucets do not have aerators. High-quality water filters were supplied for bathroom sink faucets and showerheads.

Air is routinely supplied to the unit via a HEPA (high-efficiency particulate air) system. However, as part of the pilot project, it was verified to be operating properly and that the pressurization of the air was positive (BMT to adjacent corridors).

Although the three control rooms had unique features and appearance, the same cleaning protocols were followed as the non-control rooms.

### RANDOM SAMPLE

During the pilot project, the goal is to have a minimum of six randomly selected patients stay in the control or one of the re-engineered rooms. To date, nine patients have been enrolled in the project. The patients, along with their caregivers and the environment, are followed throughout the duration of their stay.

High-touch surfaces, water and air are sampled weekly. Patient and healthcare worker samples that represent gut, respiratory and skin microflora are

## IT IS HOPED THE RESULTS OF THE PILOT PROJECT WILL LEAD TO A BETTER UNDERSTANDING OF THE INTERACTIONS OF MICROBES, ENVIRONMENT AND PEOPLE OVER A PATIENT ADMISSION, AND PROVIDE INSIGHT INTO HOW RE-ENGINEERED SURFACES AFFECT THE MICROBIOTA.

also collected. The microbiota from all these samples will be assessed using both traditional microbiological cultures and state-of-the-art DNA sequencing technology. In addition, ATP (adenosine triphosphate) sampling and colony counts of bacteria are performed. Key bacteria of interest in the study include *Staphylococcus aureus* (methicillin sensitive and resistant), enterococcus (vancomycin sensitive and resistant), *Pseudomonas aeruginosa*, *E. coli*, *Aspergillus* species and *C. difficile*.

### ASSIGNMENT DISCOVERY

The pilot project is designed to assess the feasibility of collecting and analyzing a complex set of samples for traditional bacterial and molecular analysis. To date, with the assistance of BMT unit staff, this has proved to be a realistic task. Even within the small sample range, the group should be able to assess whether there is a difference between re-engineered and control rooms in terms of ATP and bacterial colony counts. Durability and sustainability of products, such as the titanium dioxide and copper-nickel alloys over the course of the pilot project to date, has not proven to be a serious issue.

There was great interest in seeing whether copper-nickel coated surfaces and solid alloys would tarnish under real-life clinical conditions. Early indications from the study show the copper-nickel alloys had mild tarnishing, potentially caused by uric acid splashing on the toilet seat or food spilling on the over bed table. Environmental services staff had difficulty removing most of the tarnish with regular hospital disinfectant chemicals. However, through

investigation, the team found a product that quickly removed virtually all the tarnish with minimal impact to cleaning time and costs. CHAIR Canada in cooperation with VCH is now collaborating with the product manufacturer to determine the exact chemical reaction that causes mild tarnish and how the product removes it.

### THE VERDICT

The GENBMT pilot project will formally end with the completion of the molecular analysis and presentation of results in approximately six months' time. While it is hoped the results will lead to a better understanding of the interactions of microbes, environment and people over a patient admission, and provide insight into how re-engineered surfaces affect the microbiota, it is not yet possible to provide any detailed assessment on the economic impact or the affect on HAIs. The pilot will inform researchers as to the practicality and feasibility of conducting a multi-centre randomized control trial in the BMT population.

One result GENBMT leadership was not expecting was the reaction of patients to the re-engineered rooms. Staff explained the various materials and processes in the room but upon seeing the self-sanitizing copper-nickel surfaces and the bathroom wall-mounted UVC light system that kills bacteria and viruses, it conjured a very positive emotional response from patients. ■

Richard Dixon is deputy chair of the Coalition for Healthcare Acquired Infection Reduction (CHAIR) Canada.



# Data is Power

Target Your Audience With Precision

**SCOTT'S**  
DIRECTORIES  
Partners In Your Success

Come Visit Us at HealthAchieve 2016  
Booth 924 / 926



## Physicians • Surgeons • Nurse Practitioners • Healthcare Personnel

Identify and reach your target audience with Scott's Directories. Get accurate contact information and detailed profiles to help you make informed decisions, drive results, and achieve your goals.

1-866-966-9866 | [ScottsDirectories.com](http://ScottsDirectories.com)

Print & Online Directories • List Rentals • e-Blast Services • Fax Broadcasting • The Canadian Medical Directory • MDSelect.com

Love  
healthcare  
but feel  
like you're  
wearing  
the wrong  
uniform?



### We can help ...

If you love helping people, but haven't found the right niche for yourself in the industry, you should consider a career in Health Information Management (HIM). CD-ED makes it easy to train on your time from your own home and transition with confidence to the new career path you've been looking for.

### We offer

Complete flexibility – manage school around family, work and other responsibilities

24/7 support via email, chat, online classroom webinars & toll-free phone calls

Graduates have achieved an industry leading success rate on their national certification examinations

Professional career training from industry experienced instructors

Start dates available every month

Professional career placement support

Financial aid for those who qualify

ISO 9001 Registered College

Call or email to speak with our  
Admissions Representative

**1 866 446 5898**

[info@cd-ed.com](mailto:info@cd-ed.com) [www.cd-ed.com](http://www.cd-ed.com)



**CENTRE FOR  
Distance Education**  
Your future - at your finger tips



# A STANDARD BOOST

New patient hoist guidelines almost ready for lift off

**P**atient lifts are a vital part of any healthcare setting. They are used to transfer persons between beds, chairs, stretchers, bathtubs or other similar locations.

Last year, the CSA Group published a standard that addresses the design and manufacture of patient lifts. A second standard will soon join Z10535.1 — Hoists for the Transfer of Disabled Persons: Requirements and Test Methods — in the series. Lifts for the Transfer of Persons: Installation, Use

and Maintenance is expected to be published in early spring 2017.

Here, CSA's Andrea Holbeche discusses the first edition of Z10535.2. Public review of the standard closed Sept. 20, and the technical subcommittee on patient lifts is currently considering the comments.

#### **What does Z10535.2 apply to?**

The new standard sets out requirements for everything that happens on the healthcare facility side after a lift is

manufactured and sold. It covers most types of lifts, both mobile and stationary, and also sets out requirements for accessories, such as slings, as these can often be the 'weakest link' in terms of patient safety.

#### **Why was the standard created?**

The impetus for this document came from healthcare professionals, government and industry, who saw the need for a new standard that would pick up where the manufacturing standard left off.

They noted many of the problems associated with lifts aren't a result of design or manufacture but rather come about because of errors in the post-purchase phase. This was confirmed through an in-depth review of incident reporting, which identified serious risks to patients, caregivers, operators and bystanders due to improper selection of lifts and accessories, installation and testing, inspection, maintenance and use.

Patient lifts are very diverse and can include many different types of hoisting mechanisms and accessories. This diversity can cause confusion and problems can quickly arise if the lift is not installed, maintained and used appropriately and with the proper training.

#### What are the core principles of Z10535.2?

The key element, of course, is safety for patients and staff, as well as visitors.

Patient lifts are used to lift and transfer people of different weights and body types, with a range of medical, physical and psychological conditions. Whenever a person is lifted and suspended by a machine, there are concerns about balance, capacity, reliability and control. The incident reports on these devices were an important reference in establishing requirements.

In addition to general requirements around planning and procedures, specific topics covered include: installation, commissioning and recommissioning; use of lifts; inspection, periodic maintenance and performance verification testing; decommissioning/end of service; and cleaning and infection control.

The standard also includes detailed annexes outlining equipment terminology, general safety tips for caregivers and an inspection checklist for slings.

#### Who will benefit from the standard?

The standard was written to address the needs of both the person being lifted and the caregiver using the lift. It does this by setting out clear requirements for these devices as installed and used in various locations, typically hospitals and long-term care facilities. As such, its target audience is much broader than the one for the manufacturing standard, Z10535.1. It includes installers, users, managers, training staff, technicians and maintenance personnel, as well as the manufacturers of patient lifts.

While the context of this standard is primarily healthcare facilities, lifts can also be used to transfer people in clinics, residences, pools and educational facilities, among other locations. ■

## HOIST AWAY

In 2015, the CSA Group published Z10535.1, Hoists for the Transfer of Disabled Persons: Requirements and Test Methods, which is an adoption (with Canadian deviations) of the second edition of the identically titled ISO standard 10535.

The standard specifies requirements and test methods only for hoists and body support units intended for the transfer of disabled persons. These include: mobile hoists with slings; standing mobile hoists; mobile hoists with solid seats; hoist trolleys; stationary hoists fixed to the wall, floor and/or ceiling; stationary hoists fixed to, mounted in or on another product; stationary free-standing hoists; and body support units for hoists.

The standard does not apply to devices that transport persons between two levels (floors) of a building. It also does not include methods for the determination of ageing or corrosion of such hoists and units.

The requirements of the standard are formulated with regard to the needs of both the disabled persons being hoisted and the attendant using the hoist.



Our vision is an **80% reduction** in Healthcare Acquired Infections by **2024**

- 200,000 people in Canada get an infection from a hospital each year
- 5% (10,000) will die
- Healthcare acquired infections cost us \$4-5 billion EACH year

Join the Coalition for Healthcare Acquired Infection Reduction (CHAIR)



**CHAIR**

Coalition for Healthcare Acquired Infection Reduction

@chaircanada  
info@chaircanada.org

www.chaircanada.org

# BRIDGING THE DIVIDE

**E-health information sharing platform connects clinicians, improves access to patient data**

By Leela Holliman



**T**he number of healthcare professionals a person may see over their lifetime seems limitless. One survey suggests it could range from 18 to 30 different providers.

When a patient is seated in front of a clinician, whether in a hospital emergency department, urgent care centre or community practice, their health information may be scattered across dozens of facilities. This can present a challenge for a physician who needs that information to fully understand the patient's medical condition and offer the most effective and timely care.

Because patients rarely travel with their health records, clinical staff may have to spend time phoning other institutions to obtain a patient's latest lab results, medical images or medication history. More than just an inconvenience, the lack of this data may significantly compromise a patient's care, resulting in requests for duplicate or possibly unnecessary tests or treatment that may conflict with the patient's current care.

#### **CONNECTING DATA**

Recognizing this concern, Markham Stouffville Hospital (MSH) recently

implemented an electronic health information sharing platform, known as ConnectingGTA (cGTA). Part of eHealth Ontario's larger ConnectingOntario initiative, cGTA integrates electronic health records through a centralized database linking participating healthcare organizations across the Greater Toronto Area and eventually Ontario.

By seamlessly and securely linking through the organization's hospital information system (HIS), clinicians have ready access to a provincial patient data repository. Such access

ISO 9001 Registered

# Is your water GETTING THE treatment IT DESERVES?

## Programs that deliver results

Our data-driven processes will get your water systems operating at the lowest possible life-cycle cost and proactively maintain them there



Pre-Treatment



Boiler Water Treatment



Cooling Water Treatment



Wastewater Treatment



**Klenzoid**  
The Water Specialists

(888) 712-4000 • info@klenzoid.com • Klenzoid.com



Find out why more than 1,500 organisations rely on Imprivata for:

- Positive patient identification
- Enterprise single sign-on and virtual desktop access
- Secure communications
- Identity and multifactor authentication for remote access, EPCS, medical devices, and clinical workflows

For more information email [sales@imprivata.com](mailto:sales@imprivata.com) or visit [www.imprivata.com/intl](http://www.imprivata.com/intl)

# TRANSFORMING WATER INTO A POWERFUL ALLY

## SMARTFLO<sub>3</sub> HAND HYGIENE SINK



O<sub>3</sub>



- Ozonated water
- Laminar Flow
- Self-flushing
- Motion activated
- Programmable
- Wireless data-logging
- Wheelchair accessible
- Cleans even without soap
- Prevents bacterial growth and biofilm
- Drain & trap free of CPOs and other pathogens
- Future data integration with hand hygiene monitoring programs
- Exceeds CSA Z8000 requirements

Dr William Rutala:

"Prevent all infectious transmission associated with the environment in 5 years via research/technology/automation/competency."

APIC 2016 Plenary Presentation

Proud to be a founding member [chaircanada.org](http://chaircanada.org)



Building Better Healthcare™

1.800.242.9723 info@class1inc.com www.class1inc.com @Class1inc

## PATIENT PERSPECTIVE

allows them to view information critical to patients and their care.

The system also benefits patients who may be struggling with their immediate medical concerns. For example, in an emergency situation, the patient may not have access to a list of their prescription medicines or other important medical information. Similarly, cognitive impairments or language barriers may further complicate already challenging conversations.

### CONNECTING SYSTEMS

The first step in participating in cGTA for any organization is a series of assessments that examine factors such as technical resources, privacy and security infrastructure, the end-user community and training resources. Fortunately, MSH is a Hospital Information and Management Systems Society (HIMSS) Stage 6 facility — a healthcare industry standard that indicates an advanced level of maturity in technology and electronic systems. As a result, the assessment process was very smooth and little preparation work was required.

From an implementation and use perspective, one benefit of cGTA is that it utilizes an Internet browser, making it relatively easy to use. That said, it was vitally important to implement the system in a way that integrated smoothly with existing clinical processes.

To that end, MSH worked closely with its HIS vendor to link cGTA to the HIS application already being used by the organization's clinical staff. This presented a unique challenge, however, as early cGTA adopters had used an older version of the HIS or a completely different system. So MSH and its vendor needed to come up with a new way to link the resources.

### CONNECTING WITH END-USERS

Early on, it was decided the key to successful cGTA implementation at MSH would be the tight integration of system rollout with training and communication efforts.

This meant speaking with physician leadership at the hospital's medical advisory council, as well as meeting with physician groups and other clinical staff at their departmental meetings to introduce and demonstrate the cGTA application, not only offering an overview of its benefits but also answering any questions or concerns they might have. Key to this was having both the project manager and organization's privacy manager available to present the system to clinical staff, answer procedural questions and address any questions that arose around the privacy and security of patient health records.

To ensure the information remained fresh, departmental meetings were timed to coincide with their respective go-live schedules. In some cases, within hours of the meeting, clinical staff could access the application, testing out its functions first-hand.

Another important factor was simplifying and streamlining training. When introducing any new system or application, it is easy to overcomplicate training. In doing so, there is significant risk of overwhelming the end-users and making them less eager to access and utilize the system. Fortunately, MSH clinical staff was already open to, and familiar with, the use of electronic applications. As a result, systems training largely involved showing clinical staff where to find the cGTA link from within the HIS, and a brief demonstration of how to navigate the different views of clinical information as well as the types of information they might access.

After go-live, clinical application support staff toured different areas of the hospital in

two-week segments as part of an ongoing communications effort that reminded people about cGTA, offered handouts and addressed any questions about accessing or using the application. This also allowed support staff to quickly troubleshoot and resolve any issues that had arisen.

Supporting these training efforts were e-mails, posters, Intranet announcements and newsletter items designed to keep clinical staff informed at critical junctures of the project's progress as well as reinforce its use by, and benefits to, staff and patients. The program ensured clinical staff understood the application and knew they were supported in its use.

### COMPLETING THE CONNECTION

MSH is already seeing the benefits of the new system. The rapid access to patients' previous care from connected organizations and lab results from across the province has given the hospital the information needed to support medical decision-making. This is health data sharing at a level that provides the hospital with access when and where it needs it most.

As cGTA rolls out across Ontario, the MSH-developed solution will be shared with other institutions using the same HIS and early adopter organizations as they upgrade to the same version.

With respect to MSH, which presently views external patient data, the organization has begun the next phase of populating the cGTA repository with patient data. This completes the information loop, further strengthens cGTA and enhances the quality of patient care for all participating organizations. ■

Leela Holliman is a project manager at Markham Stouffville Hospital. She led the implementation of ConnectingGTA.

**CentralSorb®**  
ANESTHETIC COLLECTION SERVICE  
Where is your vented Anesthetic Waste going?  
Prevent the VENT  
blue zone® Greening Anesthesia Solutions®

**TOUCH2PLAY**  
Therapy in an Entertaining Package!  
"They have been such a good addition to our activity program; I would highly encourage all nursing homes to get one." Lee Parsons, SSD  
1-888-521-2278 | Info@Touch2Play.com

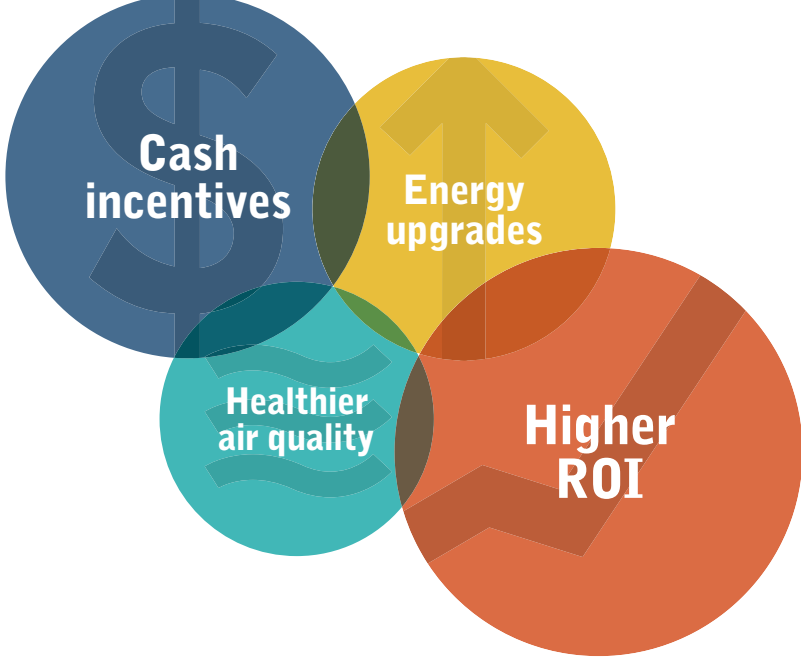
Subscribe to the  
**Canadian Healthcare Facilities**  
e-newsletter.  
Visit **www.ches.org**  
and subscribe today

# 100% of healthcare companies in the Fortune Global 500 rely on Red Hat

From the leader in open source, for the leaders in I.T.  
When enterprises need reliable mission-critical technology to  
develop new business opportunities, they count on Red Hat®  
for our broad portfolio of trusted open source solutions.

[redhat.com/trusted](http://redhat.com/trusted)





**That's  
EnerSmart.™**

**Saving energy delivers much more than energy savings.**

When you install high performance heating equipment, you expect lower energy bills. But non-energy benefits, such as improved air quality and comfort, can deliver even more value to your bottom line. **Especially with cash incentives designed to maximize your ROI.**

**2016 INCENTIVES – A FEW EXAMPLES**

View the full range of Union Gas incentives at [uniongas.com/savemoneyandenergy](http://uniongas.com/savemoneyandenergy).

EQUIPMENT UPGRADES		CUSTOM ENGINEERING PROJECTS	
ENERGY RECOVERY VENTILATOR IMPROVED EFFECTIVENESS	GET UP TO <b>\$6,000</b> PER UNIT	COMMERCIAL & INSTITUTIONAL CUSTOMERS	GET UP TO <b>\$40,000</b>
CONDENSING MAKE-UP AIR	GET UP TO <b>\$5,600</b> PER UNIT	HIGH VOLUME CONTRACT RATE CUSTOMERS	GET UP TO <b>\$100,000</b>
CONDENSING BOILER	GET UP TO <b>\$6,000</b> PER UNIT	<p>Ask an Account Manager to assess the value of energy efficiency for your healthcare facility. Email <a href="mailto:incentives@uniongas.com">incentives@uniongas.com</a> to schedule an on-site consultation.</p>	

