

Infection Control Passport Program

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Over the last few years many hospitals in England have seen increasing numbers of *Clostridium difficile* infection (CDI) with increased mortality rates. This trend has been reported similarly in America and Canada.

Thus, Infection Prevention and Control (IP&C) has never had such a high profile globally, yet so little of the basic issues are understood by either the public or practiced by clinical staff. The high and mighty, the press, the politicians, they all have a view on IP&C. They speak with such expertise that the true experts appear mute. A subject that is based on science, knowledge and years of training is now used as a political football to score points for political gain, sell newspapers and play games of “name, shame and blame”.

In early 2005, my hospital group - Barking Havering and Redbridge Acute NHS Trust (1500 beds) - experienced an average of 15 new CDI cases a day, and by necessity, a 14 bed ward was converted into a CDI isolation cohort area. This compelled us to address the training that nurses and other healthcare workers received in topics related to infection prevention and control, and take a new initiative that has proven very successful, the Infection Control Passport.

Development of the Infection Control passport

As part of the management program to reduce the number of CDI within the trust and to improve patient care outcomes, the Infection Control Team (ICT) devised a nursing educational program – the Infection Control Passport - to support the principles of standard infection control practice and precautions, which had hitherto not been fully understood or practiced by clinical staff.

The program was originally developed to be delivered over five non-consecutive days, a one-hour session each day. Components of the Infection Control Passport include correct hand

decontamination, appropriate use of personal protective clothing, effective environmental hygiene and decontamination, waste management, including sharps and clinical equipment and practice. The epidemiology and management of infections of significance, such as Methicillin resistant *Staphylococcus aureus* (MRSA), *Clostridium difficile*, norovirus and blood borne viruses are also covered with the principles of the Standard applied to practice. In order to minimize disruption to the clinical team, and maxi-



mize patient benefit, employees were given a six-week period to complete their Passport. On completion of the first 30 passports in the pilot project, and a comprehensive evaluation of the program, and documented evidence of a reduction in *Clostridium difficile* infection rates, the infection control team proposed an extension of the program to a further four clinical areas. Following the success of the revised program, additional evaluation was undertaken and further reduction of CDI, the Infection Control Passport has now developed into a full day of theory delivered by the infection control team and consultant microbiologists. The participants still have six weeks to complete their competencies with an infection control nurse. On completion of the training, staff are viewed as champions and role models for excellence in infection prevention and control within there

“The secret of success is constancy of purpose”

Benjamin Disraeli

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Best Practices for Infection Prevention and Control Programs in Ontario in All Health Care Settings

Mary Vearncombe

Medical Director, Infection Prevention and Control
Sunnybrook Health Sciences Centre and Women's College Hospital
Chair, Provincial Infectious Diseases Advisory Committee (PIDAC) Subcommittee on Infection Prevention and Control

Health care-associated infections are an important patient safety issue and represent a significant adverse outcome of the health care system. Infection prevention and control (IPAC) programs have been shown to be clinically effective, reducing morbidity and mortality, as well as cost effective, providing important cost savings in terms of fewer health care-associated infections, reduced length of hospital stay, less antibiotic resistance and decreased costs of treatment for infections.

The Provincial Infectious Diseases Advisory Committee (PIDAC) Infection Prevention and Control Subcommittee has developed a document entitled: "Best Practices for Infection Prevention and Control Programs in Ontario in All Health Care Settings". This document provides a framework for Infection Prevention and Control (IPAC) programs across the continuum of health care delivery in Ontario, and makes recommendations for specific activities, areas of expertise and adequate and appropriate resource allocation on the basis of the type of institutional setting and size. The recommendations in this document reflect the best evidence and expert opinion available at the time of writing. In addition, the recommendations reflect many best practices that are currently practiced in the field and they should be seen as an enhancement to existing practices. This document can be found on the PIDAC webpage: www.health.gov.on.ca/english/providers/program/infectious/diseases/ic_ipcp.html

Topics covered in this Best Practice document include:

- Mandate and goals of the IPAC program
- Structure and elements of the IPAC program
- The Infection Prevention and Control

Committee

- IPAC program functions: surveillance, policies and procedures, compliance with legislation and accreditation standards, occupational health and safety issues, education and training
- Key components of the program: hand hygiene, Routine Practices and Additional Precautions, immunization, cluster and outbreak investigation and management, communications, environment
- Human resources for the IPAC program including education, training and certification of IPAC professionals, ongoing professional development, roles and responsibilities, staffing levels, administrative assistance and IPAC physicians
- Laboratory and information technology support

Recommendations made in the Best Practice document are summarized in an appendix, in tabular form, to assist IPAC programs in self-evaluation.

The best practices document is aimed at senior administration, medical officers of health and others in a management role in all health care settings. Infection prevention and control programs will also find these best practices useful for prioritizing and developing their programs and engaging in strategic planning activities for the future.

It is expected that all settings in Ontario where health care is provided, across the continuum of health care, will work towards implementing the basic infection prevention and control practices and principles set out in this document. This includes settings where emergency (including pre-hospital) care is provided, hospitals, long-term care homes, outpatient clinics, community health centres and clinics, physician offices, dental offices, offices of allied health professionals and home health care.

A Case for Screening

The spread of germs

SIR - In addition to providing financial benefits, new jobs, and work for migrating doctors, medical tourists may bring a less expected, less welcome situation: resistant bugs ("Operating profit", August 16th). A study published in 2006 by a group from the Karolinska Institute in Sweden found that more than 25% of its domestic cases of methicillin-resistant *Staphylococcus aureus* (MRSA) were caused by infection from abroad. As patients start traveling more frequently and to a wider extent geographically for medical treatment they are at risk of exposure to bacteria with atypical patterns of resistance relative to those found in their host country. This suggests we should start planning for well-organised screening programmes, paying particular attention to patients making transient visits.

MARK SUGI
Los Angeles

This letter to the editor was published in the September 6 issue of *The Economist*, and identifies a need for expanded screening in healthcare facilities. This is a hotly debated point and as yet we take no position.

Now, what can be done about ongoing screening of environmental surface contamination??

Virox Update

2009 CHICA Scholarship

Does your facility have limited funds for continued education? Don't miss out on the Virox Patron Scholarship and your chance to receive funding to attend the 2009 CHICA-National Conference in Newfoundland!

The Virox Patron Scholarship is in its 7th year and to date Virox and the Patron Members (JohnsonDiversey, Butchers, Deb, STERIS and Webber Training) have contributed \$90 000.00 towards the annual scholarship which has provided the opportunity for over 50 Infection Control Practitioners to attend the annual CHICA-Canada Conference. The scholarship deadline is January 31, 2009 and is open to all Infection Control Practitioners across Canada. The application can be downloaded from the CHICA website: http://www.chica.org/opps_virox.html

Study Sponsorship at SickKids

Virox and JohnsonDiversey are excited to be partnering with Ann Matlow and the Infection Control Group at SickKids for a study titled "Knowledge, Environment and HAIs". The study is focusing on understanding the knowledge base and concerns of housekeeping staff and how this knowledge can be translated into creating education programs that will lead to improved hospital cleaning and disinfection.

RESCUE *C. difficile* Intervention Program

With the increased prevalence of *C. difficile* in healthcare facilities Virox Research and Development staff were tasked to develop a surface sporicidal agent. The challenge for us was how to kill large amounts of spores, on an environmental surface in realistic contact times and at the same time make it safer to use, and easier to work with than 5000 ppm of chlorine bleach. The end result after more than a year of R&D was a new Accelerated Hydrogen Peroxide product with a 10 minute contact time for a >6 log reduction of spores utilizing a 4.5% hydrogen peroxide formulation that is available in a Gel, Pre-Moistened Wipe and a Ready-to-Use liquid.

Virox Rescue is positioned as a safer and effective alternative to bleach as a *C.diff* patient room disinfectant cleaner for hard non-porous surfaces with reasonable sporicidal disinfection contact times and also positioned as a task oriented product for *C. diff* outbreaks and containment in medical establishments. The Rescue *C. difficile* Intervention Program has successfully been used by a number of facilities to help combat *C. difficile* outbreaks. For more information on the RESCUE *C. difficile* Intervention Program please visit virox.com/medical/acute_care.asp or call 1-800-387-7578.

Website Update: www.virox.com

Virox prides itself on being a resource tool to the infection control community and will be unveiling a newly designed website in mid-March. Some of the exciting changes to the website include a section devoted entirely to Infection Control that provides resource materials such as Guidelines, Protocols, Outbreak Information, Technical Bulletins etc as well as a section devoted to Hot Topics in Infection Control.

If you are interested in learning more about how the Professional and Technical Services team at Virox can provide educational or consulting opportunities at your facility please contact Nicole Kenny at 1-800-387-7578 x118 or via email at nkenny@virox.com.



Conference & Education Spring Schedule

Virox representatives will be participating in the following functions during the upcoming months:

October 1st - York Region Public Health Education Day in Markham, Ontario

October 2nd - IPAC Dancing with the Stars in Mississauga, Ontario

October 2nd to 3rd - CIPHI Alberta in Grand Prairie, Alberta

October 16th - Simcoe Muskoka LTC Education Day in Muskoka, Ontario

October 16th - Lambton County Public Health in Sarnia, Ontario

October 22nd - Chatham-Kent Infection Control Committee (CKICC) Conference in Chatham, Ontario

October 24th - Infection Prevention & Control Resources Day at Credit Valley Hospital in Mississauga, Ontario

November 2nd - Ontario Electrolysis Association in Toronto, Ontario

November 7th - APIC Chapter Meeting for Greater Las Vegas in Las Vegas, Nevada

November 4th to 5th - Saskatchewan Public Health Professional Education Development Seminar in Saskatoon, Saskatchewan

November 13th to 14th - CHICA Nova Scotia Conference in Halifax, Nova Scotia

We are very excited about participating in each of these conferences & education days. We wish the best to all of the various organizers and would like to thank them for their dedication and effort in organizing these very important educational opportunities. We look forward to attending and talking to all of the participants.

*Eighty percent of success
is showing up.*

- Woody Allen



In August, Virox Technologies Inc. moved to its new corporate home in Oakville, Ontario. The purchase of the new building was testament to the increased demand and acceptance of the Accelerated Hydrogen Peroxide Technology. The 47,000 square foot building was recently put on display for over one hundred customers, partners, friends and family at the company's open house held on September 4th. The open house also celebrated the 10 year anniversary of Virox and the AHP Technology. Since its creation in 1998, the once small Canadian Company has pioneered as an innovative industry leader and a true resource to infection control professionals. Through our partners, AHP products can be found in 56 countries around the globe. Thank you to all those attended in celebration of the growth of Virox and AHP!

The future for Virox is promising as there are a number of newly registered products in commercialization (30 new EPA registered products alone, as well as an FDA registered high level disinfectant) in Canada, the United States, as well as Asian and European countries. Growth into new markets makes further expansion for Virox inevitable. Virox has also added to a list of growing accomplishments through the launch of a new surface disinfectant that is effective against *C. difficile* spores. This is the first DIN registered surface sporicide in Canada and a true testament to the continued sustainability of Accelerated Hydrogen Peroxide in the Infection Control community and the war against microbes.



The Ghost Map - A Review

Nicole Kenny, Virox Technologies Inc.

"If every great city resembles a living organism, then mid-19th century London was an ungainly and careless youthful giant with appalling personal habits". As Steven Johnson makes nauseatingly clear in the grim and gripping early pages of The Ghost Map, "the stench of human excrement was everywhere".

One of my early-Summer reads was Steven Johnson's new book, "The Ghost Map", that traces a *Vibrio cholerae* outbreak through London of the mid 1800's, and describes how Dr. John Snow proved the current theory of disease transmission incorrect, and in the process created a new field of medical specialty (epidemiology) and helped to save the lives of hundreds in his own generation, and millions from generations to follow.

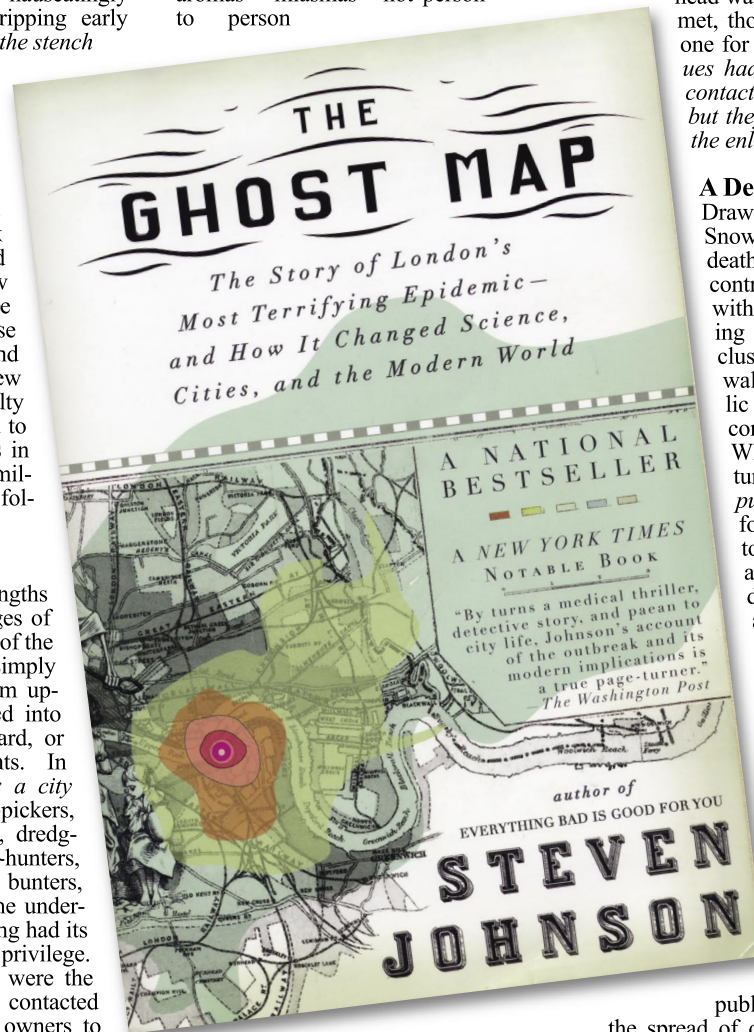
City of Scavengers

The author goes to great lengths to paint vivid literate images of the filth and contamination of the time. Human waste was simply thrown onto the street from upstairs windows, or dumped into an open pit in the backyard, or into fetid pools in basements. In August 1854, "London is a city of scavengers" – bone-pickers, rag-gatherers, pure-finders, dredgemen, mud-larks, sewer-hunters, dustmen, night-soil men, bunters, toshers, shoremen – and the underground market of scavenging had its own system of rank and privilege. Near the top of this rank were the night-soil men, those who contacted their services to property owners to clean out the human excrement (night-soil) from the overflowing cesspools in their buildings.

Miasma vs. Contagion

"All smell is disease" (Edwin Chadwick, London's sanitation commissioner at the time of the 1854 outbreak). According to conventional wisdom of the day, the

cause of disease was as plain as the nose on your face. The majority of physicians and scientists firmly believed that disease spread through polluted fumes and toxic aromas – miasmas - not person to person



contact. Before corrective action could be taken on a civic level, John Snow's biggest hurdle was to convince his peers and politicians of the theory of contagion.

Snow studied the Soho epidemic and eventually backtracked it to a water pump on Broad Street. But he wasn't working

alone. Henry Whitehead, a local curate with uncommon access to the neighborhood and unquestioned empathy for its residents, went house to house collecting data about residents' daily habits and the incidence of the disease, information Snow used to shore up his controversial theory of waterborne contagion. Whitehead was a miasmatist when they met, though he wouldn't remain one for long. "His religious values had brought him into close contact with the working poor; but they had not blinded him to the enlightenments of science."

A Death Map

Drawing on Whitehead's data, Snow plotted a demographic death map. This "ghost map" contrasted human behavior with geography, establishing that cholera deaths were clustered in houses within walking distance of a public water pump that proved contaminated. Snow and Whitehead's efforts captured "a deeper truth by putting it on a map." And for the first time, according to Johnson, a map became a triumph of information design and epidemiology as well as a rare documentation of "street level knowledge."

When he creates the map that traces the pattern of outbreak back to its source, Dr. Snow didn't just solve the most pressing medical riddle of his time. He ultimately established a precedent for the way modern city-dwellers, city planners, physicians, and public officials think about the spread of disease and the development of the modern urban environment.

The Ghost Map is an endlessly compelling and utterly gripping account of that London summer of 1854, from the microbial level to the "macrouban"-theory level, including, most important, the human level.

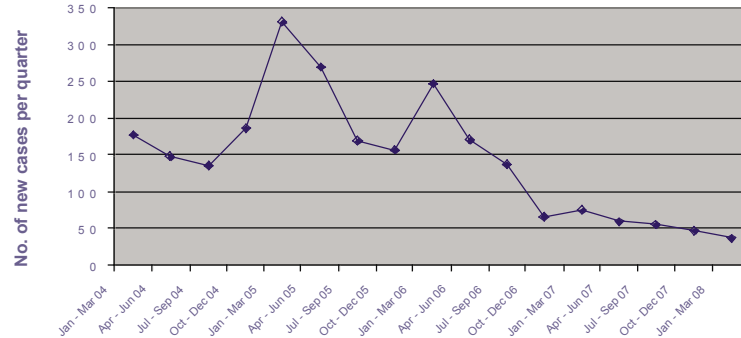
Infection Control Passport Program

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clinical area.

To date over 400 clinical staff out of a total of 2,000 have completed the passport and the passport has become a mandatory educational program for all newly appointed nurses. Since June 2008 the Infection Control Passport has been further developed in order to expand into other departmental specialities and grades of staff such as phlebotomy and junior doctors.

Clostridium difficile at BHRT from January 2004 to March 2008



Sustainable Facility Care Forum

More than 250 industry leaders came together on April 30 for the first Sustainable Facility Care Forum, a one-day event designed to give members of the facility cleaning and management industry as well as other interested parties an opportunity to better understand trends in sustainable facility care. The event was co-hosted by JohnsonDiversey Inc. and the Leonardo Academy, a non-profit organization dedicated to sustainability in buildings.

The forum was held at the recently opened Washington Neweum, the interactive museum of news. Attendees included building service contractors and in-house facility service providers from higher education, health care, government and retail, as well as distributors and property managers.

“Our objective for this forum was to promote the exchange of practical ideas for sustainable facility care”, said JohnsonDiversey President and CEO Ed Longergan. *“We were pleased to have some of the best minds in the sustainable facility care movement join us for this dialogue”.*

The morning keynote speaker, Kevin Kamschroer, acting director for the US General Services Administration’s new Office of Federal High-Performance Green Buildings, discussed the relationship between human behavior, facilities and business, and Yale University Professor Daniel Esty, made the business case for sustainability in his afternoon keynote presentation. He discussed the relationship between environment and corporate strategy, and showed how leading-edge companies have leveraged environmental commitment into business development strategies

The forum also featured a panel discussion, featuring facility care leaders and industry experts from various North American organizations, including our own Randy Pilon, president of Virox Technologies Inc. The panel developed a definition and economic argument for sustainable facility care through demonstrated best practices and metrics.

“Green business is big news these days and businesses with a corporate environmental strategy have a competitive advantage in today’s marketplace.” Bill Taylor of JohnsonDiversey concludes,

“the challenge for us as an industry is to create opportunities for our own businesses while protecting the welfare of the people in the facilities we manage. The more we can share best practices, the more we can do the right thing by protecting our customers, preserving the environment and transforming the industry. I think we can make a huge impact on the world if we work together.”

The Sustainable Facility Care Forum is expected to be an annual event. To stay in the loop with the 2009 Forum, refer to www.facilitycareforum.com.

“We’re naturally inclined to consider these scavengers tragic figures. But ... without any central planner coordinating their actions, without any education at all, this itinerant underclass managed to conjure up an entire system for processing and sorting the waste generated by two million people.”

Steven Johnson
The Ghost Map

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