



Report on Infection Control Resource Team Visit to the Ottawa Hospital (General Campus) September 27, 2012

Infection Control Resource Team Members:

Dr. Camille Lemieux Associate Director, Infection Prevention and Control, University Health Network	Freda Lam Infection Prevention and Control Epidemiologist, Public Health Ontario
Cathy Egan Director, Infection Prevention and Control, Public Health Ontario	Naideen Bailey Regional Infection Control Network (RICN) Manager, Public Health Ontario
Liz Van Horne Infection Prevention and Control Manager, Public Health Ontario	Jean-Louis Pitre Network Coordinator, Champlain Infection Control Network, Public Health Ontario

The Ottawa Hospital staff participation list

- President and CEO: Dr. JB Kitts
- Senior Vice President, Operations and Clinical Programs: Cameron Love
- Vice President, Clinical Programs: Mike Tierney
- Senior Director, Support Services, Ambulatory Care and Eye Care: Joanne Read
- Director, Physician Leadership Development and Physician Engagement; Medical Director, Infection Prevention and Control: Dr. Virginia Roth
- Associate Medical Director, Infection Prevention and Control: Dr. Kathryn Suh
- Medical Director, Antimicrobial Stewardship Program: Dr. Gary Garber
- Clinical Director, Surgery Inpatient Units, Trauma and Bariatric Program: John Trickett
- Clinical Director, Cancer Program: Cathy Degrasse
- Clinical Director, Medicine, Neuroscience, Endoscopy; Director, Infection Prevention and Control: Karen Stockton
- Director, Housekeeping: Susan Batista
- Head, Division of Microbiology: Dr. Karamchand Ramotar
- Head, Malignant Hematology and Stem Cell Transplantation: Dr. Chris Bredeson
- Manager, Infection Prevention and Control: Natalie Bruce
- Clinical Manager, 5 West and BMT: Kate Duke
- Clinical Manager, General Medicine 5NES: Elaine Lariviere
- Clinical Manager, Colo-rectal Gastrointestinal: Maureen McGrath
- Care Facilitator, 7 East: Joanne Abma
- Microbiologist: Dr. Marc Desjardins

- Infection Prevention and Control Professional: Michele Larocque-Levac
- Infection Prevention and Control Professional: Kathleen Cullen
- Infection Prevention and Control Professional: Andrea Fisher
- Infection Prevention and Control Professional: Tim Doyle
- Educator, Infection Prevention and Control: Jenn Johnson
- Manager, Housekeeping: Julie Lavergne
- Pharmacist, Antimicrobial Stewardship Program: Rosemary Zvonar
- Pharmacist, Antimicrobial Stewardship Program: Dr. Lizanne Beique
- Housekeeping: Wayne Levac

Local Public Health Unit

- Associate Medical Officer of Health, Ottawa Public Health: Dr. Carolyn Pim
- Infection Prevention and Control Nurse, Ottawa Public Health: Donna Perron

Executive Summary

Public Health Ontario (PHO) received a request from Dr. Virginia Roth (Director of Physician Leadership Development and Physician Engagement, and Medical Director of Infection Prevention and Control), to activate an Infection Control Resource Team (ICRT) to conduct a review at the Ottawa Hospital (TOH) General Campus due to an increase in *Clostridium difficile* infection (CDI) rates in the hospital following an outbreak of CDI earlier in 2012. Post outbreaks the rates of CDI within this setting did not return to the previous baseline despite several interventions by the organization.

On September 27, 2012, the ICRT conducted an on-site visit at the hospital. The visit included interviews with senior management, physicians and key staff, a tour of the facility and a review of processes for Environmental Services and Infection Prevention and Control (IPAC).

Prior to the review, the ICRT requested and received background information on CDI rates, the IPAC program and other relevant activities at TOH. The information received was essential to the assessment and the recommendations outlined in this report.

The following recommendations have been put forward by the ICRT following the review. Detailed information on the review process and the recommendations is included in the full report.

Priority Recommendations for Immediate Consideration

- Include an Infection Prevention and Control physician as a member of the Medical Advisory Committee (MAC).
- A member of the corporate senior leadership team should be given responsibility for ensuring the hand hygiene program meets its goals.
- Identify the most important communications to staff during a CDI outbreak, and work to streamline and target the information provided.
- Evaluate the current communication strategy to ensure that staff receive the information that is necessary for them to perform their jobs.
- Ensure there is timely access to data relevant to the Antimicrobial Stewardship Program (ASP), as current delays make meaningful evaluation impossible.
- Decommission spray wands in patient bathrooms immediately. Consider the use of hygiene bags or single use bedpans for waste management.
- Public Health Ontario would be happy to assist the Ottawa Hospital in further epidemiological investigation of CDI, which may also include assessment of the burden of community-associated CDI cases in the hospital.
- Select one hospital disinfectant and standardize cleaning procedures across units and sites. Ensure all environmental service staff are properly trained to use the hospital disinfectant chosen.
- Remove all cups and thermoses from housekeeping carts.
- Restrict consumption of food and drinks by staff in direct patient care areas.
- Continue with the current decluttering initiative, particularly in nurse servers.
- Remove existing tape on walkers, and discontinue this practice on all units

Additional Recommendations

***CLOSTRIDIUM DIFFICILE* MANAGEMENT**

- Reconcile discrepancies in CDI management between the Civic and General campus, particularly timing of precautions initiation.
- Encourage the use of the Bristol stool classification on hospital units to ensure consistency in the assessment and documentation of stool form and to ensure that appropriate samples are being sent for laboratory testing.

EPIDEMIOLOGY

- Review positive PCR laboratory results of CDI with clinical symptoms through chart review to validate that cases meet the case definition of an acute infection and do not represent carriage.

ENVIRONMENTAL SERVICES

- Ensure the number of dedicated environmental service staff of each hospital unit reflects the unit-specific environmental workload needs, especially on weekends.
- Environmental service staff should be responsible for environmental audits. IPAC may assist with this but primary responsibility should rest with Environmental Services.

LOGISTICS

- Identify extra staff computers in the patient care areas that are not used and remove them to decrease clutter.
- Reinforce the existing policy for cleaning of patient care equipment with all staff, and communicate responsibilities clearly to Environmental Services and unit staff. Nursing and Logistics should work together to monitor compliance with this policy on a regular basis.
- Adhere to the Product Evaluation Committee process when introducing new supplies or equipment to the hospital to ensure Infection Prevention and Control is involved with the review.

HAND HYGIENE

- A hand hygiene steering committee should be created that reports to the senior leadership team.
- Validate hand hygiene audit results collected by current processes.
- Explore other mechanisms to ensure reliable and reproducible data from hand hygiene audits. Consider using non-unit based auditors to provide accurate rates.
- Infection Prevention and Control staff should not be engaged in routine hand hygiene auditing but may assist in validating results in their role as consultants.
- Consider other infection prevention and control markers (indicators) for CDI, rather than hand hygiene.
- Review the existing handwashing sinks to ensure that they are large enough to facilitate hand hygiene without contaminating the surrounding environment. Replace those sinks that are too small.

ANTIMICROBIAL STEWARDSHIP

- Ensure there are dedicated and sufficient resources for the antimicrobial stewardship program (ASP) so that key areas of the hospital are covered, and sufficient capacity and redundancy are in place.

- Maximize opportunities to work with areas or units of the hospital that are early adopters of the ASP.
- Explore ways to limit proton pump inhibitor use.
- Engage frontline staff in determining how to best communicate outbreak information with them.

COMMUNICATION

- Ensure all areas of the organization receive communication about the outbreak, including staff who often do not have access to email such as Environmental Services
- Ensure communication has been received by staff through use of existing staff meetings and huddles.

ADMINISTRATION

- Implement a formalized method for debriefing adverse outcomes for CDI patients and for CDI outbreaks, such as through an Incident Reporting system linked to quality improvement and patient safety.

Report of Infection Control Resource Team Visit

Visit date of September 27, 2012

Background

The Ottawa Hospital is an acute care teaching hospital that services approximately 1.2 million residents in Ottawa, the surrounding Eastern Ontario area and Iqaluit. It provides primary, secondary and tertiary care services, and regional programs including cancer, eye care, nephrology, and trauma services. There are five hospital campuses, of which the General Campus is the largest, with 519 beds. As a major acute care health centre, the hospital is frequently at capacity or over-capacity.

The hospital has been dealing with several major changes, including bringing environmental services in-house, and undergoing renovations in units to replace worn infrastructure. The IPAC team has been focused on new initiatives, including reducing patient flow, decluttering, determining environmental audit agents and waste management.

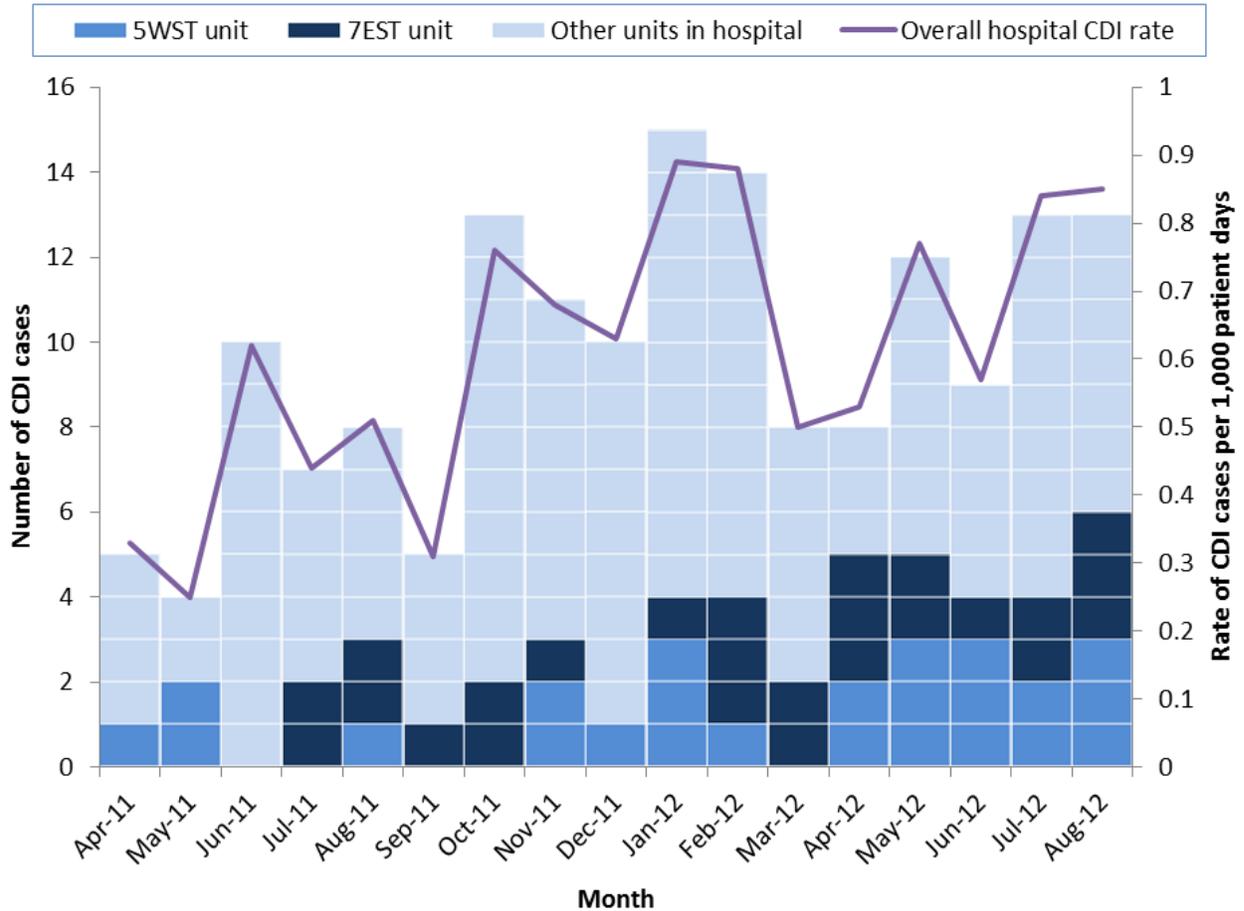
Epidemiological Summary

TOH General Campus has had an increased number of CDI cases within 2012. A CDI outbreak was declared on May 14th, 2012 in 5WST, a 20-bed bone marrow transplant unit, which was subsequently declared over on August 2nd, 2012. This unit also previously had a cluster of three cases in January 2012 (see Figure 1).

In February and April 2012, 7EST, a 40-bed general surgery unit, also had a cluster of CDI cases in which cases continued to be linked to this unit on a monthly basis. During the fiscal year of 2011-2012, 14 CDI cases were linked to this unit, with a CDI rate of 1.01 cases per 1,000 patient days. In the following 2012-2013 fiscal year, 11 cases were linked to 7EST, with the year-to-date rate of 2.05 cases per 1,000 patient days (see Figure 1).

At time of the ICRT visit, no CDI outbreaks or clusters were occurring at the General campus, although the number of CDI cases remained higher than previous years. There is a marked increase when comparing the General campus CDI rate (0.57 cases per 1,000 patient days; 110 cases in 12 months) to their sister campus (Civic) CDI rate (0.54 cases per 1,000 patient days; 84 cases in 12 months). In the 2012-2013 fiscal year (April to August), the General had a CDI rate of 0.71 cases per 1,000 patient days (55 cases in 5 months), while the Civic hospital had a CDI rate of 0.37 cases per 1,000 patient days (23 cases in 5 months). See Figure 1 below.

Figure 1. Epidemiologic curve of CDI cases at the Ottawa Hospital, General Campus, April 2011 – August 12



The high number of cases have placed TOH General in the >80th percentile in patient safety reporting for several months, and rates have remained high despite various infection control measures.

At time of the ICRT visit, September 2012 was the first time in several months where the TOH General CDI rate was less than 0.45 per 1,000 patient days (the CDI target rate that TOH has set as a benchmark indicator). The ICRT was requested to come to provide an objective review of TOH General Campus' CDI management, with a particular focus on the staff perception and culture on environmental service procedures, communication and patient care.

Process of ICRT Review

Baseline information provided by TOH prior to the ICRT visit was reviewed. The one-day visit consisted of an introductory meeting and discussion with Dr. Roth and representatives from the IPAC team, hospital units, environmental services and public health. This was followed by a series of meetings with representatives of the CDI outbreak- or cluster-affected units, IPAC, the antimicrobial stewardship program and environmental services. An opportunity to tour selected areas of the facility was also provided to the ICRT.

PIDAC Best Practice Documents used to assess practices at TOH:

The Provincial Infectious Diseases Advisory Committee's (PIDAC) best practice documents were used for this review. In particular:

- *Best Practices for Infection Prevention and Control Programs in Ontario in all Health Care Settings (January 2011)*
- *Routine Practices and Additional Precautions in All Health Care Settings (July 2011)*
- *Best Practices for Environmental Cleaning for Prevention and Control of Infections in all Health Care Settings – 2nd Edition (May 2012)*

CDI Management Considerations

IPAC at TOH consists of 10 ICPs, one educator and an IPAC manager. At the General Campus, there are four infection control professionals (ICPs) that follow PIDAC case definitions and review CDI cases. ICPs typically are not involved with CDI management unless there is an outbreak, as an algorithm has been developed for unit staff to follow. Some units mentioned that using the Bristol stool chart has been helpful in determining the form of fecal matter and may be considered as an additional resource for all TOH staff in managing diarrhea. IPAC staff report that unit staff frequently need consultation on diarrhea management, despite the availability of the algorithm.

A policy discrepancy was observed between the implementation of CDI treatment between the General and Civic campus sites, where only the General campus would immediately implement precautions, whereas the Civic campus initiated precautions after CDI laboratory confirmation. Procedures should be the same at both campuses. Also, laboratory testing for CDI should be completed as soon as a patient presents with diarrhea that is new to their hospital stay.

In patient bathrooms in the units, it was observed that spray wands were still in place. Although staff are told not to use them in fecal management, these spray wands remain functional. It is recommended that the spray wands be decommissioned and to use hygiene bags or single-use bedpans in the interim. As storage of single pans may be challenging, unit managers will need to educate staff on consistent and proper handling and storage.

Recommendations

- Reconcile discrepancies in CDI management between the Civic and General campus, particularly timing of precautions initiation.
- Encourage the use of the Bristol stool classification on hospital units to ensure consistency in the assessment and documentation of stool form and to ensure that appropriate samples are being sent for laboratory testing.
- Decommission spray wands in patient bathrooms immediately. Consider the use of hygiene bags or single use bedpans for waste management.

Epidemiological Considerations

At TOH, IPAC staff members have been completing a review of CDI cases within this calendar year. While they identified 5WST (bone marrow transplant) and 7EST (general surgery) as the units with the highest number of cases, they have yet to determine the “source” of the propagated outbreak. Many of the cases that stayed in 7EST had many risk factors for CDI acquisition (prolonged antibiotic use, gastrointestinal surgery, age, immunocompromised etc.); however, the historical number of CDI cases has never been high. It was suggested that community-associated CDI cases may have introduced the organism to the ward, but lack of laboratory evidence in discriminating CDI clonal types make it difficult to determine if any transmission existed. While it is known that the IPAC team is diligent in following PIDAC case definitions for CDI, case review of the clinical symptoms and antibiotic use remain important in case classification.

IPAC had reviewed infection control practices and there is some evidence that Contact Precautions may not have been implemented immediately during the first cluster of cases in January at 5WST; however, other practices were generally followed throughout the year in the affected units. One of the ICPs observed that the past several cases staying in 7EST had been staying on pressure-distribution air mattresses (beds). These air-inflated mattresses were purchased a year ago, to provide continuous low pressure to reduce the chance of skin ulcers in patients. These particular mattresses are difficult to clean, because of the multiple flaps, creases and electronic equipment attached to the bed. IPAC had already made further inquiry to the company to provide training on how to properly clean the beds between uses. Plans to investigate whether the beds were a transmission source are being considered.

Recommendations

EPIDEMIOLOGY

- Validate positive laboratory results of CDI with clinical symptoms through chart review.
- Public Health Ontario would be happy to assist the Ottawa Hospital in further epidemiological investigation of CDI, which may also include an assessment of the burden of community-associated CDI cases in the hospital.

Environmental Services

In the recent months, Environmental Services have undergone major changes, as its service has been brought in-house, after being with an external company for several years. Two effective strategies in improving communication involved developing a centralized paging system to reach housekeepers at night and dedicating housekeepers to the units. Two educators have been brought in to teach the staff about the different processes, and staff has been receptive in working towards standardizing practices and procedures. IPAC has been collaborating with Environmental Services in testing different products to determine the best product to use when going forward with audits.

However, this major change in Environmental Services has also brought opportunities for confusion. There has been reduced Environmental Service staff on the weekend, but the workload remains demanding with patient activity. Decreased staffing levels on weekends have created challenges in ensuring that the patient care environment is cleaned properly. Staff remain unclear on proper cleaning practices when Additional Precautions are implemented, and inconsistent practices are being used on different wards and different campuses (e.g. confusion over when to use chlorine-based disinfectants, and accelerated hydrogen peroxide disinfectant). Environmental service audits are currently completed by the unit manager but it is recommended that Environmental Services complete audits on their own staff to identify problem areas and address them; this is to promote the ownership of their work and program. Infection Prevention and Control may assist, but the primary responsibility should rest with Environmental Services.

Some other issues Environmental Service staff have identified was the irritating smell of chlorine-based disinfectants reported by patients and their families, the eroding nature of chlorine-based disinfectants on patient equipment, difficulty in cleaning the pressure-distribution air mattresses (beds), and the clutter in patient care areas that restrict thorough cleaning. During the facility tour, many housekeeping carts had food or drinks, which should be removed to prevent contamination. Food and beverages intended for consumption by staff were also observed in various areas of patient care areas. To prevent contamination to staff or to patients from cases, food and beverages should be restricted from these areas.

Environmental Service staff have expressed that they are eager to do things well; however, they would like to see the cleaning process simplified and standardized.

Recommendations

- Ensure the number of dedicated environmental service staff of each hospital unit reflects the unit-specific environmental workload needs especially on weekends.
- Select one hospital disinfectant and standardize cleaning procedures across units and sites. Ensure all Environmental Service staff are properly trained to use the hospital disinfectant chosen.
- Environmental Service staff should be responsible for environmental audits. IPAC may assist with this but primary responsibility should rest with Environmental Services.
- Remove all cups and thermoses from housekeeping carts.
- Restrict consumption of food and drinks by staff in direct patient care areas.

Logistics

AT TOH, “Logistics” refers to staff that provides support to units in areas such as patient equipment reprocessing, storage and supply, and patient transport. Logistics staff have lanyard cards that are a quick-reference that outlines the routine, contact, droplet and airborne precautions when transporting a patient. Cleaning audits of shared equipment is done only during an outbreak, and usually high compliance is observed. Logistics staff identified that it was a challenge to keep supply rooms neat and tidy, and limited ways of transporting between floors.

During the unit tour, it was observed that nurse servers were often cluttered and filled with overstocked supplies. There were also many unused computers meant for staff use in patient care areas. Staff mentioned that they would like to have a better way to store their linens. Patient equipment placed around the hall or in storage areas were assumed clean, although there was no process to distinguish if equipment was clean or dirty. There was a general assumption that the previous person who used the equipment would have cleaned it. While some units used a tagging system, the tags were reported to be unclear (equipment were tagged with “Clean” and staff were unsure if this meant the equipment was clean, or needed to be cleaned). Cleaned stretchers and beds were placed in areas that were initially thought to be for dirty items, which was later discovered to be for clean items. Walkers for patient use were observed to be reinforced with tape, which would hinder its proper cleaning.

Individual units are responsible for the ordering of patient equipment; 7WST had decided to order the pressure-distribution air mattresses (beds) without consultation from the Product Evaluation Committee, where the IPAC educator participates in. If the bed had been submitted to the Committee for review, IPAC could have identified the housekeeping challenges with the bed, and could make recommendations. Currently, Environmental Service staff are awaiting training from the mattress manufacturer to provide training on proper cleaning and disinfection. While this is the appropriate response in this situation, it is recommended that all new patient equipment be reviewed by the Product Evaluation Committee in the future to prevent challenges such as this one.

Recommendations

- Continue with the current decluttering initiative, particularly in nurse servers.
- Identify extra staff computers in the patient care areas that are not used and remove them to decrease clutter.
- Reinforce the existing policy for cleaning of patient care equipment with all staff, and communicate responsibilities clearly to Environmental Services and unit staff. Nursing and Logistics should work together to monitor compliance with this policy on a regular basis.
- Remove existing tape on walkers, and discontinue this practice on all units
- Adhere to the Product Evaluation Committee process when introducing new supplies or equipment to the hospital to ensure Infection Prevention and Control is involved with the review.

Hand Hygiene

TOH has a hand hygiene initiative that was initially led by IPAC. It should be recognized that this initiative is currently driven by front-line staff, where audits are completed by unit staff weekly, with a targeted hand hygiene rate of 85% before initial patient/patient environment contact. IPAC may participate in audits and these rates are also reported to the senior leadership team. However, ever since the hand hygiene advisory committee has been disbanded, the initiative has focused on hand hygiene audits rather than formalizing a hand hygiene program. The hand hygiene program has been lacking a senior leader sponsor to champion the program, and to be responsible for ensuring that the program meets its stated goals.

Hand hygiene rates are also seen as an indicator for CDI rates; a more appropriate indicator may be those related to antibiotic use, as antibiotics have been implicated as important risk factors in the literature. The ICRT would recommend that TOH consider including CDI rates as an indicator for the antimicrobial stewardship program. Hand hygiene rates should continue to be used as an indicator for the transmission of antimicrobial resistant organisms such as Methicillin-resistant *Staphylococcus aureus* (MRSA).

A discrepancy between reported hand hygiene rates among unit staff audits and IPAC audits has been observed, with higher rates of compliance reported from unit auditors. The ICRT is concerned that relying solely on unit-based auditors may artificially inflate the compliance rates for the unit, as the unit auditors often report 100% compliance, which contradicts the compliance rate when audits are completed by IPAC. This rate discrepancy between IPAC and unit-based auditors needs to be further explored and the process validated to minimize inter-observer bias. Consider using non-unit based auditors; however, Infection Prevention and Control should not be relied on to regularly conduct observational audits within the facility and should continue their role as consultants for the audit process. Responsibility for hand hygiene should be decentralized throughout the organization to ensure that departments take ownership for this.

It is also unclear whether low rates of hand hygiene are being addressed, despite being reported to the unit managers. Units have been inconsistent in developing action plans with IPAC to identify problem areas and planning solutions. There needs to be an approach where hand hygiene audit results can be validated, and it may require other mechanisms to ensure that the data is reliable and reproducible. Audits should also be completed around the 24-hour clock so that rates provide a better representation of hand hygiene performance.

During the unit tour at TOH, hand washing sinks for staff were observed as being too small for proper handwashing, and the size and orientation of the faucets promoted splashing and contamination of surrounding areas. This was further supported by observing paint and grout breakdown around the sink in some nursing units, which promotes the growth of mold. Some handwashing sinks in 7EST have been trying a new faucet design to minimize splash back; these initiatives are commendable and should be continued.

Recommendations

- A member of the corporate senior leadership team should be given responsibility for ensuring the hand hygiene program meets its goals
- A hand hygiene steering committee should be created that reports to the senior leadership team.
- Validate hand hygiene audit results collected by current processes.
- Explore other mechanisms to ensure reliable and reproducible data from hand hygiene audits. Consider using non-unit based auditors to provide accurate rates.
- Infection Prevention and Control staff should not be engaged in routine hand hygiene auditing but may assist in validating results in their role as consultants.
- Consider other infection prevention and control markers (indicators) for CDI, rather than hand hygiene.
- Review the existing handwashing sinks to ensure that they are large enough to facilitate hand hygiene without contaminating the surrounding environment. Replace those sinks that are too small.

Antimicrobial Stewardship

In 2011, TOH implemented an Antimicrobial Stewardship Program (ASP) as a patient safety and quality of care initiative. The ASP team is supported by two physicians, with two pharmacists at 0.5 FTE dedicated to the program, placed at the General and Civic campus. Currently, the general medicine unit at the General and the intensive care unit (ICU) at the Civic participate in the program. Daily reports are reviewed and real-time feedback is provided to the prescribing team. The ASP team may also participate in rounds of every prescribing team on a bi-weekly basis to discuss more complex cases and address infectious disease-related questions. Physician buy-in and participation has been positive, with physicians implementing recommendations within 24 hours in the medicine unit, and greater variability in implementation among ICU staff. The relationship between ASP and IPAC has not been formalized, but the ASP medical director regularly communicates with the IPAC medical director, with IPAC staff involved in ASP subcommittees, and ASP pharmacists attending infection control committee meetings.

The ASP team reported that despite the initiative with two units, it is difficult to maintain the program as human resources (with respect to pharmacist and physician recruitment) are limited and thus, capacity development is challenging. Another identified barrier is the timely access to data, as current delays of up to three months make real-time evaluation impossible and difficult to assess the impact of ASP at TOH. Once data is received, it also takes considerable time for data cleaning and analysis, thus further delaying timely reporting.

It is recommended that the ASP maximize opportunities to work with early adopters, use their success stories as examples, and to develop and implement an ASP strategic plan with corporate support. Although it may not be the primary focus of the ASP, the use of proton pump inhibitors (PPI) should be explored and reviewed to limit use.

Recommendations

- While there are currently no standards related to human resources required for antimicrobial stewardship programs, ensure there are dedicated and sufficient resources for the antimicrobial stewardship program (ASP) so that key areas of the hospital are covered, and sufficient capacity and redundancy are in place. The current level of staffing is not sustainable should the program expand to the remaining areas of the hospital.
- Ensure there is timely access to data relevant to the ASP, as current delays make meaningful evaluation impossible.
- Maximize opportunities to work with areas or units of the hospital that are early adopters of the ASP.
- Explore ways to limit proton pump inhibitor use.

Communication Considerations

In general, communication within the hospital was found to be positive, with interviewed staff reporting that they felt they were heard whenever they brought concerns to management. Unit staff also reported that the IPAC team was always visible on the unit, and were very accessible.

However, various staff reported that the amount of information was found to be overwhelming on an organizational level. The ICRT members heard from many staff that while they appreciated the communication, the volume made it difficult to determine what was most important for their role. One of the biggest barriers was balancing and managing expectations; it was expressed that unit managers needed more support for IPAC strategies. Not only were there were discrepancies in infection control practices between units, but also on the outbreak status of the hospital; some staff appeared to be unclear that the most recent CDI outbreak was over. Communication to units remains important, as the focus of IPAC is to gradually move from a “policing” approach to a consulting/facilitation approach. It is best to engage front-line staff in each unit to determine the best way to communicate information to them, and to ensure that the most important messages are shared with them. TOH may consider using non-traditional approaches to improve communication, including using applications that can be used on staff iPads. All areas that are involved with the outbreak (the staff of affected units, environmental services etc.) will need to receive timely communication, and it is recommended that a mechanism is in place so that communication can be acknowledged, once it has been received.

Recommendations

- Identify the most important to communications to staff during a CDI outbreak, and work to streamline and target the information provided.
- Evaluate the current communication strategy to ensure that staff receive the information that is necessary for them to perform their jobs.
- Engage frontline staff in determining how to best communicate outbreak information with them.

- Ensure all areas of the organization receive communication about the outbreak.
- Ensure communication has been received by staff through use of existing staff meetings and huddles.

Administrative Considerations

Among IPAC staff, the Medical Directors (IPAC physicians) report to the Senior Vice-President of Medical Affairs, Quality and Patient Safety, while the Clinical Director of IPAC reports to the Vice-President of Clinical Programs and Senior Vice-President of Operations and Clinical Programs. It is unclear if this reporting structure is effective and efficient when TOH is dealing with CDI outbreaks.

The Infection Control Committee reports to the Medical Advisory Committee (MAC). However, there is no IPAC physician representation in the MAC. To optimize the quality of patient care, particularly with infection prevention and control, an IPAC physician should be invited as a standing member to participate in the committee.

During the ICRT interviews, the outcomes of the CDI cases in the hospital were discussed. Although the most recent CDI outbreak did not have any cases with severe outcomes (i.e. requiring ICU admission or contributed in a patient's death), there was no formalized process where CDI cases with severe outcomes could be reviewed. Currently, deaths related to CDI are identified by IPAC retrospectively, and then reviewed by the IPAC physicians on an ad hoc basis. There is no formal mechanism, such as morbidity and mortality rounds or incident reporting, where cases can be debriefed.

TOH considers CDI an important indicator, as it is included as a performance indicator in the Leader Evaluation Manager (LEM) electronic system, as well as its Quality Improvement Plan. However, during the interviews and the tour of the facility, staff expressed that they were unaware of the antimicrobial resistant organism (ARO) and CDI rates in their units. While the hospital is working towards creating a dashboard of ARO and CDI rates and having it entered in the LEM system, it may not be unit-specific, and could be difficult to interpret. Having the ARO and CDI rates fed back to unit staff, with trending information on display, would allow staff to gain a better understanding of the infection prevention and control policies that are implemented, particularly during times of an outbreak.

Recommendations

- Consider a formalized method for debriefing adverse outcomes for CDI patients and for CDI outbreaks.
- Consider implementing a way for each hospital unit to view their CDI rates trended over time.
- Include an Infection Prevention and Control physician as a member of the Medical Advisory Committee (MAC).

Conclusions

The ICRT commends The Ottawa Hospital on their *C. difficile* management efforts to date. All TOH staff that participated in the review demonstrated a keen interest and strong commitment to improve practices to reduce CDI rates in the hospital. Staff appeared to work in a positive culture that promoted the importance of IPAC, especially at the patient care level. TOH has been proactive in facilitating this review and indicated commitment to adopt the recommendations outlined in this report. We welcome any questions you may have as you work towards implementation of these recommendations.

Respectfully submitted by:

- Naideen Bailey
- Cathy Egan
- Freda Lam
- Dr. Camille Lemieux
- Jean-Louis Pitre
- Liz Van Horne

REPORT SUBMITTED OCTOBER 19, 2012

AMENDED: OCTOBER 31, 2012