

REGIONAL INFECTION
CONTROL NETWORKS



RÉSEAUX RÉGIONAUX DE
CONTRÔLE DES INFECTIONS



RESOURCES AND ACTIVITIES FOR INFECTION PREVENTION AND CONTROL IN ONTARIO, 2008

PROVINCIAL SUMMARY REPORT
PROVINCIAL TECHNICAL REPORT
QUALITATIVE REPORT

ACKNOWLEDGMENTS

The Regional Infection Control Networks would like to acknowledge the dedication that healthcare providers in Ontario demonstrate everyday for providing safe, high quality care.

We would also like to extend our appreciation to the many RICN members that completed our lengthy questionnaires while managing competing demands for their time and attention. We hope that the information that we have collected will be of use to all healthcare professionals in Ontario as we strive to maintain and improve infection control best practices across the healthcare continuum.

On behalf of the Regional Infection Control Networks,

Colleen Nisbet
Chair, RICN Surveillance Sub-Committee

RICN Surveillance Sub-Committee Members
Madeleine Ashcroft
Anne Bialachowski
Nora Boyd
Grace Volkening
Isabelle Langman

Giving Health a Helping Hand



Donner un coup de main à la santé

TABLE OF CONTENTS

| | |
|---|-----|
| I. INTRODUCTION | 1 |
| a. Regional Infection Control Networks | 3 |
| II. ORGANIZATION PROFILE | 5 |
| a. Employee Health Programs | 5 |
| b. IPAC Staffing- Professional Training and Certification | 6 |
| a. Professional Designation | 6 |
| b. Membership in External Associations | 7 |
| III. IPAC POLICIES | 7 |
| a. Policy Review | 7 |
| b. Compliance Auditing | 8 |
| IV. SURVEILLANCE ACTIVITIES | 9 |
| a. Acute and Non Acute Care | 9 |
| b. Community Care Direct Service | 10 |
| c. Reports | 10 |
| d. Initiatives Based on Surveillance | 111 |
| e. In-Service Topics | 111 |
| f. Benchmarking of Surveillance and Reporting | 11 |
| g. Public Health | 112 |
| V. MAIN ISSUES FOR HEALTHCARE ORGANIZATIONS AND IPAC PROGRAMS | 133 |
| VI. SATISFACTION WITH IPAC PROGRAM'S INFLUENCE AND STANDARD OF PRACTICE | 144 |
| VII. PROFESSIONAL DEVELOPMENT AND EDUCATION OF IPAC STAFF | 177 |
| VIII. MEMBERSHIP IN RICN | 17 |
| IX. OBSERVATIONS & RECOMMENDATIONS | 18 |

I. INTRODUCTION

Following the SARS crisis in 2003 various reports (the National Advisory Committee on SARS and Public Health chaired by Dr. David Naylor¹, the Expert Panel on SARS and Infectious Disease Control chaired by Dr. David Walker², and the Interim Report of Mr. Justice Archie Campbell³) led the Ministry of Health and Long-Term Care (MOHLTC) in Ontario to develop a three year plan of public health transformation, called *Operation Health Protection*⁴. This action plan focussed on the following key areas:

- Creation of a Health Protection and Promotion Agency
- Public Health Renewal
- Health Emergency Management
- Infection Control and Communicable Disease Capacity
- Health Human Resources
- Infrastructure for Health System Preparedness

Many remarks contained in these reports were directly related to existing infection control staff and networks in Ontario and concluded that they were working in relative isolation; this further highlighted the need for the coordination and integration of Ontario's infection control activities. To remedy some of these concerns, Operation Health Protection, recommended the implementation of Regional Infection Control Networks (RICNs); local networks of infection control professionals from all fields of healthcare which enhance infection control practices not by replacing existing collaborations and resources, but by coordinating activities and promoting standardization in healthcare facilities across the province. RICNs enable knowledge transfer and information sharing, enhance communication, provide education, increase access to expertise, maximize integration and ensure efficient use of scarce resources by reducing duplication of efforts.

Further to the development of the Regional Infection Control Networks, the MOHLTC developed other complementary initiatives such as: the Hand Hygiene Improvement Program, Infection Prevention and Control Core Competencies Education and enhanced funding to hospitals to hire more Infection Control Practitioners (ICP) as well as the funding of additional communicable disease positions in local Public Health Units.

¹ Learning from SARS - Renewal of Public Health in Canada, Naylor D. A Report of the National Advisory Committee on SARS and Public Health. [Toronto, Ont.]: National Advisory Committee on SARS. Public Health Agency of Canada, 2004. [online]. Accessed July 12, 2008 from: <http://www.phac-aspc.gc.ca/publicat/sars-sras/naylor/>

² Expert Panel on SARS and Infectious Disease Control (Ont.), Walker D. For the public's health: an action plan to prevent threats to our health and promote a healthy Ontario. [Toronto, Ont.]: SARS Expert Panel Secretariat. Ontario. Ministry of Health and Long-Term Care; 2004. [online]. Accessed July 12, 2008: http://www.health.gov.on.ca/english/public/pub/ministry_reports/walker04/walker04_mn.html

³ The SARS Commission Second Interim Report: SARS and Public Health Legislation, Campbell A., Commissioner. [Toronto, Ont.]. Ministry of Health and Long-Term Care, 2005. [online]. Accessed July 12, 2008: http://www.health.gov.on.ca/english/public/pub/ministry_reports/campbell05/campbell05.pdf

⁴ Ontario. Ministry of Health and Long-Term Care. *Operation health protection: an action plan to prevent threats to our health and promote a healthy Ontario*. Toronto, Ont.: Ministry of Health and Long-Term Care; 2004. [online]. Accessed January 12, 2006 from: http://www.health.gov.on.ca/english/public/pub/ministry_reports/consumer_04/oper_healthprotection.html

The implementation of these initiatives has now been in progress for over three years and while many Operation Health Protection objectives have been successfully achieved, the demand for excellence in Infection Prevention and Control (IPAC) has not waned. The requirement to provide infection prevention and control measures that are evidenced-based, current and well understood by healthcare providers is paramount. In fact, organizations such as the Canadian Council of Health Service Accreditation (CCHSA) now have a much more comprehensive IPAC requirement for accreditation.

In addition to these new accreditation requirements other initiatives have, at the same time, increased the demand on IPAC resources. A program such as the Quality Health Network's "Safer Healthcare Now" (SHN) campaign is one example. While the SHN is a voluntary program and offers benefits in its bundled approach to reducing healthcare acquired infections the requirement for IPAC leadership in this initiative can be time consuming. A third recent addition to IPAC requirements, especially in the non-acute care sector, are the revised, detailed IPAC program components outlined in audits conducted by the Ministry of Labour.

Further to these initiatives, a response to concern for patient safety and healthcare acquired infections, has prompted the MOHLTC to announce new mandatory public reporting of patient safety indicators. By September 30, 2008, all Ontario hospitals will be required to report the C. difficile rates in their facilities through a public website. Reporting on MRSA, VRE, Ventilator Associated Pneumonia and Central Line and Surgical Site Infections, as well as Hand Hygiene Compliance will be phased in over the next eight months.

REGIONAL INFECTION CONTROL NETWORKS

Regional Infection Control Networks (RICNs) have been designed to coordinate infection prevention and control activities and promote standardization in health care facilities across Ontario. Development of the networks has brought together infection prevention and control and infectious and communicable disease expertise from relevant fields across the health care continuum including acute care, public health, community care, long-term care homes and emergency medical services.

The first four networks were successfully launched in early 2005, with an additional six beginning operations in 2006 and 2007. Now, in 2008 the RICNs are implemented in fourteen regions across Ontario.

The RICNs correspond geographically with the Ontario Local Health Integration Networks (LHINs). The mandate of the RICN networks is to maximize coordination and integration of activities on a regional basis that are related to prevention, surveillance and control of infectious diseases. The networks will not replace existing programs, powers, or duties of the current stakeholders, but are intended to support and enhance the planning, coordination and integration already being undertaken locally.

Each RICN is affiliated with a host-hospital and local, strategic direction is provided by a RICN Steering Committee comprised of stakeholders from across the healthcare sector.

For more information on the Regional Infection Control Networks you may visit our website at www.ricn.on.ca

Study Purpose and Method

As each RICN established its local office there existed pre-determined milestones for success over the first six months, one-year, two-years etc. Within the first year the expectation was that each network would perform a Needs Assessment/Inventory of local infection prevention and control resources and activities among local healthcare agencies. This inventory was designed to assist RICN staff in supporting the development of a local integrated strategy and planning framework. In 2007, all networks and the MOHLTC agreed that with ten networks established and the remaining four soon to be operational; a provincial inventory of this type would have many benefits on both a local and provincial level. A Request for Proposal was soon developed and the successful vendor, Research Strategy Group, was asked to undertake a provincial survey on behalf of the RICNs.

The overall goal of this research was to identify and evaluate infection control resources along various dimensions of human and other resources, such as inter-agency cooperation, knowledge sharing, committees, other networking activities, accountability and governance.

The information from this survey is intended to provide a baseline for benchmarking and marking progress in infection control support and surveillance. The overall goal was to provide RICNs with the ability to document and evaluate infection control resources and practices among regional stakeholders and provide a measurable means to support local needs and identify ongoing progress.

The primary objectives of this project were to:

- Identify strengths and gaps currently existing within infection control environments;
- Collect baseline data which can be used in the future to measure changes and improvements over time;
- Compare against initial information collected by the four pilots to assess their progress;
- Benchmark the outcomes against pre-determined standards or against similar organizations;
- Provide a strategic report, which can be used to engage community partners and advocate for change within these organizations.

The research was designed to include five sectors – Acute Care, Non-Acute Care, Emergency Medical Services (EMS), Community Care Facilities, and Public Health Units across Ontario. The questionnaires were tailored for each sector to address sector-specific issues, but designed to ensure most questions were common to all sectors. Questionnaires were provided in both English and French, as required by regions.

The survey was mailed to 1064 organizations in Ontario. 641 organizations (60%) filled out and returned the questionnaire. For results based on this sample, one can say with 95% confidence that the margin of sampling error is ± 2.4 percentage points.

The response rates varied significantly across sectors. The table below shows the response rates for each sector, total number of participating organizations and margin of error based on that sample*.

| | RESPONSE RATE | TOTAL NUMBER OF RESPONDENTS | MARGIN OF ERROR |
|----------------|---------------|-----------------------------|-----------------|
| Acute Care | 77% | 111 | +/- 4.5% |
| Non-Acute Care | 61% | 390 | +/- 3.1% |
| Public Health | 82% | 31 | +/- 7.5% |
| EMS | 58% | 33 | +/- 11.5% |
| Community Care | 42% | 76 | +/- 8.7% |

* Please note that this report provides results at the provincial level. Except in a few sections where healthcare sector specific issues have provincial significance, all detailed sector specific findings were not included in the provincial report. These findings are available in separate healthcare sector reports which will be made available on the RICN website. This provincial report does not comment on or include findings from a regional perspective however; regional reports will be available on the RICN website. Also, please note that the commentary in this document has been reorganized for readability and flow and does not necessarily follow in the same order as the technical report(s) appended to it.

II. ORGANIZATION PROFILE

a. EMPLOYEE HEALTH PROGRAMS

Most organizations in all healthcare sectors (94%) provide annual influenza programs for their staff. Staff influenza rates are also compiled in most facilities across all sectors. Most organizations have staff influenza immunization rates available, with Community Care reporting the lowest levels of organizations with this information available (73% of organizations).

The majority of Acute Care Facilities and Public Health Units also provide post exposure sharps injury support, communicable disease management, and vaccines against preventable diseases. However, fewer organizations in the Non Acute Sector, Community Care and EMS reported that they provide programs for communicable disease management and vaccines against preventable diseases. The Community and Non Acute sector have the lowest reported number of programs that provide vaccines against preventable diseases other than influenza (30% and 17% respectively). Most organizations provide N95 Mask Fit Testing, with Community Care reporting the fewest mask fit testing programs at 67%.

b. IPAC STAFFING- PROFESSIONAL TRAINING AND CERTIFICATION

IPAC staffing varies significantly across sectors. Over all respondents, only half (51%) of Acute, Non-Acute and Community Care organizations have any infection control practitioners (ICPs) on staff, either full or part time.

In Acute Care, the majority (80%) of facilities have at least one ICP, while only 45% in Non-Acute Care and a third (32%) in Community Care reported having any ICPs on staff.

Overall, most ICPs are hired on a part-time basis. Only 14% of the facilities in Non Acute Care said that they have full-time ICPs vs. 35% who have part-time ICPs. In Acute Care, the situation is somewhat better with 58% of healthcare providers having ICPs on a full-time basis and 38% on a part-time basis.

The number of ICPs on staff also varies significantly across sectors. In Acute Care the majority (57% of those who have ICPs) have two or more ICPs, while in Non-Acute only 12% of those who have ICPs have 2 or more.

The situation is unlikely to improve in 2008. Overall, only 7% of the healthcare organizations plan to hire new ICPs in the current year. Anticipated hiring of ICPs is significantly higher in Acute Care where 21% said they plan to hire new ICPs. In the Non-Acute and Community sectors, only 3% plan to hire.

The main reason cited for hiring new ICPs was to fill existing funded vacancies within the IPAC program. A few organizations reported that they had received internal funding for hiring new ICPs. Only five organizations in Acute Care said that they had received funding from MOHLTC to add new positions.

The main reasons for not hiring new ICPs in Acute Care was that IPAC programs were already at full complement. In Non-Acute Care, however, organizations stated budget/funding issues (26%) along with “at full complement” as reasons for not hiring new ICP’s. or IPAC Program (30%) was the main reasons for not hiring new ICPs.

c. PROFESSIONAL DESIGNATION

The majority of ICP practitioners are Registered Nurses followed by Medical Laboratory Technologists and Public Health Inspectors. Overall, 18% reported that they had Infection Prevention and Control Staff who were certified with the Certification Board of Infection Control and Epidemiology. In Acute Care, the number of organizations that had staff with certification was 45%, whereas in Non-Acute, it was 5%. No respondents in Community Care reported staff with the CIC designation.

A majority of facilities in Acute Care had ICPs who had completed training through the Centennial College-CHICA program or similar programs such as the Queen’s University or

University of British Columbia Infection Control course. A few organizations in the Non Acute sector reported their ICPs had formal training. A small number of Community Care organizations reported that staff had completed professional IPAC training programs.

d. MEMBERSHIP IN EXTERNAL ASSOCIATIONS

Networking and educational opportunities through professional IPAC associations were more apparent in the Acute Care and Public Health sectors. About one third of these organizations have staff that are members of either CHICA-Canada or the Association for Professionals in Infection Control and Epidemiology (APIC). Membership in both of these organizations is very low in the Non Acute, Community and EMS sectors. This is of concern because membership in these organizations provides excellent opportunities for learning about new and current practices and professional networking.

Given the heightened public profile related to the serious impact of healthcare acquired infections, the need for infection prevention and control generally, and the recent expectation of the Ministry of Health and Long Term Care for increased surveillance and public reporting, the current staffing complement and levels of training reported in this survey will not be adequate to implement the required components of an effective infection prevention and control program. The implementation of an effective IPAC program is difficult even when there are sufficient numbers of trained and experienced IPAC professionals to provide ongoing program oversight and staff training.

IPAC programs in the Non-Acute Care sector appear to be most at risk, given the low level of staffing noted, and the number of part-time staff. Additionally, lack of funding was noted by 26% of these organizations as a key reason stated for not hiring new staff. The majority (60%) of Acute Care facilities and some (30%) Non-Acute facilities have now or will have their programs at full complement within the existing program framework complement; however, the question remains whether the currently funded staffing complement can satisfy the growing IPAC demands.

III. IPAC POLICIES

Use of Best Practice (PIDAC) Documents

Agreement that 'their organization adhered to the Provincial Infectious Disease Advisory Committee (PIDAC) Best Practice documents' was moderate. About half of all organizations agreed strongly that their organization was adherent, while 34% somewhat agreed that this was the case. By sector, both the Acute Care and Public Health sectors were most positive in their response while Community Care, EMS and Non Acute were somewhat less likely to agree.

a. POLICY REVIEW

Formal review of policies is done annually in about half of all facilities, with about one quarter of organizations reporting that they review policies every 1-2 years, and 12% review less frequently.

Additionally, when new guidelines and best practice documents are published, somewhat less than half (41%) of all organizations reported that they would “organize a meeting to review them”. About a fifth (21%) stated that they would review them at the next formal review meeting, and some (12%) stated they would circulate, post or otherwise sharing with staff. This approach was similar across sectors, although there was variance by individual institution.

b. COMPLIANCE AUDITING

Healthcare organizations employ different approaches to evaluating compliance with IPAC policies in their facility. The most common approaches utilized by more than 50% of organizations overall are ‘spot audits’ (67%) and ‘documentation review’ (64%). ‘Practice audits’, ‘supply usage tracking’ and ‘analysis of patient safety data’ are used by less than half (40-45%) of the organizations.

Non Acute facilities more frequently report use of ‘analysis of patient safety data’ and ‘tracking of supply usage’ than other sectors while the majority of agencies in the Community Care sector reported the highest use of ‘documentation review’ to monitor compliance. Community Care agencies also had the lowest use of ‘spot audits’ of all the sectors; this is not unexpected as supervisory staff in this sector are not often ‘on site’.

With a renewed focus in Acute Care on patient safety and supply management it was somewhat surprising that Acute Care facilities reported a relatively low utilization of ‘analysis of patient safety data’ (38%), and ‘supply usage tracking’ (25%). Supply use tracking has not been considered to be the best form of monitoring for audit purposes, however, with new technologies for supply tracking this may be improving.

The approach used in the Public Health sector was in line with the overall data; that is, focusing primarily on ‘documentation review’, followed by ‘spot audits’.

Community Care agencies were asked if there were policies and procedures to assist staff with approaches to infection control. Most agencies (86%) reported having policies and practices in place for ‘preventing a client from getting infections through routine practices’. Similarly, most (89%) direct care providers also confirmed that they had policies in place for ‘managing an infection that a client has’, (for example, use of personal protective equipment, or additional precautions). Eighty –three percent (83%) of agencies reported that they have procedures for ‘identifying if a patient has an infection through signs and symptoms’. ‘Reporting of infectious complications’ however, was reported by somewhat fewer agencies, at 73%.

IV. SURVEILLANCE ACTIVITIES

a. ACUTE AND NON-ACUTE CARE

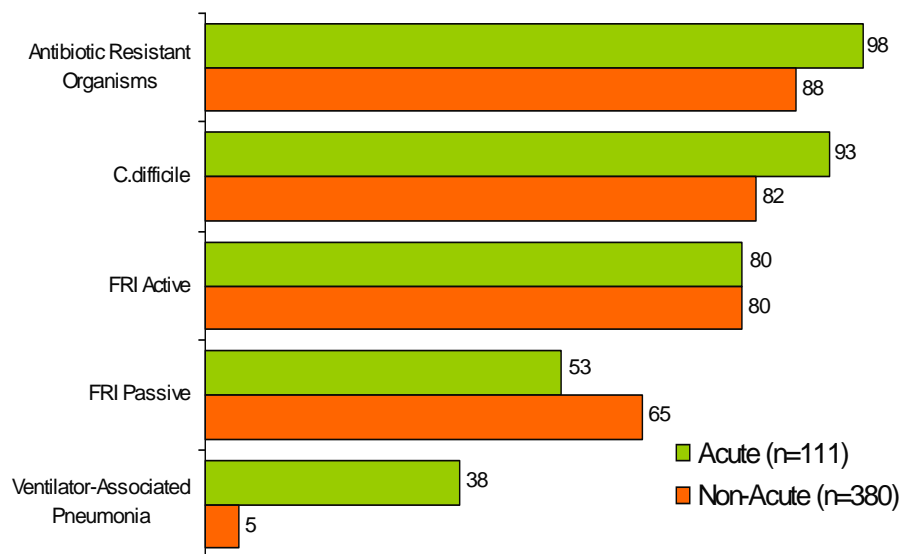
Most facilities in Acute and Non Acute sectors report that they conduct surveillance activities for Antibiotic Resistant Organisms (AROs) and *C. difficile*. Non Acute organizations report at about 10% lower (88% and 82% respectively) than Acute Care at 98% and 93%.

FRI Active Surveillance is undertaken at only 80% in both acute and non-acute sectors. Given the importance of FRI active surveillance as an alert for emerging respiratory infections, it is somewhat concerning that this type of surveillance is not reported at 100%. Passive FRI surveillance is conducted in Acute Care (53%) with less frequency than Non-Acute at 65%, (See Chart A).

The Healthcare Acquired Infection (HAI) least surveilled in Acute Care was Ventilator Associated Pneumonia (VAP) at only 38% (all facilities reporting). However, for Acute Care facilities that specifically noted that they provide ventilation and hemodynamic monitoring, 63% report that they surveil VAP. This still is the lowest HAI surveilled in Acute Care with the exception of Febrile Respiratory Illness (FRI) passive. Considering the lower incidence of residents in Long Term Care with ventilators, the lower level of surveillance in Non Acute Care is not surprising.

In about half of the Acute Care and Non-Acute Care organizations the frequency of internal reporting is monthly with a range that varies by type of surveillance: ARO's and *C. difficile* are reported monthly by 47% and 45% of organizations, whereas Active FRI surveillance conducted 80% of both Acute and Non Acute facilities, is only reported monthly by about 37% of organizations. Ventilator Association Pneumonia is reported monthly by 31% of organizations.

CHART A - Surveillance Activities*, %



* The questions were asked ONLY in Acute and Non-Acute Care

b. COMMUNITY CARE DIRECT SERVICE

Community Care agencies are heavily involved in direct patient care activities where the patient environment is often a challenge for optimal IPAC practices. Of the fifty-two agencies who responded to this question, the majority of direct healthcare professionals provide care for patients with complex healthcare issues, including patients with Antibiotic Resistant Organisms (92%), cancer, diabetes and dialysis patients who are immunocompromised (96%) and many frail elderly who are especially vulnerable to infection. Most Community Care agencies provide a variety of other invasive and high risk procedures including the management of complicated acute and chronic wounds, tracheotomy care, and central venous access device care. Also, about half of these organizations provide mechanical ventilation care and half of the agencies reported having a “clinic” setting option for providing nursing care.

In terms of surveillance activities in the community, only one quarter of direct care agencies undertake surveillance in wound management and skin infections, few (9/52) report surveillance of Foley Catheter use and Urinary Tract infections, and only a small minority (5/52) report surveillance of VAP. The agencies report moderate levels of satisfaction with their surveillance activities. When asked, half (n=63) stated they were “somewhat” satisfied.

c. REPORTS

Most surveillance reports of healthcare acquired infections go to senior management, department heads and/or IPAC committees. In Acute Care 11% reported that they share this information with the general public, and only 9% noted that they report this data to staff. Reporting to the MOHLTC was indicated in 2% of the responses from Acute Care.

Notably, in Community Care, 23% say that surveillance reports are not shared at all and 35% provided no answer to this question.

d. INITIATIVES BASED ON SURVEILLANCE

The most common initiatives undertaken overall as a result of surveillance activities are 'in-service development' and 'staff education in high incidence areas' (72%).

In Acute Care, in line with the overall sample data, the most common initiatives (reported by more than 3/4 of the facilities) undertaken based on surveillance activities are 'staff education' and 'in-services development'. 68% said they initiate changes in policies/procedures. Half 'issue bulletins' (50%) and provide 'increasing surveillance in high incidence areas' (40%). All other initiatives are less common and undertaken on average by 20-35%.

In contrast, Public Health Units are most likely to 'initiate a change in policy or procedure' as a result of surveillance results in their catchment area (88%), followed by 'development of in-services'. They are also more likely (72% vs. 23% overall) to 'conduct a root cause analysis', 'develop corporate indicators' (50% vs. 20%) and 'to provide more frequent reports to their Department Heads' (44% vs. 23% overall). This is consistent with the Public Health mandate related to surveillance of infectious diseases. The differences indicated between the Acute Care and Public Health sector in this regard indicate a positive opportunity with areas for sharing of surveillance initiatives and cross-sector learning.

The Community Care educational initiatives implemented as a result of surveillance activities are much lower than other sectors, which is in-line with the description of their surveillance practices. The most frequent activities undertaken are the same as in most other sectors; i.e. 'in-services' (37%) and 'education of staff in high incidence areas' (29%).

e. IN-SERVICE TOPICS

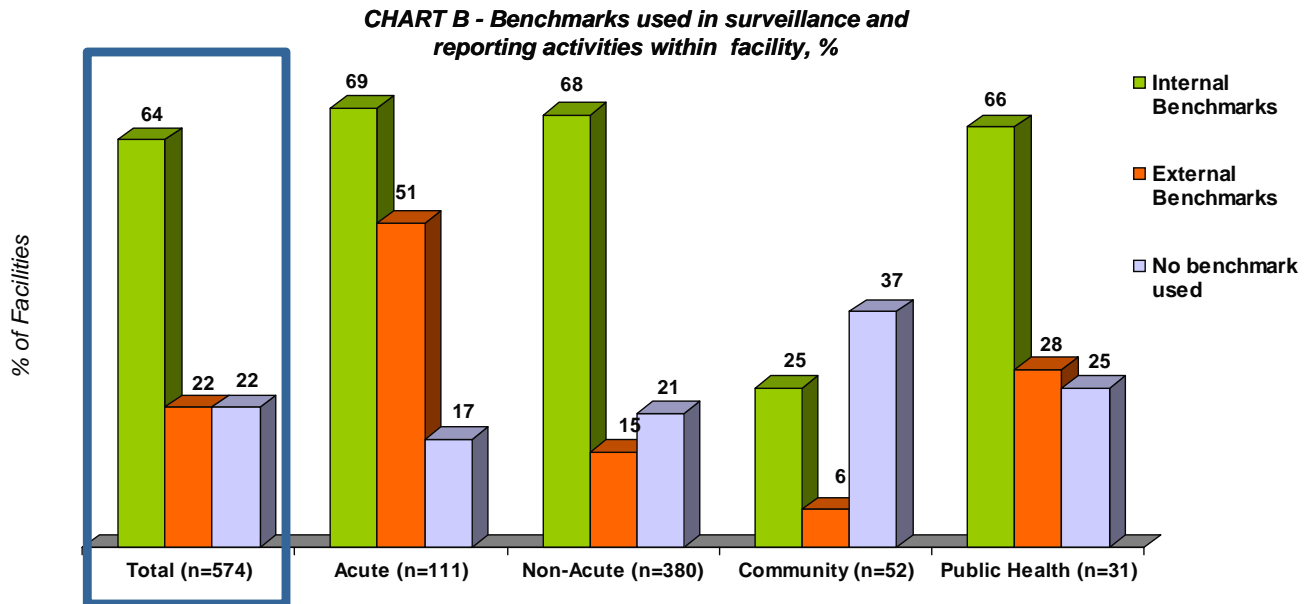
The Acute Care sector was the most likely to provide training on most topics, with Community Care and EMS least likely. Overall, the top three most frequently reported in-service topics (with little difference noted between most sectors) included 'hand hygiene', 'routine practices' and 'influenza'. In Acute Care, ARO's are a more frequently presented topic than 'influenza'. Less than 50% of organizations however, reported in-service training on C. difficile, Cleaning, Disinfecting and Sterilization, Additional Precautions, Chain of Transmission', 'Febrile Respiratory Illness and 'Tuberculosis in the last six months.

f. BENCHMARKING OF SURVEILLANCE AND REPORTING

While some form of internal benchmarking (establishing a data set over time within a facility and using that data as a means of determining an increase or decrease in activity) in surveillance and reporting is done in about two thirds of facilities overall, less than one quarter of all facilities use external benchmarks (surveillance rates from an external source with which organizations can compare their own rates i.e. the Canadian Nosocomial Infection Surveillance Program (CNISP). Across all sectors, one quarter of the organizations reported no use of any benchmarks in their surveillance practices. (See Chart B below).

g. PUBLIC HEALTH UNITS

Public Health Units were asked whether surveillance reports were provided by healthcare facilities in their catchment area for MRSA, VRE, and C. difficile. While these reports are not listed on the Reportable Disease List in Ontario one third of the Health Units reported that they received reports on these infections. These reports were primarily provided on an aggregate basis and most reports were received monthly or quarterly.



Community Care agencies report the lowest benchmark usage, with only one quarter (25%) of organizations that reported using internal benchmarks, 6% using external benchmarks, and notably, over one third (37%) of Community Care respondents report using no benchmarks at all; the highest among all sectors.

Two thirds of Acute Care, Non Acute and Public Health organizations report that they use internal benchmarks, but in regard to external benchmarking; only Acute Care had about half of its facilities reporting usage. The Public Health and Non-Acute care sectors reported only 15% usage of external benchmarks for surveillance.

Based on the data provided by the respondents, both internal and external benchmarking is not employed by the great majority of organizations in their surveillance and reporting activities, especially the use of external benchmarks.

Given the importance and public scrutiny being attached to this issue, consideration might be given to the development of a common set of tools and training to support benchmarking processes, particularly external benchmarking, that institutions could utilize to improve and consolidate best practices in surveillance and reporting.

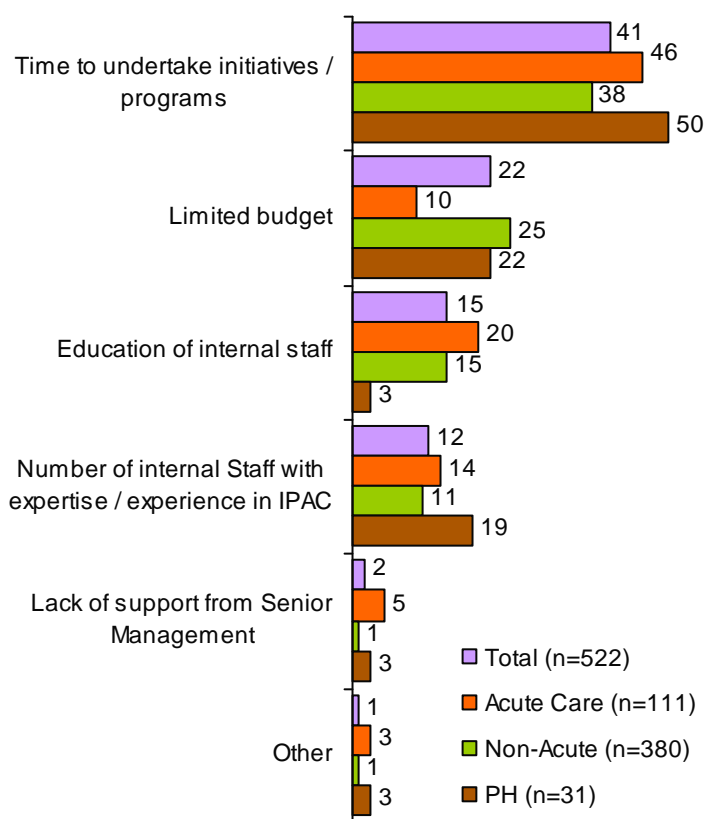
V. MAIN ISSUES FOR HEALTHCARE ORGANIZATIONS AND IPAC PROGRAMS

The main issue identified by all healthcare providers (except Public Health which was not asked this specific question) is 'education of internal staff' (48% overall identified this as the most pressing issue), followed by 'emergency preparedness' (17%) and 'facility design issues' (11%). Of note, Acute Care facilities had a higher than average concern with 'facility design issues' at 16%, but were much less concerned with 'emergency preparedness' (5% vs. 17% overall).

The most pressing issue for IPAC program managers (see chart C) is 'lack of time to undertake initiatives/programs' (41%). The second most frequent response and another significant obstacle is 'limited budget' (this issue was identified as the most pressing by 25% of Non-Acute Care organizations, 22% of Public Health Units, and 10% of Acute Care facilities). 'Education of internal staff' is the third most pressing issue (15%), followed by 'lack of staff with expertise/experience in IPAC'.

Given the key issue identified by facilities was 'education of internal staff', and the key issue for program managers was 'time to undertake programs', there appears to be an overall organizational resource gap. This reinforces the general concern that current infection prevention and control resources within organizations in Ontario might not have the ability to support the day to day requirements such as surveillance practices, development and implementation of IPAC policies and procedures, compliance with legislation and accreditation standards, education and staff training to mention a few program requirements. When this is viewed in light of other findings within this survey one could easily conclude that this resource gap has a concerning impact; especially as it relates to the critical knowledge transfer which is required for all healthcare providers in order to make use of current and evidence-based infection and prevention control practices.

**Chart C. Most Pressing Issue Facing IPAC Program/ Manager
% of Facilities**



VI. SATISFACTION WITH IPAC PROGRAM'S INFLUENCE AND STANDARD OF PRACTICE

Overall satisfaction with the ability of the IPAC program to impact positive change is only moderate. Most (42%) are only somewhat satisfied, only 16% are very satisfied and 13% are dissatisfied. Public Health and Acute Care show somewhat higher levels of overall satisfaction, with 56% and 51% somewhat satisfied and 19% and 25% very satisfied.

Analysis of the key drivers of satisfaction with the IPAC program's ability to impact positive change shows that satisfaction is driven by the following four factors:

- 1. Satisfaction with the current standard of IPAC in the facility**
- 2. IPAC Program's involvement in decision-making**
- 3. Satisfaction with IPAC infrastructure and resources**
- 4. Satisfaction with physicians dedicated to IPAC**

1. Satisfaction with the current standard of IPAC in the facility

Satisfaction with the current standard of infection prevention and control practices is not strong. While a quarter (25%) report being very satisfied with the IPAC program in their organization most (51%) organizations reported being only somewhat satisfied and several (11%) expressed dissatisfaction. The level of satisfaction with the current standard of practice may have to do with the consistency and ability of organizations in following PIDAC and other current guidelines:

- Only half of healthcare providers across the sectors (54%) strongly agree that their facility consistently adheres to the PIDAC best practices documents. The agreement is higher in Acute Care (69%) and Public Health (72%) and significantly lower in the other sectors (about 50%).
- About half of the healthcare providers state that they review their IPAC policies annually, while another half review them even less frequently.
- When new guidelines/best practices documents are published only 41% organize a meeting to review new documents (Acute Care, EMS and PH seem to be more responsive to the new guidelines – about 57% organize a meeting to review them vs. only 34% in Non-Acute Care).

2. IPAC Program's involvement in decision-making

Satisfaction with the IPAC programs' ability to impact positive change is also linked to the IPAC programs' involvement in decision-making.

- Most IPAC programs don't have the singular authority in approving IPAC policies in their facilities. When asked who is ultimately responsible for approving IPAC policies in their facility, only a quarter (24%) said it's their IPAC program or IPAC manager. The most common response was their Medical Advisory Committee (34%).
- Acute Care has the highest involvement rates in initiatives, while Community Care reported the lowest rates of involvement overall in activities. (see Chart D below).

CHART D - Involvement in Initiatives*, %

| RESOURCES | Involvement in Initiatives*, % | | | | |
|--------------------------------|--------------------------------|---------------|-------------------|------------------|------------|
| | Total (n=587) | Acute (n=111) | Non-Acute (n=380) | Community (n=63) | EMS (n=33) |
| Pandemic Planning | 85 | 96 | 85 | 62 | 79 |
| Emergency Preparedness | 77 | 79 | 79 | 60 | 76 |
| Occupational Health | 76 | 93 | 74 | 56 | 70 |
| Accreditation | 75 | 95 | 75 | 56 | 42 |
| Professional Practice | 68 | 68 | 69 | 59 | 64 |
| Safety and Quality Initiatives | 63 | 88 | 64 | 44 | 55 |
| Product Evaluation | 57 | 77 | 56 | 35 | 55 |
| Construction and Renovation | 43 | 74 | 33 | 6 | 18 |

*Not asked in Public Health

3. Satisfaction with IPAC infrastructure and resources

The level of satisfaction with resources is another contributing factor to the IPAC's programs' ability to impact positive change. In general, close to half (45%) of all respondents say they are only somewhat satisfied with their resources, and 20% say they are dissatisfied/very dissatisfied.

Overall satisfaction with resources is driven by three key factors: whether there is a 'dedicated cost centre', 'administrative and secretarial support' and 'a designated work space for the program staff'. The levels of reported availability for these three key drivers of overall satisfaction is low to moderate overall; with only 32% reporting 'dedicated cost centres', 51% 'administrative support', and 54% 'have dedicated staff work spaces' (See Chart E on the following page).

Public Health and the Acute Care sector report high availability of 'designated work spaces for staff', but only Public Health shows equally high availability of 'secretarial and administrative support', and both have only moderate numbers reporting 'dedicated cost centres'.

The Non-Acute sector has the lowest reported percentage of these resources, with 'dedicated cost centres' being reported by only 17% and the other two factors at '42%-45%.'

Least available resources reported overall were 'infection control software programs', 'dedicated cost centres' and 'access to patient electronic medical records'.

Given the limited availability of these resources, satisfaction is lowest overall with 'infection control software programs' and 'resource libraries'.

The Non-Acute sector, being the least resourced of the three surveyed, is also the least satisfied. The lowest levels of satisfaction were with 'infection control software programs' 'resources library', 'access to laboratory results', and access to patients' electronic medical records'

Chart E - Availability of Resources, %

| RESOURCES | Total (n=522) | Acute (n=111) | Non-Acute (n=380) | PH (n=31) |
|---|---------------|---------------|-------------------|-------------|
| Internet and email access | 91 | 98 | 88 | 97 |
| Support for IPAC Initiatives from Senior Management | 85 | 96 | 81 | 94 |
| Equipment | 75 | 82 | 71 | 97 |
| Access to laboratory results | 68 | 98 | 57 | 91 |
| Resource library | 64 | 81 | 57 | 88 |
| Computer systems for each staff member | 57 | 86 | 46 | 91 |
| Dedicated office space | 56 | 90 | 43 | 88 |
| Designated staff work spaces | 54 | 81 | 42 | 100 |
| Secretarial and administrative support | 51 | 59 | 45 | 94 |
| Access to patients' electronic medical records | 44 | 82 | 34 | 25 |
| Dedicated cost centre | 32 | 67 | 19 | 53 |
| Infection control software programs | 23 | 38 | 17 | 44 |
| Composite Score | 0.58 | 0.80 | 0.50 | 0.80 |

The scarce availability of and satisfaction with infection control software programs is identified as a fundamental gap, given the extensive new reporting requirements that IPAC programs will be facing in the future. Additionally, with the survey results indicating that little time is available for training and education, the ability for staff to utilize this software may be limited.

4. Satisfaction with physicians dedicated to IPAC

The final key driver of the program's ability to effect positive change is the existence of physicians dedicated to the IPAC program. Overall, only slightly more than half (57%) of facilities in the province have physicians dedicated to IPAC programs. In Acute and Non-Acute Care this percentage is higher (about two-thirds of facilities have physicians dedicated to supporting the IPAC program). In Community Care, less than 1 in 10 facilities (8%) have

reported dedicated physicians for IPAC. The main sources of support for Community Care agencies (for those who don't have staff or programs) are their local Public Health Unit, and the RICNs.

When asked how many dedicated physicians for IPAC they have, most organizations did not provide any answer. Across all sectors, respondents that provided an answer indicated that they have just one physician.

Overall, the interaction between IPAC programs and their dedicated physicians is not extensive. The average number of contacts is 4.6 per three month period, however, half of the facilities request support less than once a month. Public Health respondents requested support at the highest rate, with most organizations stating they requested help at least once a month or more often. In Acute Care the frequency of requesting support from IPAC physicians is lower: only 43% said they asked for help at least once a month or more often over the past 3 months. Non-Acute Care reported the lowest level of requesting support – 3 in 10 said they did not request any support from a dedicated physician at all, and a quarter said that requested support only once or twice in the past 3 months.

Despite low rates of interaction, most IPAC programs across all sectors are satisfied with the level of support provided by dedicated physicians. Their satisfaction with the expertise provided by their physicians, however, is only moderate, with less than half (44%) strongly agreeing that they receive the expertise they need and a third (31%) only somewhat agreeing. Perhaps a potential lack of physician's specialized training in infection prevention and control influences this satisfaction rating.

VII. PROFESSIONAL DEVELOPMENT AND EDUCATION OF IPAC STAFF

The level of agreement that 'their institution provides appropriate access to education and training to IPAC staff' varies widely among sectors. Overall, about a quarter of institutions strongly agree with the statement, while about a third somewhat agree. Community Care and EMS had the lowest level of overall agreement that they have appropriate access. Public Health and Acute Care sector respondents have a high level of agreement that there is appropriate access to education and training for their IPAC staff.

The most common types of support for education provided by the majority of facilities (>50% for all but Community and EMS) include 'time off for continuing education', 'access to video and teleconferences', and 'financial support for continuing education'. Public Health and Acute Care reported these supports at the majority of their institutions, whereas they are reported to be provided at only one quarter to one third of Community Agencies and EMS.

VIII. MEMBERSHIP IN RICN

Overall membership in the local RICNs is reported at 72%. However, this varies widely across sectors, reflecting perhaps, the initial outreach activities of RICNs and the phased-in, staggered approach taken to the development of each network. By sector, the lowest membership rate is 52%, reported by the Community Care sector. In the Non Acute and

Emergency Services sector, membership is reported by about two thirds of organizations. The highest membership is in Acute and Public Health where over 90% of organizations identified themselves as belonging to a RICN.

It should be noted that 16% overall did not know whether or not their organization is a member of a RICN. Lack of awareness was highest in Community Care at 30%, and slightly higher than the overall in Non-Acute facilities at 18%.

Given that some RICNs have only recently started up, and a formal RICN Communication Strategy has begun as of March 2008, awareness levels will likely be positively impacted over the next six months to a year. However, the data does indicate that perhaps a focused communication strategy targeted to providing general awareness would be particularly important in the Community and Non-Acute Care sectors.

IX. OBSERVATIONS AND RECOMMENDATIONS

- 1.** This data strongly indicates that current infection and prevention and control resources may be insufficient to provide the required proactive day to day requirements to maximize quality infection prevention and control practices and meet the increased compliance requirements. The current staffing complement for Infection Prevention and Control in all sectors appears to be both minimal and unevenly distributed across institutions. This is especially true in the Long Term Care facilities and Community Care agencies. Additionally, a large proportion of these positions are only part-time or have had this responsibility added onto their primary full time roles.
- 2.** Lack of funding was a key reason stated by organizations for not hiring staff, particularly in the Non Acute sector. As well, Ministry of Health and Long Term Care funding for new IPAC positions in Acute Care appears not to have been fully utilized. Additionally, lack of funding and lack of time to undertake initiatives are the most pressing issues facing IPAC program managers raised universally across all sectors. There is a need to strongly consider the provision of increased and new funding to support prevention of infection and outbreaks in these sectors. The provision of this funding should be closely monitored to ensure that it is utilized for IPAC staffing and initiatives only.
- 3.** Consideration should be given to increasing staffing ratios based on soon to be published PIDAC recommendations; particularly in the Long Term Care and Community sectors.
- 4.** The PIDAC recommendations do not seem to be wholly integrated into the culture of organizations. Additionally, reviews of new and existing policies for relevance often are not done on a timely basis, with many organizations reviewing on a one to two year cycle. It might be useful to consider additional communication about the PIDAC recommendations to all sectors.

5. Professional networking opportunities through membership in CHICA, or APIC appear to be very limited, especially in the Non Acute, Community and Emergency Medical Services sectors. This lack of membership may limit opportunities for learning about best practices, and developing networks for information sharing among practitioners. The benefits of membership in Infection Prevention and Control organizations should be encouraged among practitioners and their organizations.
6. Very few of the professional infection prevention and control staff in Non Acute facilities or Community Care agencies hold the professional designation from the Certification Board of Infection Control and Epidemiology. The issue of the value of the designation and/or support for professional IPAC training should be examined further to determine if CIC certification or similar designation is an important component of quality infection control. If so, issues related to cost for certification and relevance to the Canadian environment should be explored.
7. It should be noted that while surveillance levels are reasonably high for some types of surveillance in Acute and Non Acute facilities, higher levels of surveillance and reporting may be desirable, particularly in relation to *C.difficile* and Ventilator Associated Pneumonia. (note: new ministry requirements were not in place at the time of the survey)
8. Levels of surveillance in Community Care agencies appear to be very low for key areas of potential infection in these facilities, such as wound management and skin infections. This sector also reports the fewest educational initiatives undertaken as a result of surveillance. Given the low staffing resources in this sector, opportunities to proactively surveil and train are likely quite limited.
9. Many organizations lack a benchmark to measure against. Although there are a fair number of organizations who utilize some form of internal benchmarks, most do not have external comparators, and some utilize no benchmarking practices at all. Without a formal benchmark and external comparators, it is difficult to measure improvement and develop best practices. Consideration should be given to development of a common set of tools and provision of training to support benchmarking activities for these organizations.
10. Many organizations report very limited resources and infrastructure support, particularly in the area of staff workspace, appropriate software and library resources. Particularly given increased reporting requirements, the lack of appropriate software tools is a key gap. Funding support or provision of these software tools would be an important addition to program resources as would increase funding to obtain library resources.
11. Membership in RICN although quite high in most sectors, is not as common in the Community and Long Term Care sectors. Communication strategies should likely focus on these two sectors in particular.