Resources and Activities for Infection Prevention and Control in Ontario, 2008
- A Comprehensive Provincial Survey for IPAC -

This project was lead by the Surveillance Sub-Committee of the Regional Infection Control Networks.
Colleen Nisbet (Chair), Madeleine Ashcroft, Anne Bialachowski, Nora Boyd, Isabelle Langman, Grace Volkening

Regional Infection Control Networks — Réseaux régionaux de contrôle des infections

Giving Health a Helping Hand

Regional Infection Control Networks (RICN) have been designed to coordinate infection prevention and control (IPAC) activities and promote standardization in health care facilities across Ontario. The RICNs have been developed under the guidance and support of the Ontario Ministry of Health. The RICN mandate is to maximize coordination and integration of activities on a regional basis that are related to prevention, surveillance and control of infectious diseases.

In 2007, the Network Coordinators agreed to launch a provincial Needs Assessment/Inventory survey in order to provide data that was comparable between regions and collectively would provide a snapshot of IPAC in Ontario.

The primary objectives of this survey were:

1. *To inform a RICN strategic report, which can be used to engage partners and advocate for change;*
2. *To identify strengths and gaps currently existing within infection control environments;*
3. *To collect baseline data which can be used by RICNs to measure changes and improvements over time;*
4. *To compare against initial information collected by the first four networks to assess progress;*
5. *To benchmark the outcomes against pre-determined standards or against similar organizations in the same health sector.*

This project began in early 2007 when a working group of Network Coordinators was assembled to lead the provincial survey. In July, a marketing research firm, Research Strategy Group (RSG) Inc., of Toronto, was selected through an RFP process to support our questionnaire development, execute the survey, analyze the results and report their findings to the RICN. The survey was completed in two phases with the first ten networks being in the first phase conducted in October/November 2007 and the remaining four networks being surveyed in April, 2008.

In the spring of 2008, RSG conducted on behalf of the RICN, a second qualitative study as a follow up to the quantitative survey: "Resources and Activities for Infection Prevention and Control in Ontario, 2008." The objective of this study was to follow up on gaps and issues in the quantitative survey, and to engage organizations in broader discussion on infection prevention and control.

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 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%

Results:

IPAC Staffing:

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.

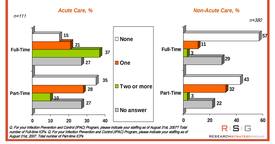
In Acute Care, the majority (80%) of facilities have at least one ICP, while only 45% in Non-Acute Care and a third (32%) in Community Care reported having any ICPs on staff.

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.

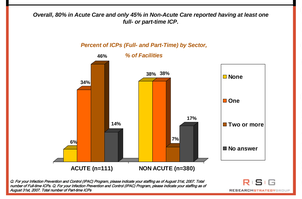
Full-time and Part-Time ICPs by Sector

- Half (58%) in Acute Care reported having full-time ICPs, and more than a third (38%) said they have part-time ICPs.
- By contrast, only 14% in Non-Acute Care said they have full-time ICPs and about a third (35%) reported part-time ICPs.



Q. For our Infection Prevention and Control (IPAC) Program, please indicate your staffing as of August 31st, 2007: Total number of ICPs; ICPs; Q. For our Infection Prevention and Control (IPAC) Program, please indicate your staffing as of August 31st, 2007: Total number of Part-time ICPs

Total Number of ICPs, by Sector



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IPAC Policies :

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. 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'.

Approaches to Evaluate Compliance with IPAC Policies

- Most facilities employ a variety of practices to evaluate compliance with IPAC policies, with the most common being spot audits and documentation review (not surprisingly, the former was less common in Community Care and Public Health).
- All other approaches are employed, on average, by 40-45%, but vary significantly across sectors.
- Non-Acute Care tends to use a broader variety of approaches than the other sectors, while PH uses the least.

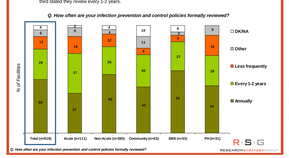
Q. What approaches do you use to evaluate compliance with policies?

	Total (n=618)	Acute (n=111)	Non-Acute (n=380)	Community (n=63)	EMS (n=33)	PH (n=31)
Spot Audits	67	74	71	38	73	44
Review documentation	64	64	65	57	67	56
Analyze patient safety data	44	38	52	43	15	9
Track supply usage	42	25	50	37	27	22
Practice Audits	45	49	48	40	36	19
Other	11	14	9	19	15	13
None	1	1	1	3	0	3
NA/DK	6	2	5	16	6	3

Q. What approaches do you use to evaluate compliance with policies?

Frequency of Formal Reviews of IPAC Policies

- About half of the **Non-Acute, EMS, Community and PH** organizations said they formally review their IPAC policies at least once a year. About a quarter indicated that they do revisions every 1-2 years.
- In **Acute Care**, organizations report less frequent reviews- only a third said they review annually, and another third stated they review every 1-2 years.



Q. How often are your infection prevention and control policies formally reviewed?

Surveillance in IPAC:

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%. 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. The most common initiatives undertaken overall as a result of surveillance activities are 'in-service development' and 'staff education in high incidence areas' (72%). 68% said they initiate changes in policies/procedures. Half 'issue bulletins' (50%) and provide 'increasing surveillance in high incidence areas' (40%). **Benchmarking:** 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.

Initiatives Undertaken Based on Surveillance Results in the Past 6 months

- The most common initiatives undertaken based on surveillance activities are in-services development and staff education in high incidence areas. Acute Care (68%) and Public Health (88%) also said that they initiate a change in policy based on the surveillance results.
- Community Care facilities are less likely to undertake any initiatives than those in the other sectors, while Public Health and Acute Care are more likely to undertake initiatives based on surveillance.

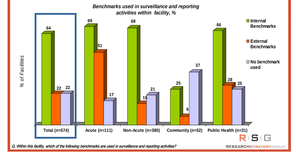
Q. Which of the following initiatives has your facility undertaken based on your surveillance results in the past 6 months?

INITIATIVES	Total (n=618)	Acute (n=111)	Non-Acute (n=380)	Community (n=63)	Public Health (n=31)
Develop in-services	72%	74%	76%	37%	78%
Educate staff in high incidence areas	72%	81%	76%	29%	66%
Initiate change in policy / procedure	52%	68%	48%	21%	68%
Increase surveillance frequencies in high incidence areas	42%	50%	42%	12%	59%
Issue bulletins	38%	50%	33%	17%	50%
Conduct a root cause analysis	23%	26%	21%	4%	72%
Provide more frequent reports to Dept. Heads	23%	35%	21%	0%	44%
Develop Corporate Indicators	20%	30%	17%	4%	50%
Support institutional implementation team	12%	20%	9%	0%	28%
Other	4%	5%	12%	1%	4%
Just started	1%	1%	1%	2%	0%
None	1%	1%	2%	2%	0%

Q. Which of the following initiatives has your facility undertaken based on your surveillance results in the past 6 months?

Benchmarks Used in Surveillance and Reporting Activities

- Two thirds of facilities across sectors use internal benchmarks in their surveillance and reporting activities. Only in Community Care this proportion is much lower (25%).
- In Acute Care, half said they also use external benchmarks, but most other sectors reported low use of external benchmarks.
- The Community Care sector has the highest proportion of facilities that don't use any benchmarks at all (37%), while in the other sectors this fraction is about 17-20%.



Q. Within this facility, which of the following benchmarks are used in surveillance and reporting activities?

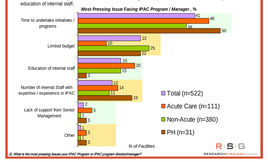
Main Issues for IPAC Programs:

The main issue identified by all healthcare providers 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 is 'lack of time to undertake initiatives/ programs' (41%). The second most frequent response 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 concern that current infection prevention and control resources within organizations 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 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.

Most Pressing Issue Facing IPAC Program / Manager

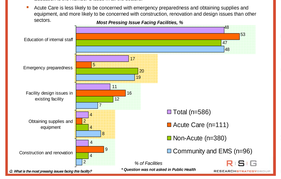
- Lack of time is mentioned by a majority as the #1 issue in all the sectors. Limited budget is the second most pressing issue, followed by education of internal staff.
- Acute Care is less likely to be concerned with limited budget than the other sectors, and more likely – with education of internal staff.



Q. What is the most pressing issue your IPAC Program or IPAC program director/manager?

Most Pressing Issue Facing Facilities

- Education is the Number 1 issue in all the sectors.
- Acute Care is less likely to be concerned with emergency preparedness and obtaining supplies and equipment, and more likely to be concerned with construction, renovation and design issues than other sectors.



Q. What is the most pressing issue facing the facility?

Satisfaction with IPAC Program:

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. 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 current guidelines. About half of the healthcare providers state that they review their IPAC policies annually, while another half review them even less frequently.

Drivers of Satisfaction for IPAC Resources

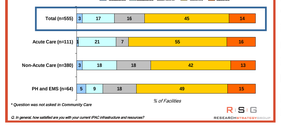
- Resources that help IPAC Programs function as independent centers (Dedicated cost center, Administrative and secretarial support, and Designated work space) contribute the most to the overall satisfaction with resources.

Q. In general, how satisfied are you with your current IPAC infrastructure and resources?

Satisfaction With IPAC Program Resources

- Overall, close to half (45%) are only 'Somewhat Satisfied' with their IPAC program resources.
- 20% say they are dissatisfied/very dissatisfied.
- Satisfaction is more polarized in Acute Care, where most (71%) are satisfied, but many (22%) are dissatisfied.

Q. In general, how satisfied are you with your current IPAC infrastructure and resources?*



Q. In general, how satisfied are you with your current IPAC infrastructure and resources?

To obtain the full provincial report or reports by health care sector (Acute Care, Non-Acute Care, EMS, Public Health and Community Care) visit www.ricn.on.ca or e-mail nsmicn@osmh.on.ca