



National Collaborating Centre
for Infectious Diseases

Centre de collaboration nationale
des maladies infectieuses

National Collaborating Centre for Infectious Diseases
Environmental Scan

Infectious Disease Information Needs of Public
Health Practitioners

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Background

The **National Collaborating Centre on Infectious Diseases (NCCID)** is one of six National Collaborating Centres for Public Health (NCCs) that contribute to the pan-Canadian public health strategy. The NCCs conduct environmental scans, synthesize existing public health research and information, translate and disseminate evidence-based tools, and sponsor events.

The mandate of NCCID is to bridge ongoing research and evidence respecting emerging and re-emerging infectious diseases with the program and policy questions of front line practitioners and public health policy makers.

To facilitate achievement of its mandate, NCCID conducted an environmental scan of public health practitioners, through an interview survey in the summer of 2007, to ascertain their information resource needs.

Methodology

A single interviewer conducted forty-one telephone interviews. An initial contact with prospective respondents or their assistants briefly explained the Environmental Scan and the interviewer's expectations of the respondent. A follow-up e-mail further explained the scan, attached a copy of the interview guide, and formally invited the individual to participate and to contact the interviewer with possible times and dates for the interview. Respondents were then sent a second e-mail confirming the date and time of the interview appointment and attaching another copy of the interview guide. The interviewer then contacted the individual at the arranged time. The duration of the interviews ranged from 20 minutes to a maximum of one hour, the majority lasting approximately 25 minutes. In addition to the interviews four responses were written and submitted.

Profile of Respondents

The 45 respondents included:

- Medical Officers (21)
- Communicable Disease Specialists/Physicians (7)
- Communicable Disease Nurse Managers (3)
- Public Health Laboratory Director (1)
- Environmental Health Officers (3)
- Chief Provincial Veterinary Officer (1)
- CDC Public Health Nurses (2)
- Senior Managers (7)

All Provinces and Territories were represented in the survey, the response from each ranging from one to nine interviews.

Summary of Responses

The interview guide was, as the name suggests, merely a guide. It was used to focus discussion and to give the respondents a sense of the purpose of the scan and the expected degree of their participation. The results have been collated in a relatively general fashion, rather than



by exact numbers. Many of the responses applied to more than one question and ruled out the feasibility of providing an exact tabulation of the responses to each.

Question # 1

What are your key information needs in the area of infectious diseases as they relate to public health? (Please reference appendix for a listing of potential areas)

When asked to identify information needs in the infectious disease area, many participants initially expressed a sense of frustration. They stressed that the issue is not a lack of information available to them but rather the overwhelming amount of information that is available and the resultant lack of time to research the variety of sources, read through the material, and determine what is reliable and relevant.

However, respondents were able to identify areas where there is a need for more information. These responses varied. Some took a disease-specific approach, following the guide provided; others responded from a program/management perspective; still others took a demographic and/or a geographic perspective and, in some cases, the response included more than one perspective. The data have therefore been categorized to reflect these variations.

Disease Specific Information Needs

- **New and Emerging Diseases:** alerts and up to date clinical and case management information.
- **Antibiotic Resistant Diseases:** lack of coordination between the public health community and health care institutions was identified as a major issue; strategies and policies to address this were identified as a key need.
- **HIV/STI/Hepatitis C:** concern about complacency respecting these diseases, in the face of continuing increases in their incidence in the majority of jurisdictions. The most frequently identified need was for information on strategies for reaching high risk populations, as current practices are not working.
- **Tuberculosis:** information on policies for managing TB, specifically with new immigrants.
- **Zoonotic Diseases:** information on the relationship between animal and human health with regard to infectious diseases, along with the need for national coordination and standardized information on zoonotic diseases.
- **Food Borne Diseases:** disconnect between the Public health Agency of Canada (PHAC) and the Canadian Food Inspection Agency (CFIA), coordination of information sources needed.

Program/ Management Information Needs

- **Immunization:** timely evidenced-based information on new vaccines, including recommended use, policies and guidelines, as well as changes in practice for existing vaccines.
- **Climate Change:** information respecting potential impacts on infectious diseases.
- **Outbreak Management:** sharing of information and guidelines for outbreak management.
- **Emergency Response:** standardization of emergency response policies and procedures as these relate to infectious diseases.



Geographic/Demographic Information Needs

- **Infectious Diseases Affecting New Immigrants:** information and national policies and guidelines for the management of infectious diseases in the new immigrant population.
- **Arctic Health:** infectious disease information specific to the Arctic.
- **Determinants of Health:** statistics respecting the relationship between infectious diseases and the determinants of health.
- **Aboriginal Health:** specifically a need for more sharing of national surveillance data.

Question # 2

In the last six months what were your most frequent sources for information on infectious diseases as they relate to public health?

Frequently identified sources for reliable information

- Public health and medical journals, on-line and hard copy
- CDC Atlanta website
- Provincial/Territorial Health Departments: Communicable Disease Branch personnel, Medical Officers of Health, and Provincial/Territorial communicable disease manuals
- Canadian Immunization Guide
- PIQ, protocole d'immunization du Quebec

Frequently used websites

- CDC Atlanta, Centers for Disease Control and Prevention
<http://www.cdc.gov/>
- ProMED, a program of the International Society for Infectious Diseases
<http://www.fas.org/promed/>
- Canadian Integrated Outbreak Surveillance Centre (CIOSC), Health Canada
http://www.hc-sc.gc.ca/ed-ud/respond/food-aliment/fiorp-pri11_e.html
- PHAC
<http://www.phac-aspc.gc.ca>
- World Health Organization (WHO)
<http://www.who.int/en/>
- Communicable Disease Surveillance Centre (CDSC), Health Protection Agency (UK)
<http://www.cdscni.org.uk/info/default.asp>
- OVID
<http://www.bib.umontreal.ca/DB/hermes/guidemedline.htm>
- INSPQ, Institut national de sante publique du Quebec
www.inspq.qc.ca
- MSSS
www.msss.gouv.qc.ca

Less frequently mentioned sources

- Morbidity and Mortality Weekly Report (MMWR), CDC Atlanta.
- Reports from expert Federal/Provincial/Territorial committees.
- British Columbia Centre for Disease Control (BCCDC).
- Canadian Food Inspection Agency (CFIA).



Question # 3

In an urgent situation where you require reliable, immediate information on infectious diseases, what are your usual sources?

Frequently identified sources

- CDC Atlanta: respondents are able to count on an immediate, reliable and current response either from individual or general staff contacts.
- Colleagues: either in their province/territory or known experts in the area from other provinces/territories.
- Medical Officers of Health, Provincial Health Departments.

Less frequently identified sources

- Northern Medical Unit, University of Manitoba.
- Travax, Health Protection Scotland, a UK National Health Services resource for exotic/travel disease information.

Question #4

What are the challenges you face in obtaining reliable, timely information on infectious diseases as they relate to public health?

Frequently mentioned challenges

- Too much information available: not enough time to sort, read and determine reliability.
- Lack of timely, useful surveillance data, and difficulty obtaining national surveillance data for First Nations.
- Limited resources/expertise in Provincial Health Departments.
- Lack of information on emerging diseases and unusual outbreaks.

Less frequently mentioned challenges

- Lack of guidelines to bridge the gap in infectious disease control and management between health care institutions and the public health community.
- Lack of infectious disease information specific to the North.
- Limited resource links between Health and Agriculture agencies at both Provincial/Territorial and Federal levels.

Although most respondents acknowledged concern, approximately 20% did not identify any specific challenges in obtaining timely information.



Question # 5

Rank the formats you use to keep your professional knowledge current.

Ranked order

- Written: books, journals, etc.
- Web sites
- E-mail contacts, list serv and peer education/consultation
- Workshops/conferences
- Formal training courses
- On-line courses

Question # 6

Which infectious diseases are currently of most concern in your jurisdiction?

Disease	Number of Respondents
STI/HIV, includes HPV	34
Health Care Acquired and Antibiotic Resistant	24
Tuberculosis	21
Vaccine-Preventable (primarily Mumps)	14
Influenza	13
Hepatitis C	8
Enteric (E Coli, Salmonella)	7
Rabies	4
West Nile	4
Hepatitis B, Hepatitis A, Anthrax, Respiratory, HPLV-1	Less than 6

Question#7

Which infectious disease/s do you feel should receive more attention?

The diseases most frequently identified by the majority of respondents as needing more attention nationally and provincially/territorial included:

- HIV/STI/Hepatitis C
- Antibiotic resistant infections
- TB (principally among new immigrants and aboriginal populations)
- Vaccine preventable diseases (emphasis on updating guidelines and protocols)



Other less frequently mentioned diseases cited as needing attention nationally and provincially/territorial included:

- Rabies (emphasis on updating guidelines)
- Food borne (emphasis on improving food safety)
- Influenza surveillance
- HTVL-1
- Respiratory Infections

Several respondents expressed concern respecting the extent of resources allocated to pandemic planning for Avian Influenza, a disease that has not yet appeared in Canada, at the possible expense of more immediate disease management needs.

Question # 8

In your opinion what gaps in infectious disease surveillance currently exist?

The majority of respondents identified an urgent need for a national strategy for surveillance of infectious diseases - a strategy that would include a comprehensive, affordable, surveillance model. It was also suggested that national surveillance should include not only the monitoring of infectious diseases but also links between determinants of health, incidence of disease, and best management and prevention practices.

Most responses emphasized national surveillance. Some suggested that, in the absence of a reliable national system, provinces and territories were developing their own systems in isolation thus restricting the feasibility of regional comparisons.

Identified Needs in National Surveillance

- **Timeliness** of data analysis and feedback.
- **Standardization** of definitions and reporting.
- **Integration** of such areas as environment, zoonotics, and infectious diseases.
- **Extension** to provide not only base line and ongoing disease data but also information on links to determinants of health and best practices.

Identified Gaps in National Surveillance

Several disease categories were identified as requiring addition to or improvement of the national surveillance program:

- Antibiotic Resistant
- Vaccine Preventable
- Zoonotic
- Food Borne
- HTLV-1

The emphasis of national surveillance issues frequently extended to comments respecting the limitations of regional surveillance programs. Provincial/Territorial Health Departments frequently do not have the resources or capacity to support and manage an adequate surveillance system. Timely data analysis and feedback are not always available from the Provincial Health Departments.



Compliance in reporting was cited as an issue both nationally and regionally. There was some suggestion that national surveillance was more effective in this regard.

The majority of respondents indicated that they are looking forward to the implementation of the **Panorama Surveillance Program** with the anticipation that it will be a significant improvement over the current system

Question # 9

What unique public health programs or best practices in your jurisdiction would you like to share?

Respondents were asked to identify one or two programs within their jurisdiction that have had positive impact on infectious disease control. The substantial number of programs identified is an indication of the variety of successful interventions/best practices occurring across the country. By definition, the following list is not exhaustive and program details could not be recorded within the allotted interview time.

North West Territories

- Infection Control Program (sets standards and audits facilities)
- Hepatitis C Follow-up Program
- TB Street Program
- Rabies Program
- Communicable Disease Manual
- Direct Observed Therapy (TB)
- Aggressive MRSA Program

Nunavut

- TB Program Review (incentives assure 100% compliance)
- HTLV-1 Guidelines

Yukon

- Infectious Disease Control Monitoring Program (partnerships with public health/hospitals/community health centres)
- Field study of DPT Immunization of High School Students (David ST, Hemsley MC, Pasquali PE, Larke B, Buxton JA, Lior LY. Enhanced surveillance for adverse events following immunization: two years of dTap catch-up among high school students in Yukon, Canada (2004,2005). Can J Public Health. 2006 Nov-Dec; 97(9):465-9.)

British Columbia

- BCCDC-HIV Prevention Program
- Integrated Care for Hepatitis C
- Analysis of the Reproductive Impact resulting from Chlamydia Control
- Control of Invasive Pneumococcal Disease in Two Year Olds, Approaches to Outbreaks
- Best Practices for Core Public Health Programs
- Provincial Framework for Immunization



- Annual Provincial Health Officer Report
- Annual BCCDC Report

Alberta

- Program for Prenatal HIV/Hepatitis B Infection
- STI Surveillance Program
- Program for HIV Non Compliance (non criminal)
- Public health monopoly on vaccination throughout the province

Saskatchewan

- Saskatoon School of Public Health-research on animal and human health interface
- TB Program for First Nations
- Standardized immunization of health care workers

Manitoba

- Zoonotics Committee-partnership between public health/animal health authorities
- Directly Observed Program (TB)
- Harm Reduction Program (including TB)
- Pre-School Health Circus (immunization, dental, and hearing)
- Breakfast voucher and cab fare incentive program (TB, STI, HIV)
- Manitoba Health-reorganization of the Public Health Branch
- Immunization Registry Program
- Vaccine Inventory Management Program

Ontario

- Chlamydia Campaign
- Public Health Immunization Protocols
- TB Prevention and Control (homeless and prison populations)
- Infection Control Manual for Homeless
- Needle Exchange Program
- Communicable Disease Liaison Program (public health staff working with hospital staff)
- Regional Infection Control Network
- Water Borne Disease Program
- Blastomycosis Reporting Program
- Syndromic Surveillance Program in Emergency Room

Quebec

- Nosocomial Infection Program
- GIS Surveillance
- Field Epidemiologist Program
- Day Care infectious Diseases Program

New Brunswick

- Provincial Standard Operating Procedures for Communicable Diseases



Prince Edward Island

- Asthma/Insecticide Program

Nova Scotia

- Public Health /Laboratory Partnership

Newfoundland

- Public Health Nurses Phone Forums (province-wide, monthly)

Question # 10

How best and in what format could the NCCID meet your infectious disease information needs, format/content/venue for dissemination?

Suggestions included an NCCID-sponsored website and a regular conference.

Website

Most respondents identified the need for a dynamic, reliable, one-stop web site that would assist them in their daily practice - serving as a quick reference, providing immediate advice on the management of infectious diseases and identifying and offering opportunities for the sharing of best practices.

Suggested features of the site included:

- Sharing of Best Practices (including source identification and contact information).
- Literature Synthesis (" translating science into English", bundling of articles, functioning as a clearinghouse).
- Protocols and Guidelines for up to date management of infectious diseases, including posting of interim guidelines for testing and debate.
- Links to Team of Experts (available for immediate advice to practitioners, possibly retained by the NCCID on a per diem basis).
- Listserv (debate of issues, sharing of information).
- Online Education (training courses/video conferencing).
- Links to other key sites (e.g., animal health, food inspection, etc.).
- Power Point Presentations, (prepared presentations on specific issues, suitable for direct use by practitioners or for tailoring to regional circumstance).

Conference

A small conference could be sponsored by NCCID, yearly or every second year, and targeted at program managers, policy-makers, and practitioners. The conferences could focus on specific infectious disease areas such as blood borne or food borne illnesses and offer a program that featured expert speakers and provided an opportunity for collegial discussion and debate.



Question # 11

Were you aware of the NCC and/or the NCCID prior to this contact?

Thirty-nine participants responded to this question. Nineteen were aware of the National Collaborating Centres but unclear as to their role. Eight knew of the National Collaborating Centre for Infectious Diseases. Twelve were not aware of either the NCCs or NCCID.

Summary

The concept of an Environmental Scan is to collect information on a specific topic quickly, with the expectation that participants will spend a minimum of time preparing and responding to the questions. The average interview for this survey took approximately 25 minutes. The sample size (45) was relatively small but included respondents from every province/territory. Participants were generally enthusiastic and, for the most part, had taken time to review the Interview Guide in advance. Comments were thoughtful and candid. Respondents consistently shared a passion for public health, regardless of their location or length of experience.

From the interviewer's perspective the response was noteworthy in several respects. A majority of respondents were heavily dependent on CDC Atlanta as a principal information source. Although PHAC was frequently identified as a source that could be used more often; many respondents expressed frustration in locating individuals responsible for specific information needs, and subsequent difficulty in obtaining timely responses.

The continuing increase in the incidence of STI's and HIV was identified as a major public health concern, particularly in the larger urban centres. New and emerging diseases, as well as the antibiotic resistant diseases were consistently cited concerns by respondents generally.

The need for a national surveillance program was repeatedly stressed. Although many respondents mentioned looking forward to the Panorama Surveillance Program, many were concerned about the length of time it was taking to implement and the eventual cost to the provinces/territories.

The number of successful or innovative programs volunteered in response to question #9 is indicative of the creativity and the resourcefulness of the public health community. However, the fact that very few of the programs overlapped suggests a need for better communication and coordination between agencies and practitioners, and suggests some potential for follow-up by NCCID.

And, finally, the response to the question on the potential role of the NCCID, identifying an opportunity to host a common website and a regular conference, clearly suggests a shortcoming of existing infectious disease resources with respect to communication and coordination of some timely and relevant information critical to the public health community.

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