

**Pan-Canadian Public Health Education Initiative
Summary of Three Regional Workshops**

April 2004

**Centre for Surveillance Coordination
Population and Public Health Branch
Health Canada**

**Health Care Policy Directorate
Health Policy and Communications Branch
Health Canada**

Pan-Canadian Public Health Education Initiative

Summary of Three Regional Workshops

Introduction

The report of the National Advisory Committee on SARS and Public Health (Naylor Report) clearly outlined the human resources crisis facing the public health system in this country recommending:¹

- Immediate discussions around the initiation of a national strategy for the renewal of human resources in public health;
- Urgent exploration of opportunities to create and support training programs;
- The development of a national public health service.

In January and February 2004, Health Canada's Centre for Surveillance Coordination sponsored three regional workshops to gather input and develop consensus among a diverse set of public health practitioners and academics. While it is recognized that assuring a first-class workforce will involve issues beyond training, such as recruitment and retention, job enrichment, and working conditions, the focus of the workshops was on the following public health workforce education issues:

- A vision for education of the public health workforce;
- Current assets and barriers;
- The strategies and actions needed to realize the vision.

The purpose of this paper is to summarize the key themes that emerged from the regional workshops for future policy development. Additional context material has been added where appropriate. A list of workshop participants is shown in Appendix 1.

A Vision for Education of the Public Health Workforce

The vision for developing the public health workforce is related to the overall vision for a stronger public health system in this country. As such, improvements in education and training would be occurring in parallel to improvements elsewhere in the system (e.g. public health applied research, knowledge translation, defined public health core functions, structures and roles, identifying required competencies, creation of a national public health agency, leadership of a Chief Public Health Officer, etc.). Consistent with recommendations from the Naylor Report, many workshop participants stressed the need for a national public health human resources strategy and this issue will be addressed in a later section of this report. Three recurring themes emerged as participants described their

vision for education of the public health workforce: defined competencies, well-developed and open career paths, and comprehensive training.

Competencies

Competencies are the knowledge, skills and abilities that are critical to the effective and efficient function of an organization. The required competencies for public health practice need to be defined and agreed to by a mix of system stakeholders including employers, practitioners, and training programs. It should be possible to use the defined competencies for a number of purposes including developing job descriptions using a standardized nomenclature, identifying skill levels required for programs and organizations, guiding curriculum development, and as a basis for individual and organizational learning needs assessment.

Workshop participants suggested that the identification of competencies needs to consider the following:

- Competencies need to address not just current programs and structures, but also the future needs of the public health workforce: including more knowledge and skills in the areas of public health informatics, human and microbial genomics applications to public health, laboratory sciences, health risk modelling, organizational/leadership skills, policy, knowledge management, communications, and ethics;
- Different types or levels of competencies need to be developed:
 - Front-line staff, senior/supervisory level staff, and management staff;
 - Technical competencies that are necessary to perform certain tasks;
 - Discipline-specific competencies that may be necessary for specialized roles or practice areas.

Health Canada is currently funding projects to identify core public health competencies, as well as discipline-specific competencies for public health nurses and public health inspectors.

Open and Attractive Career Paths

Public health human resources is faced with problems of recruitment, retention and distribution. Career paths need to be attractive, with opportunities to work in stimulating and challenging environments with competitive remuneration. There should be opportunities for ease of movement between various parts of the system. This includes not only moving between levels of the system (i.e. federal, provincial/territorial, local/regional), but also between practice and academia. To further improve exposure to other systems, secondments and exchanges with other countries' public health systems should be supported. This desire for mobility not only has implications for human resource policies (e.g. pension transferability, license portability, seniority, vacation time, etc.), but also availability of training to facilitate such shifts. Consideration of the full life-cycle of careers needs to pay attention to the recruitment of individuals to the field of

public health and include a combination of part-time and full-time employment. Recruitment should also consider specific population groups that are under-represented in the public health workforce (e.g. Aboriginal peoples). Many participants articulated a desire to have public health viewed as a preferred occupation and that a marketing strategy should be developed.

Comprehensive Training

Workshop participants described a vision for training that is more comprehensive and accessible than is currently available. Several key attributes were identified:

- Prepare an adequate number of properly trained practitioners (including specialists and sub-specialists), educators, and researchers;
- Competency-based training, which is dependent on defining the scope of public health practice;
- Inter-disciplinary with a broader range of professions represented (e.g. veterinarians, anthropologists, sociologists, geographers, medical microbiologists, laboratory scientists, etc.);
- Combination of academic and practical training (e.g. teaching public health units being analogous to teaching hospitals);
- Guided incorporation of new skills into practice (e.g. mentoring, apprenticeship, etc.);
- Stronger public health research environment with knowledge translation and exchange;
- Greater training capacity in academia and practice-based training sites;
- Supported by professional organizations such as Royal College of Physicians and Surgeons of Canada, Canadian Nurses Association, Canadian Association of Schools of Nursing, Community Health Nurses Association of Canada, Canadian Public Health Association, College registries (physicians, nurses), Canadian Institute of Public Health Inspectors, etc.;
- Supported by employers;
- Spectrum of training options:
 - Formal degree levels: bachelor, master, doctorate;
 - Other training options: diploma, short-courses;
 - Continuing education;
 - Variety of formats;
- Availability of training from a variety of institutions that are networked:
 - Centres of excellence in public health training and research across the country (i.e. Regional training consortia);
 - Full range of accredited training programs that are coordinated for an overall “menu” of training options;
 - Regional balance of training opportunities, within which training is provided in a variety of settings/locations;
 - Sharing of courses and students (i.e. recognition of credits);

- Comparability of training (e.g. know what core training someone has if they have a professional Masters degree);
- Greater inclusion of public health skills in training of other disciplines;
- Inclusion of a global focus that would be attractive to international students and to prepare Canadian practitioners to contribute outside Canada.

Describing the Vision

The workshop participants were asked to provide descriptive keywords of their vision for public health education:

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|------------------------------------|----------------------------|--|
| ● Interdisciplinary; | ● Responsive | ● Cutting-edge/high quality practice; |
| ● Flexible; | ● Comprehensive; | ● Continuously evolving; |
| ● Portable; | ● Protective; | ● Science-based; |
| ● Pragmatic/practical; | ● Trusted; | ● Accessible to all; |
| ● Integrated; | ● Competent; | ● Inclusive public health <u>practitioner</u> label; |
| ● Exciting; | ● Energetic; | ● Effective; |
| ● Alliance with experts; | ● Public health detective; | ● Feasible; |
| ● Innovative; | ● Financial support | ● Sustainable; |
| ● Preferred occupation/role model; | ● Organizational support; | ● Life-long learning; |
| ● Operational; | ● Global; | ● Value-added; |
| ● Partnership; | ● Role models; | ● Excellence; |
| ● Well-equipped; | ● Champion; | ● Programmatic/practical. |
| ● Pan-Canadian; | ● Framework; | |

Current Assets and Barriers

Although many improvements are required, there is widespread recognition that the public health field is not starting from scratch in developing a response to the current human resources challenge. There are many existing building blocks for developing a comprehensive training program:

- Royal College certified medical specialty programs in community medicine, medical microbiology, and infectious diseases;
- Certification programs for public health inspectors, community health nurses, laboratory scientists and technicians;
- Increasing interest in public health training:
 - Increasing availability of interdisciplinary education such as BHSc programs;
 - Development of professional master's degree programs (i.e. MPH) in public health;
 - Discussion of creating schools of public health;

- Developing regional consortia with the benefit of existing models (e.g. nurse practitioner program – see text box; and later discussion of CIHR/CHSRF Centres);
- Increasing distance education options from universities, as well as continuing education programs such as the Skills Enhancement for Health Surveillance initiative;
- Practice, education and research models such as Ontario’s PHRED program;
- Researchers receptivity to contributing their expertise toward problem solving and subsequent policy development;
- In Quebec, a number of unique circumstances:
 - National Public Health Institute to support training and align it with programmatic requirements;
 - Provincial legal requirement for employers to provide continuing education;
 - Fee structure for physicians that explicitly supports continuing education;
 - Critical mass of staff in most regions with decentralization and greater autonomy;
 - Inter-disciplinary summer school program;
- Field Epidemiologist Program.

The relatively small size of the public health field is a potential asset because there are existing relationships between key stakeholders and a willingness to work together. The current environment is an excellent opportunity to put in place a comprehensive approach to system development.

Primary Health Care Nurse Practitioner Programme Consortium (Ontario)

A consortium of 10 Ontario universities provide this training program. Lead universities develop the curriculum in English and French, which is delivered by distance education to all universities in the consortium, and is administered province-wide by the developing university. Delivery methods include: CD-ROM, computer-mediated conferencing, print-based materials, tutorials, clinical labs and placements, library resources.

There is an existing pool of individuals with public health training who are not currently working within the public health system. These individuals are a potential source of human resources that could augment the public health workforce. An appropriate set of incentives including refresher training options would likely be necessary to recruit them. The recent federal funding [announcement](#) to enable more foreign trained physicians to eventually work in Canada is an example of such an approach.

The creation of the Canadian Public Health Agency and the position of the Chief Public Health Officer² provides an opportunity for sustained leadership and involvement in public health workforce development. The federal Budget also makes explicit reference to expanding the Field Epidemiology program, as well as “providing funding for fellowships, bursaries, chairs, and community-based public health apprenticeships.”

While the current environment is unique in that there is, at least for the moment, public and political interest in strengthening the public health system, there are long-standing and well-entrenched structural reasons why there is not a stronger public health workforce across the country.

The public health system's functions, program standards, and core competencies have not been defined. There are also large gaps in information needed to describe the current workforce. The formal public health system is governmental in nature and split across multiple jurisdictions. Health is primarily a provincial responsibility, yet many public health human resource issues are essentially national in scope. Most public health staff are located in smaller clusters at local/regional levels, which further hampers the development and provision of training. Many participants identified that the leadership of Ministries of Health are generally not committed to public health. The placement of public health within government departments and their associated cultures limit financial support for the basic principles of training and research. The limitations of existing human resources impair the availability of practitioners to participate in continuing education.

There is a general lack of investment in technology infrastructure within public health, which is a barrier to electronic-based distance education. The older age of the public health workforce also presents a barrier to adopting new technology. In addition to the lack of continuing education courses on-line, there is difficulty in funding the development of such courses. Existing programs are primarily in English, which is a further barrier to francophone practitioners. There is also a perception that some employers tend to favour training their "best" employees. In this way, training is part of a reward system, versus a mechanism of improving skills for those who are in greatest need. Accredited training programs in public health are rare.

There are a number of additional barriers within academic institutions. Most institutions are set-up to compete with each other and not to work collaboratively. Their focus in education also tends to be on formal degree programs versus the continuing education needs of practitioners after they graduate. Research interests tend to follow funding streams, which are not typically focussed on applied public health research topics. Some researchers are more focussed on knowledge development versus the subsequent steps of synthesis and translation into practice.

In addition to these challenges within governments and academia, there is a lack of coordination between these two key stakeholders and the practitioners themselves. The lack of staff exchange between universities and practice settings hinders the development of linkages. The lack of funding for applied research is a barrier to university involvement within public health. Overall, there is no organization that is responsible to comprehensively address these challenges and is focussed on meeting the needs of the system. This lack of system development and leadership for workforce development was identified by many participants as illustrative of the lack of leadership and coordination of the public health system overall.

Strategies, Actions and Priorities

Many of the comments from the workshop participants focussed on the higher-level and more strategic actions required over the long-term to improve the public health workforce. There was a consistent view that the federal government's role was to provide national leadership, system funding, and ensuring the development and implementation of a strategic plan. This section will provide a discussion of the development of a national public health human resources strategy and the creation of regional consortia or schools of public health. This is followed by a description of several potential actions that could occur to strengthen the public health workforce while the national public health human resources strategy is being developed.

Developing a National Strategy for Public Health Human Resources

While the development of a national strategy was not the focus of the workshops, it was an issue that was repeatedly raised. An environmental scan of public health workforce development initiatives in the US, England, and Australia was recently completed.³ A common theme, particularly in the US and Australia, is the identification of the required individual and organizational competencies that are required to fulfill functions and deliver programs. The role of competencies is seen in the US' workforce development plan that was published in 2000 and is led by the Centers for Disease Prevention and Control (CDC) Office of Workforce Policy and Planning.⁴ It involves six strategies that are linked in an iterative loop:

- Monitor workforce composition and forecast needs;
- Identify competencies and develop related content/curriculum;
- Design an integrated learning system;
- Use incentives to assure competency;
- Conduct evaluation and research;
- Assure financial support.

In Australia, the National Public Health Partnership struck a Workforce Development Steering Committee, which developed a planning framework for the public health workforce that involved describing the required organizational competencies to achieve goals and implement programs.⁵ The framework is currently being piloted in the field.

Many of the workshop participants identified that the Canadian Public Health Agency should have the lead responsibility for the strategic plan to develop the public health workforce. Development and implementation of the plan would involve the active participation of multiple system stakeholders across the country. Consistent with the previously outlined workshop themes, the national strategy needs to address attraction

and retention of public health practitioners and the presence of open and attractive career paths.

Schools of Public Health and Regional Consortia

Several of the recently published analyses of the public health system discuss or recommend the creation of one or more schools of public health in this country.⁶⁻⁸ These schools are often described as being “virtual” in that they would be comprised of a network of centres across the country and would therefore relate to the concept of Regional Consortia outlined earlier in this paper.

Schools of public health have existed for a number of years in the US. The Schools are expected to have the faculty and other human, physical, financial and learning resources to provide both breadth and depth of educational opportunity in public health.⁹ They must offer education at the masters level sufficient to provide a concentration in each of five areas: biostatistics, epidemiology, environmental health sciences, health services administration, and social/behavioural sciences. It is also expected that in addition to offering the MPH degree, that a School of Public Health would provide at least one doctoral degree program in one of the five core areas. Another feature of the American schools is that they should have the same level of independence and status accorded to professional schools in their parent institution.

At the regional workshops, there was a lack of consensus as to whether a US-type school of public health is the “answer” for Canada’s public health training needs. Some participants pointed out that the American schools had been the subject of criticism for a number of years for not having been sufficiently responsive to the needs of the public health system. In 1988, the Institute of Medicine stated that the schools needed to develop a greater emphasis on public health practice and to equip them to train personnel with the breadth of knowledge that matches the scope of public health.¹⁰ The recent massive influx of training funds has provided a financial lever for CDC to ensure the schools are meeting the system’s needs through the creation of several [Centers of Public Health Preparedness](#). The academic Preparedness Centers are based in schools of public health and are providing competency-based training for the public health workforce. Several additional specialty and advanced practice Centers have been created to focus on specific issues such as public health law, zoonotic disease, research, mental health, and information technology.

In Canada, considering the limited number of existing training sites for public health, the relative disparity in their capacity, and the geographic dispersion of training sites and potential trainees, it only seems reasonable to create regional consortia of training centres. The extent to which these should be networked nationally and whether it will be appropriate to label one or more consortia as a “school of public health” will likely require the benefit of the strategic plan that is to be developed. It was not felt, however, that promoting the development of schools of public health along the American pattern was a national priority at this time. The development of more relevant programs of study

(e.g. MPH programs) than are currently available from existing faculties was felt to be more important. This however, does not preclude individual or partnered institutions from pursuing the development of schools of public health. If schools of public health are developed, many participants stressed the importance of having an accreditation mechanism for them.

Whether or not schools of public health are created, the many recommendations for needing comparability of training and standards for training programs are still highly relevant. Creating, developing, and sustaining regional consortia and expanding training capacity will require targeted investment. Several workshop participants pointed to the [CHSRF/CIHR Training Centres](#) as a model for developing regional consortia for public health training. The Centres provide competency-based, graduate-level training with course availability across a consortium of universities, summer institutes, linkages of students and faculty across universities and disciplines, and field placement opportunities in settings across a Region.

Continuing Education Programs

Continuing education programs need to include a balance of general and specialized topics. These programs also need to be available in a variety of formats including on-line, summer schools, teleconferences, and other formats. It was recommended that these programs need to go beyond surveillance and epidemiologic analysis and address health promotion and disease prevention. The continuing education needs of senior managers need to be considered and could include training in leadership and business skills. For example, in the US, [public health leadership institutes](#) and a [management academy](#) have been developed for middle and senior managers by partnerships between CDC, schools of public health, and schools of business.

Support for Further Training

Existing practitioners need to be supported to increase their knowledge and skill levels by pursuing formal education (e.g. masters degree). Training options need to be available that minimize the stress on the individual, their family and their employer. A systematic approach should be used to provide training grants to reduce financial barriers and be available for all disciplines. Workshop participants also recommended providing funds to employers to assist them back-filling the worker's position.

Field Epidemiology Program

The Canadian Field Epidemiology Program is operated by Health Canada's Centre for Surveillance Coordination. It takes health professionals who already have at least a masters degree in epidemiology / public health and provides two years of training in field

epidemiology (including surveillance, outbreak investigation and disease control) through supervised experience. Considering the size of Canada, the current production of 5 field epidemiologists a year appears to be an obvious shortcoming. The number of field epidemiologists should be increased, which will allow their use in more geographic locations in Canada, and to address a broader range of public health issues beyond infectious diseases (e.g. chronic diseases, injuries, etc.). Expansion of the Field Epidemiology Program was announced in the federal Budget.²

Non-Degree Programs

Some workshop participants described the need to expand opportunities for careers in public health that do not require formal training at the degree level. This might be particularly applicable in rural, northern and Aboriginal settings. Support for people to start working in public health under supervision would meet an immediate need and also might generate interest in pursuing further training.

Recruitment to Public Health

The potential for a career in public health needs to be emphasized to high school and university undergraduates. To expose potential future practitioners to public health, funding should be provided to employers to create summer studentships and elective placements during academic programs. This applies to all levels of training and includes covering the practicums required for certification of public health inspectors. Return of service educational grants is an additional option. Remuneration of public health practitioners needs to be reviewed to ensure competitiveness with other sectors.

Any barriers to re-entry of physicians seeking specialty training in community medicine should be eliminated. Streamlined processes should be in place to allow recognition and where required, upgrading of skills, of foreign-trained public health physicians. While individuals are awaiting certification, opportunities for involving foreign-trained practitioners in public health settings should be explored.

There are many individuals who have received public health training who are currently working outside the system. Opportunities for encouraging their re-entry into the field of public health should be examined. To encourage cross-over of individuals with experience from other fields, consideration should be given to executive MPA/MBA style courses for those entering public health later in life.

Practical Training of Future Public Health Practitioners

This was identified as a key issue. At present, most of the graduate education relevant to public health available in Canada has a focus on epidemiology and research skills. Most

graduates of these programs do not enter public health practice, and many public health practitioners feel that these programs do not fully meet their needs. Among the exceptions are the MHS programs in Toronto and UBC. These are “professional masters” programs, which have a practicum component and do not require a research thesis. The American MPH is another example, and there are proposals to mount MPH programs in Canada. Such programs might require more support to be fully effective. The University of Montreal has started a Dr.PH program (again following the American pattern). It was felt that persons with this training could play an important role in the public health system in the future.

Individuals training in undergraduate and graduate programs need to be exposed to public health practice during their training. Public health practice settings need to be compensated for the costs of having student placements including not only the costs of workspace and equipment, but also the real time commitment required to appropriately supervise students. Practicums should also include settings outside the formal public health system to increase exposure to broader public health issues. Ideally, there would be a partnership between public health practice settings and academic centres to ensure an appropriate experience for the students. The expansion and appropriate funding of teaching health units is one approach for such a partnership.

Emerging Content Areas

The past decade has seen the emergence of new fields in public health that are under-developed in academic settings in Canada. Examples include the emerging field of public health informatics and public health genomics. There is a role for national leadership to ensure that knowledge and skills are developed in new areas such as these. Potential actions include the creation of post-graduate fellowship programs, sponsoring training outside the country if necessary, and encouraging a Canadian site to develop a training program with appropriate incentives.

Communication Regarding Existing Training Opportunities and Available Positions

The number of institutions offering distance and continuing education is growing. There needs to be a better mechanism for practitioners to be able to search for and find these training opportunities. To encourage ease of movement of staff and cross-pollination of workplaces, better information needs to be available regarding job opportunities. The electronic posting of position vacancies and training opportunities in a searchable format is one approach to address these needs.

Linking Research and Public Health Practitioners

Workshop participants suggested a number of ways to strengthen the linkage between academic centres and public health practice. This included supporting faculty with a foot in both worlds creating academic public health practitioners similar to existing “clinician scientists”. Bursaries could be made available to facilitate exchanges between public health practitioners and university faculty. It was also suggested that the creation of university “Chairs” of public health practice would be useful to champion development of the training system. Career re-orientation awards were also suggested to encourage practitioners from other fields to shift to research and practice in public health. The development of regional consortia discussed previously would also be a mechanism to strengthen academic-practice linkages.

Summary and Next Steps

A remarkable level of consistency was observed in the vision and strategies proposed in the three workshops. Over 75 public health practitioners, academics and system stakeholders had an opportunity to reflect upon and discuss their vision for improving the education of the public health workforce and to make recommendations for priority actions. This information will be useful to guide decision-making in the near term, and in the development of the recommended national workforce development strategy.

A draft version of this document was distributed to workshop participants, as well as to selected individuals who were not available to attend any of the workshops. Many of their comments have been incorporated in this final version. As described in the workshops, this document is being shared with the F/P/T Strengthening Public Health System Infrastructure Task Group, the F/P/T Public Health Human Resources Joint Task Group, and Health Canada to support and inform ongoing workforce development.

Appendix 1 – Workshop Participants

Vancouver:

David Mowat	Health Canada
Perry Kendall	British Columbia
Ron de Burger	Toronto Public Health
Gina Balice	Health Canada
Catherine Cook	Aboriginal Health Services, Winnipeg
Richard Massé	Institut de santé publique du Québec
Janet Braunstein Moody	Nova Scotia Department of Health
John Millar	Provincial Health Services Authority, BC
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Richard Stanwick	Vancouver Island Health Authority
David Buckeridge	Stanford Medical Informatics, California
Richard Musto	Calgary Health Region
Karen Lee	Capital Health, Alberta
Bruce Reeder	University of Saskatchewan
Robert Brunham	University of British Columbia
Tom Noseworthy	University of Calgary
Richard Mathias	University of British Columbia
Kay Teschke	University of British Columbia
Nicholas Bayliss	Alberta Health & Wellness
Arun Chockalingam	Canadian Institute of Health Research, BC
Brent Moloughney	Public Health Consultant
Carla Jane Troy	Health Canada
Shirley Chan	Health Canada
Ross Findlater	Saskatchewan Health
David McLean	Simon Fraser University

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John Frank	University of Toronto
Harvey Skinner	University of Toronto
Dorothy Pringle	University of Toronto
Jane Underwood	Community Health Nurses Association of Canada
Larry Chambers	Élizabeth Bruyère Research Institute
John O'Neil	University of Manitoba
Joe Losos	University of Ottawa
Carole Orchard	Canadian Association of Schools of Nursing
Lori Kiefer	Community Medicine Specialist
Maureen Dobbins	McMaster University
Ann Ehrlich	McMaster University
Doug Manuel	Institute for Clinical Evaluative Sciences
Marsha Sharp	Dietitians of Canada
Lynn Scruby	University of Manitoba
Brian Emerson	Ministry of Health Planning & Services, BC
Chris Green	Manitoba Health
Mary Lou Decou	Association of Public Health Epidemiologists, ON
Kathleen Steel O'Connor	Public Health Research, Education & Development

Absent:

Bart Harvey	University of Toronto
Donna Meagher-Stewart	Dalhousie University
Martha Karen Campbell	University of Western Ontario
Barb Mildon	Community Health Nurses Association of Canada
Joel Weiner	Health Canada
Kevin Keough	Health Canada
Paul Gully	Health Canada
Frank Plummer	Health Canada
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Jean-Louis Caya	Health Canada
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Christine Colin	Université de Montréal
Marie-France Raynault	Université de Montréal
Isra Levy	Canadian Medical Association
Susan Stock	Institut national de santé publique du Québec
Céline Farley	Institut national de santé publique du Québec
Richard Lessard	Département de santé communautaire de Montréal
Erica Di Ruggiero	University of Toronto
Horacio Arruda	Ministère de la santé et des services sociaux du Québec
James Gomes	University of Ottawa
Elinor Wilson	Canadian Public Health Association
Diane Berthelette	Université du Québec à Montréal
Pierre Joubert	Institut national de santé publique du Québec
Jeff Scott	Nova Scotia Medical Officer of Health
Bill Bavington	Memorial University of Newfoundland
Pierre Gosselin	Centre hospitalier universitaire de Québec
Michel Savard	Région nationale des Laurentides

Absent:

Chandrakant Shah University of Toronto

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