

Chapter 12

LEARNING FROM SARS: Renewal of Public Health in Canada

SARS has demonstrated the speed with which a dangerous new disease can emerge and spread around the planet. The seriousness of the outbreak and the challenges that arose in containing SARS are widely and rightly regarded as signposts for the need to strengthen Canada's public health systems.

In fact, the evidence of actual and potential harm to the health of Canadians from weaknesses in public health infrastructure has been mounting for years without a truly comprehensive and multi-level governmental response. Canada has faced the HIV epidemic, water contamination in Walkerton, Ontario and North Battleford, Saskatchewan, and threats to the safety of Canadian blood supplies from HIV and Hepatitis B and C. The events of September 11, 2001 and the related anthrax attacks on our US neighbour heralded the possibility of bioterrorism within our borders. Recently, one part of the country has faced economic hardship caused by fears of the spread of BSE from cattle to humans, while others are trying to stem the spread of West Nile virus from birds to humans. And as this report goes to press, a new public health crisis is unfolding around a meat packing plant in Aylmer, Ontario.

All these events have represented tangible threats to the physical and economic well-being of Canadians. All these threats emphasize the need for a seamless public health system. At minimum, Canadians expect that the nation's public health systems should be fully prepared to deal with emergencies caused by infectious diseases, accidental or intended, and consistently be able to protect them from mass contamination of water or food. These minimal expectations are not being met.

As a disease outbreak, SARS was relatively small. Nonetheless, the disease killed 44 Canadians, and caused illness in a few hundred more. The response to the outbreak paralyzed a major segment of Ontario's health care system for weeks, and saw more than 25,000 residents of the Greater Toronto Area placed in quarantine. Psychosocial effects of SARS on health care workers, patients, and families are still being assessed, but the economic shocks have already been felt. Estimates based on volumes of business compared to usual seasonal activities suggest that tourism sustained a \$350 million loss, airport activity reduction cost \$220 million, and non-tourism retail sales were down by \$380 million. It seems entirely possible that the direct and indirect costs of SARS could reach \$2 billion.

As Canada recovers from this extraordinary set of events, the National Advisory Committee on SARS and Public Health has been weighing what lessons might be learned from the outbreak of SARS in Canada. The foregoing chapters indicate that there was much to learn—in large part because too many earlier lessons were ignored. We are confident that related work by other individuals and groups—including the Senate Standing Committee chaired by the Hon. Michael Kirby, the expert panel in Ontario chaired by Dr. David Walker, and the public health investigation by Mr. Justice Archie Campbell—will lead to many lessons beyond those drawn here. Those ongoing assessments, however, must not be used by governments as an excuse for inaction and delay.

Before recapitulating the recommendations from earlier chapters, some themes and issues from the body of this report may be worthy of review.

Our first theme is that the single largest impediment to dealing successfully with future public health crises is the lack of a collaborative framework and ethos among different levels of government. If the experience of SARS in Ontario were to be repeated in a jurisdiction with fewer resources and a smaller base of highly-skilled and dedicated personnel, or in the face of a more virulent infectious disease, the consequences could be disastrous. Canadians expect to see their governments collaborate responsibly in the face of a serious threat to the health of the population. The rules and norms for a seamless public health system must be sorted out in advance of a health emergency, with a spirit of partnership and shared commitment to the health of the citizenry, not on an *ad hoc* basis in the midst of the battle to contain a viral outbreak.

Systems-based thinking and coordination of activity in a carefully-planned infrastructure are not just essential in a crisis; they are integral to core functions in public health because of its population-wide and preventive focus. To repeat an observation from an earlier chapter: the Committee does not seek to build public health systems so perfect that people no longer need to be good. But we believe Canadians should demand a set of interlocking public health systems sufficiently strong that bad things do not happen needlessly to good people. The case for a collaborative and coordinated approach to public health is arguably even more acute than in our still-fragmented personal health services systems. Weakness in health protection or disease control in one jurisdiction will rapidly affect many other jurisdictions. To that end, the Committee has recommended strategies that will strengthen all levels of the public health system as well as integrate the components more fully with each other.

The Committee appreciates that F/P/T relations are not straightforward in Canada (or any other federation). That, in large part, is why we have proposed new structures and funding mechanisms that aim to remove public health from the jurisdictional cross-fire. The Committee nonetheless strongly urges current and future governments to view public health as a 'constructive-engagement zone' in F/P/T relations for several reasons.

First, public health threats have generalized impacts. The success of Ontario and British Columbia in containing SARS spared the rest of the country. We cannot afford to have any weak links in a pan-Canadian chain of health protection and disease control.

Second, public health costs are modest—perhaps 2-3% of health spending, depending on how one defines numerators and denominators. The actual amount of new federal spending that the Committee has recommended would reach \$700 million per annum by 2007. This is what F/P/T governments currently spend on personal health services in Canada between Monday and Wednesday in a single week.

Third, the Committee's recommendations for new funding are oriented to supporting all jurisdictions. Until now, there have been no federal transfers earmarked for local and provincial/territorial [P/T] public health activities. Public health has instead been competing against personal health services for health dollars in provincial budgets, even as the federal government has increasingly earmarked its health transfers for specific health service priorities. About 75% of the new federal spending that we have recommended will flow to support local and provincial/territorial public health activities. This includes \$300 million per annum for front-line public health activities under the new Public Health Partnerships Program, \$100 million per annum to support P/T purchase of costly new vaccines under a reinvigorated National Immunization Strategy, and \$100 million in a Communicable Disease Control Fund to support second-line defences at the P/T level and link P/T and federal centres of excellence in surveillance, prevention, and containment of infectious threats to health. Furthermore, the new Canadian Agency for Public Health would make significant new investments in health human resources, research, and surveillance for non-communicable diseases—all of which will have direct benefits for P/T jurisdictions.

Fourth and finally, the fiscal and strategic approaches set out in this report are entirely consistent with international precedents and, we believe, the expectations of Canadians. Similar programs of transfers for public health to states and territories exist in Australia and also operate under the auspices of the Centers for Disease Control and Prevention [CDC] in the USA. Public health authorities in the European Community are building capacity to coordinate health protection and facilitate networking among national foci for disease control. With the globalization of health threats and growing importance of international collaboration in disease control, the Committee urges F/P/T governments to coalesce around public health as a pan-Canadian priority.

We turn back now to the Committee's recommendations.

The first section consists of a series of recommendations that require urgent attention by governments as part of preparation for the winter season and the associated increases in the incidence of respiratory viral illnesses. They are largely self-explanatory.

The sections thereafter recapitulate recommendations presented in the body of the report. Arguments in support of each recommendation were given in the relevant chapter. For brevity, we do not repeat the rationale for the recommendations or elaborate on them below.

While the Committee is providing its advice and recommendations to the federal Minister of Health, public health broadly and health emergencies more specifically are national issues that require pan-Canadian collaboration and involvement. No one level of government has sole responsibility over all aspects of public health. And, given the roles and experiences of various Committee members, we believed it would be a dereliction of responsibility for us to focus very narrowly on federal issues. Therefore, by necessity, we present recommendations or sub-recommendations that apply to jurisdictions in addition to or other than the federal government.

Among these are recommendations that deal with the personal health services sector and aspects of local public health arrangements where P/T jurisdiction is relatively clear. Most of these were first set out in Chapter 8. The information and evidence bearing on those recommendations was carefully collected, albeit primarily from one large province. We repeat these recommendations in the hope that they may be useful to all P/T jurisdictions.

A further caveat is that many of the recommendations apply to public health broadly. Infectious diseases are an essential piece of the public health puzzle, but cannot be addressed in isolation, particularly since in local health units, the same personnel tend to respond to both infectious and non-infectious threats to community health. Furthermore, the success of health emergency planning and outbreak management is dependent upon a broad and solid public health foundation. Implementation of these recommendations should therefore greatly enhance the capacity of Canada's public health systems to respond to infectious diseases or other health emergencies, while simultaneously renewing the general public health infrastructure and its ability to protect and improve the health of Canadians.

12A. Preparing for the Respiratory Virus Season

As Canada recovers from SARS, preparations must begin for the next respiratory virus season. SARS may or may not re-emerge; however, even if it does not, the public health system and the health care system will be forced to respond to many false alarms. While many of the initiatives needed to renew the public health system will require months or years of hard work, there are some areas that, in the Committee's view, require attention over the next three months.

- A national manual for the investigation and control of SARS outbreaks should be completed. Parts of this manual exist in Health Canada guidelines, and in Ontario and British Columbia directives and guidelines. A coordinated and detailed package needs to be available to hospitals and public health units across the country. Health Canada funding and a secretariat, as well as P/T cooperation and collaboration, will be necessary.
- In addition to a comprehensive technical manual for outbreak containment, Health Canada should coordinate the development of an educational package about routine practices, SARS, and SARS surveillance for the coming winter season that can be distributed to hospitals, programs and institutions involved in educating health professionals, and various professional associations and stakeholder groups for use in training front-line staff.
- The F/P/T Conference of Deputy Ministers should immediately designate lead public health officials to develop guidelines for federal, provincial, local, and institutional roles and responsibilities during an outbreak of SARS or similar agent. This work would be antecedent to more comprehensive and longer-term development of intergovernmental agreements on public health roles and responsibilities. It should specify the roles of institutions and various levels of government in both domestic and international elements of responding to SARS.
- Real-time alert systems for SARS and similar respiratory illnesses need to be created and coordinated. This includes: mechanisms for rapid reporting of activity within Canada to Health Canada, mechanisms for informing Canadians rapidly of developments in other jurisdictions, and mechanisms for prompt communication of the evolving scientific data from Canada and other parts of the world. The alert systems must extend to all health care facilities and, to the greatest extent possible, should also reach primary care providers.

- National recommendations on surveillance for SARS should ideally be completed by mid-October. Primary care providers require guidelines for assessment and referral of respiratory illnesses, given the high volume of such patients in their offices during the winter months. Definitive diagnoses will generally be made in emergency departments and hospitals. Hence, for clarity of responsibility, surveillance planning should be led by the Nosocomial and Occupational Infections Section within the Centre for Infectious Disease Prevention and Control [CIDPC] with input from other key divisions. The surveillance strategy should include recommendations for appropriate laboratory testing for SARS and other viral pathogens, a manual of definitions and procedures, and a software program for data entry at the hospital level for reporting to local public health units.
- The National Microbiology Laboratory, through the Canadian Public Health Laboratory Network, should establish guidelines for the necessary laboratory capacity across the country. Provincial ministries of health should coordinate provincial and hospital laboratory resources to ensure that adequate capacity for SARS and other viral testing is available by mid-November, and that clinicians are educated as to what specimens are needed, how they should be sent, and the timeframe for reporting of results.
- Health Canada should work ahead of the Health Emergency Response Team [HERT] framework to create, organize, and resource two national epidemic response teams. Their roles, responsibilities and reporting structure need to be negotiated with the provinces and territories, with due consideration given to the needs and responsibilities of the local public health units and other institutions or agencies that the teams would be sent to assist.
- A full research evaluation and publication of the effectiveness of passenger screening on the detection of 'importation and exportation' of SARS should be completed as soon as possible. Health Canada should share these results with other jurisdictions that are performing passenger screening antecedent to the multilateral dialogue on passenger screening recommended below.
- International technical liaison offices, at a minimum with the World Health Organization [WHO] and the US CDC, should be established for the National Microbiology Laboratory and the CIDPC. Protocols for the exchange of liaison officers during epidemics must be negotiated.

- Health Canada should coordinate an open scientific meeting late in the Fall, with objectives that include: updating Canadians on the science of SARS, discussing plans for SARS surveillance for the winter season, and reviewing the roles of travel advisories and passenger screening.

12B. Recommendations for Renewal of Public Health in Canada

12B.1 New structures for Public Health

- The Government of Canada should move promptly to establish a Canadian Agency for Public Health, a legislated service agency, and given it the appropriate and consolidated authorities necessary to provide leadership and action on public health matters, such as national disease outbreaks and emergencies, with or without additional authorities regarding national disease surveillance capacity.
- The Government of Canada should ensure that the scope of the Agency's mandate covers public health broadly with appropriate linkages to other government departments and agencies engaged in public health activities. The Government's scoping exercise for the new Agency must be informed by a careful review of public health service provision and health promotion for First Nations and Inuit Canadians.
- The architects of the new Canadian Agency for Public Health should ensure that its structure follows a hub and spoke model whereby links are made to existing regional centres with particular strengths in public health specializations while some other functions and new ones are devolved to other regions of the country, with a vision that these parts support the entire system.
- The Government of Canada should create the position of Chief Public Health Officer of Canada. The Canadian Agency for Public Health should be headed by the Chief Public Health Officer of Canada who would report directly to the federal Minister of Health and serve as the leading national voice for public health, particularly in outbreaks and other health emergencies.
- The Government of Canada should create the National Public Health Advisory Board, and ensure that nominations of board members come forward through provincial and territorial as well as federal channels. The mandate of the Board will be to advise the Chief Public Health Officer of Canada on the development and implementation of a truly pan-Canadian public health strategy.

- The F/P/T Conference of Deputy Ministers of Health should initiate a new Network for Communicable Disease Control that would link F/P/T activities in infectious disease surveillance, prevention, and management. This initiative should be started as soon as possible, and integrated with the existing F/P/T Network for Emergency Preparedness and Response.
- The Canadian Agency for Public Health should create a Public Health Ethics Working Group to develop an ethical framework to guide public health systems and health care organizations during emergency public health situations such as infectious disease outbreaks. In addition to the usual ethical issues, the Working Group should develop guidelines for collaboration and co-authorship with fair apportioning of authorship and related credit to academic participants in outbreak investigation and related research, and develop templates for expedited ethics reviews of applied research protocols in the face of outbreaks and similar public health emergencies.

12B.2 New Funding for Public Health

- The Government of Canada should budget for increases in core functions of the new Canadian Agency for Public Health that will rise, over the next 3 to 5 years, to a target of \$200 million per annum in incremental funding beyond that already spent on core federal public health functions.
- The Government of Canada should fund a new Public Health Partnerships Program under the auspices of the Canadian Agency for Public Health. The Agency would thereby provide program funding to provinces and territories to strengthen their public health programming in agreed areas and in support of the National Public Health Strategy. The funding for the Public Health Partnerships Program should rise over 2-3 years to \$300 million/annum.
- Through the Canadian Agency for Public Health, the Government of Canada should invest \$100 million/annum within 12 to 18 months to realize the National Immunization Strategy whereby the federal government would purchase agreed-upon new vaccines to meet provincial and territorial needs and support a consolidated information system to track vaccinations and immunization coverage.
- Under the aegis of the new Canadian Agency for Public Health, the Government of Canada should budget for a Communicable Disease Control Fund, allocating a sum rising over 2-3 years to \$100 million per annum in support of provincial, territorial, and regional capacity for infectious disease surveillance,

outbreak management, and related infection control activities, including the sponsorship of a new F/P/T network. Initial allocations from this Fund should be made to facilitate immediate preparedness for a possible return of SARS to Canada during the winter season of respiratory illnesses and influenza.

12B.3 National Public Health Strategy

- The Canadian Agency for Public Health should play a catalytic role in developing a National Public Health Strategy in collaboration with provincial and territorial governments and in consultation with a full range of non-governmental stakeholders. The new Strategy should delineate priorities and goals for key categories of public health activity along with provisions for public reporting across jurisdictions of progress towards achieving goals.
- The Government of Canada should incorporate into the new Agency the current grants and contributions programs of the Population and Public Health Branch of Health Canada. These grants and contributions should be reviewed and their uses aligned with the National Public Health Strategy and made complementary to the Public Health Partnerships Program.

12B.4 Emergency Planning, Outbreak Management and Crisis Communications

- The F/P/T Network for Emergency Preparedness and Response, in collaboration with the new F/P/T Network for Communicable Disease Control, should urgently move ahead with the development of a comprehensive approach to managing public health emergencies through a pan-Canadian system that includes:
 - harmonizing emergency preparedness and response frameworks at the federal, provincial and territorial levels;
 - developing seamless planning and response capacities as envisaged by the 31 recommendations of the Special Task Force on Emergency Preparedness and Response;
 - building an integrated F/P/T planning, training and exercising platform for responding to all-hazard disasters, including public health emergencies created by large scale disease outbreaks;
 - developing and applying a common set of principles, concepts and capabilities for large scale disease outbreaks; and
 - creating the requisite linkages to major employers, the travel and hotel industry, and relevant NGOs.

- Health Canada in collaboration with provincial/territorial jurisdictions should lead the development of a national legislative and policy framework for a measured, harmonized, and unified response to public health emergencies.
- As part of Health Canada's legislative renewal process currently underway, the Government of Canada should consider incorporating in legislation a mechanism for dealing with health emergencies which would be activated in lockstep with provincial emergency acts in the event of a pan-Canadian health emergency.
- F/P/T governments should develop and provide training programs and tools to support local public health units and institutions in systematically developing, implementing, and evaluating crisis and emergency risk communication strategies.
- The F/P/T Conference of Deputy Ministers of Health should support the continued activity of the F/P/T Network for Emergency Preparedness and Response with a view to enhanced surge capacities in all jurisdictions, including:
 - developing an integrated risk assessment capability for public health emergency response;
 - assessing the National Emergency Stockpile System [NESS] to optimize its role in supporting the response to large-scale disease outbreaks; and
 - developing and funding the Health Emergency Response Team concept, including a psychosocial response component, as a practical, flexible mechanism for addressing the need for human resource surge capacity.

12B.5 Surveillance/Data Gathering and Dissemination

- The Canadian Agency for Public Health, in partnership with the new F/P/T Network for Communicable Disease Control, should give priority to infectious disease surveillance, including provision of technical advice and funding to provincial/territorial jurisdictions and programs to support training of personnel required to implement surveillance programs. The Agency should facilitate the longer-term development of a comprehensive and national public health surveillance system that will collect, analyze, and disseminate laboratory and health care facility data on infectious diseases and non-infectious diseases to relevant stakeholders.
- Assuming some lag time to inception of a new Agency or F/P/T Network, Health Canada and the provinces and territories should urgently commence a process to arrive at business process agreements for collaborative

surveillance of infectious diseases and response to outbreaks. (This work dovetails with the above-noted SARS surveillance initiative for the Fall of 2003). The business processes for infectious disease surveillance would be extended over time with support from the Agency's Centre for Surveillance Coordination and the Public Health Partnerships Program, to a national system for non-communicable diseases and population health factors.

- The Government of Canada should seek the establishment of a working group under the auspices of the Canada Health Infoway Incorporated and Health Canada and/or the new Canadian Agency for Public Health, to focus specifically on the needs of public health infrastructure and potential investments to enhance disease surveillance and link public health and clinical information systems.

12B.6 Clarifying the Legislative and Regulatory Context

- The Government of Canada should launch an urgent and comprehensive review of the application of the *Protection of Information Privacy and Electronic Documents Act* to the health sector, with a view to setting out regulations that would clarify the applicability of this new law to the health sector, and/or creating new privacy legislation specific to health matters.
- The Government of Canada should launch a comprehensive review of the treatment of personal health information under the *Privacy Act*, with a view to setting out regulations or legislation specific to the health sector.
- The Government of Canada should embark on a time-limited intergovernmental initiative with a view to renewing the legislative framework for disease surveillance and outbreak management in Canada, as well as harmonizing emergency legislation as it bears on public health emergencies.
- In the event that a coordinated system of rules for infectious disease surveillance and outbreak management cannot be established by the combined effects of the F/P/T Network for Communicable Disease Control, the Public Health Partnerships Program, and the above-referenced intergovernmental legislative review, the Government of Canada should initiate the drafting of default legislation to set up such a system of rules, clarifying F/P/T interactions as regards public health matters with specific reference to infectious diseases.

12B.7 Renewing Laboratory Infrastructure

- The F/P/T Conference of Deputy Ministers of Health should urgently launch an expedited review to ensure that the public health laboratories in Canada have the appropriate capacity and protocols to respond effectively and collaboratively to the next serious outbreak of infectious disease. The review could be initiated through the Canadian Public Health Laboratory Network and engage with the new F/P/T Network for Communicable Disease Control as soon as the latter is operational.
- Health Canada, in collaboration with the relevant provincial/territorial authorities, should urgently initiate the development of a laboratory information system capable of meeting the information management needs of a major outbreak or epidemic. The laboratory information system must be designed in such a way as to address the functional needs of laboratories, be readily integrated with epidemiologic information, and be aligned with data-sharing agreements across jurisdictions and institutions.
- The F/P/T Conference of Deputy Ministers of Health should launch a full review of the role of laboratories in national infectious disease surveillance systems, with the aim of creating a more efficient, timely, and integrated platform for use of both public and private laboratories in surveillance.
- The Government of Canada, through the Canadian Agency for Public Health, should invest in the expansion of the Canadian Public Health Laboratory Network to integrate hospital and community-based laboratories. This includes alignment of incentives and clarification of roles and responsibilities for infectious disease control. The relevant monies could flow from the Public Health Partnerships Program or the Communicable Disease Control Fund.
- The Canadian Agency for Public Health should give priority to strengthening the capacity of provincial/territorial laboratories as regards testing for infectious diseases. The Agency should provide incentives to increase the participation of provincial public health laboratories in national programs. It should support provincial/territorial public health laboratories in the creation of provincial laboratory networks equivalent to the Canadian Public Health Laboratory Network; these would connect in turn to the national network. The relevant monies would flow from the Communicable Disease Control Fund.
- The Canadian Agency for Public Health should support participation and leadership in international laboratory networks by our national laboratories, thereby building on the success of the international collaboration in the response to SARS.
- Health Canada, in collaboration with provincial/territorial authorities, should sponsor a process that will lead to a shared vision for the development, incorporation, and evaluation of leading-edge technology in the public health laboratory system. Among the issues that require elucidation are the role of national systems for the real-time surveillance of infectious disease through molecular fingerprinting of micro-organisms, toxicology capacity to detect illnesses caused by the poisoning of natural environments and occupational hazards, and the potential for linking genetic testing and infectious disease surveillance in novel programs that would target cofactors associated with the development of chronic diseases.
- A national report card of performance and gap assessment for public health laboratories should be developed through the Canadian Public Health Laboratory Network and/or the F/P/T Network for Communicable Disease Control, allowing comparative profiling of various provincial and national laboratories against international standards.

12B.8 Building Research Capacity

- The Canadian Agency for Public Health should earmark substantial funding to augment national capacity for research into epidemiologic and laboratory aspects of emerging infectious diseases and other threats to population health. This enhanced national public health science capacity should be strongly linked to academic health institutions through co-location, joint venture research institutes, cross appointments, joint recruitment, interchange, networks and collaborative research activities.
- The Canadian Agency for Public Health, in partnership with provincial/territorial governments and through the F/P/T Network for Communicable Disease Control, should directly invest in provincial, territorial, and regional public health science capacity.
- The F/P/T Network for Communicable Disease Control, in partnership with the CIHR and the Canadian research community, should develop clear protocols for leadership and coordination of future epidemic research responses.
- The Canadian Agency for Public Health and the F/P/T Network for Communicable Disease Control should ensure that epidemic response teams initiated as part of the Health Emergency Response Team [HERT] concept, provide not only surge capacity for outbreak containment per se, but also a mobile “B-team” and investigative infrastructure, including epidemiologists, programmers, and analysts.

- The Canadian Agency for Public Health, in partnership with provincial/territorial governments, should develop clear rules, reinforced by intergovernmental agreements, on the sharing of information, the establishment of national databases, and the use of biologic materials for research in response to epidemics.
- The Canadian Agency for Public Health, in collaboration with the CIHR, should establish a task force on emerging infectious diseases to recommend research priorities and funding mechanisms. The Agency, in collaboration with the CIHR and other national research funding bodies, should support the development of special funding mechanisms and processes for fast-tracking research related to epidemics of infectious diseases.
- The Canadian Agency for Public Health, in partnership with research agencies and provincial/territorial governments, should work with universities to improve research training opportunities in infectious diseases and outbreak management for the full range of involved disciplines. This capacity-building focus should be a priority within the broader health human resource strategy of the Agency.
- The Government of Canada should strengthen its R&D functions in international health outreach, with particular emphasis on emerging infectious diseases on a global basis.
- The Government of Canada should foster workable public-private partnerships with the biotechnology, information technology, and pharmaceutical industries for shared research interests in the realm of emerging infectious diseases, including new vaccines, antiviral compounds, immunotherapies, and diagnostic technology.

12B.9 *Renewing Human Resources for Public Health*

- Health Canada should engage provincial/territorial departments/ministries of health in immediate discussions around the initiation of a national strategy for the renewal of human resources in public health. This F/P/T strategy should be developed in concert with a wide range of non-governmental partners, and include funding mechanisms to support public health human resource development on a continuing basis.
- Health Canada should catalyze this strategy by urgently exploring opportunities to create and support training positions and programs in various public health-related

fields where there are shortfalls in workforces (e.g., community medicine physicians, field epidemiologists, infection control practitioners, public health nursing, and others).

- The Canadian Agency for Public Health should develop a National Public Health Service, with a variety of career paths and opportunities for Canadians interested in public health. The National Public Health Service should include an extensive program of secondments to and from provincial/territorial and local health agencies, with arrangements for mutual recognition of seniority and a range of collaborative opportunities for advancement.
- Educational institutions, in collaboration with teaching hospitals as applicable, should develop contingency plans to limit the adverse impact on their students and trainees from infectious disease outbreaks, while maximizing learning opportunities from these events. These plans should include communications, education regarding infection control, preparedness with appropriate protective gear, guidelines for support of students/trainees in quarantine or work-and-home isolation, strategies to limit the impact of impeded access to usual teaching and research sites, and guidelines for the involvement of students in the care of patients with serious infectious conditions.

12B.10 *International Issues*

- The Government of Canada should take the lead, along with an international consortium of committed partners, in the detection of global emerging diseases and outbreaks. This should be done through enhancements to the Global Public Health Intelligence Network and similar programs.
- The Canadian Agency for Public Health should have a mandate for greater engagement internationally in the emerging infectious disease field, including the initiation of projects to build capacity for surveillance and outbreak management in developing countries.
- The Canadian Agency for Public Health should be the institution responsible for direct communication with the World Health Organization, the US CDC, and other international organizations and jurisdictions. The Agency should disseminate within Canada information received from international organizations and jurisdictions on global health threats, and in turn, it would inform the World Health Organization and other jurisdictions of relevant Canadian events. During outbreak situations, the Agency would perform the role of liaising between Canadian and international organizations and jurisdictions to maximize mutual learning.

- The Government of Canada should review its travel screening techniques and protocols with a view to ensuring that travel screening measures are based on evidence for public health effectiveness, while taking into account the financial and human resources required for their implementation and sustained operation. The Government of Canada should also initiate a multilateral dialogue with other nations that are currently engaged in SARS travel screening to determine whether and when some or all of these measures should be modified or discontinued.
- The Government of Canada should seek the support of international partners to launch a multilateral process under the auspices of the World Health Organization that would set agreed-upon standards of evidence for the issuance of travel advisories and alerts by member states. The multilateral process should also seek to determine the role of WHO in issuing travel advice, and to establish a procedure for providing advance notice for possible alerts and advice. The notice process should provide a mechanism for consultation with and a response by the target country.
- The Government of Canada should ensure that an adequate complement of quarantine officers is maintained at airports and other ports of entry, as required. Fully trained and informed quarantine officers should be available at airports to deal with health threats, to provide information to and educate airport staff, customs officials, and airline personnel concerning the recognition of illness and measures to be taken to contain risk. Close collaboration with airport authorities and airline personnel to clarify responsibilities in the event of a health threat is necessary.
- The Government of Canada should ensure that incoming and outgoing passengers are provided with health information about where and when health threats exist, including any precautionary measures to take, how to identify symptoms of the disease, and what first steps to take in case of suspected infection. A partnership with the travel industry would facilitate this process so that information could be provided at the time of bookings. The current Health Canada web site containing information for travelers should be made more prominent and its existence promoted.
- All federal/provincial/territorial/municipal response plans should include port/cruiseship- and airport/airplane-specific protocols for infectious diseases as well as protocols for employee protection guidelines and decontamination of aircraft, ships, and/or facilities. Jurisdictional issues concerning travel and health need to be resolved through the plan. The plan should be developed with input and buy-in from local health

officials, response agencies, ports, airports and the relevant companies in the shipping and airline industries.

12B.11 Clinical and Local Public Health Issues

- F/P/T departments/ministries of health should facilitate a dialogue with health care workers, their unions/associations, professional regulatory bodies, experts in employment law and ethics, and other pertinent government departments/ministries concerning duties of care toward persons with contagious illnesses and countervailing rights to refuse dangerous duties in health care settings.
- The CEOs of hospitals and health regions should ensure that there is a formal Regional Infectious Disease Network that can design and oversee implementation of hospital strategies for responding to outbreaks of infectious disease. These Networks should map out programs of hospital surveillance for infectious diseases that cross-link institutions and connect in turn to a national surveillance program so as to integrate hospital and community-based information.
- As part of its activities, the F/P/T Network for Emergency Preparedness and Response should examine provincial and federal emergency measures with a view to ensuring that all emergency plans include a clear hierarchy of response mechanisms ranging from the response of a single ministry to a response from the entire government, with appropriate cross-linkages.
- Provincial/territorial ministries and departments of health should ensure that emergency plans include provisions for appropriate compensation of those individuals required to respond to and those affected by an emergency.
- Provincial/territorial ministries and departments of health should revise their statutes and regulations to require that every hospital or health region has formalized and updated protocols for outbreak management. These plans must include mechanisms for getting information and supplies to those outside the institutional sector, such as primary care physicians, ambulance personnel/paramedics, and community care providers.
- The CEO of each hospital or health region should ensure that each hospital's protocol for outbreak management incorporates an understanding of the hospital's interrelationships with local and provincial public health authorities.

- The CEO and relevant clinical chiefs of each hospital or health region should ensure that there is continuing education for hospital staff, particularly front-line health care workers, to enhance awareness of outbreak/infectious disease issues and institutional/clinical infection control.
- Provincial/territorial ministries and departments of health should ensure that all key health leaders are trained in crisis communications. Hospital and health region CEOs in turn should ensure that clinical leaders and key administrators are also trained in crisis communications and that the organization has a clear cut protocol for providing all relevant information to staff and hearing their concerns in a timely, respectful, and participatory fashion.
- Provincial/territorial ministries and departments of health should require through regulation and provide funding to ensure that emergency departments have the physical facilities to isolate, contain and manage incidents of infectious disease. Emergency departments should also be equipped with appropriate infrastructure to enable their participation in infectious disease surveillance networks, including receipt of all necessary national and international alerts.
- Provincial/territorial ministries and departments of health should provide the necessary funding for renovation to achieve minimal facility standards for infection control in emergency departments.
- Provincial/territorial ministries and departments of health should ensure that each hospital has sufficient negative pressure rooms for treatment of patients with infectious disease.
- Provincial/territorial ministries and departments of health should ensure that, for emergency situations, at least one hospital in each 'region' of a province/territory has sufficient facilities and other infrastructure to serve as a regional centre to anchor the response to outbreaks of infectious disease.
- Provincial/territorial ministries and departments of health should ensure that systems are developed to ensure that providers and the public receive timely, accurate and consistent information and directives during an outbreak of infectious disease.
- Public health managers and facility/regional health authority CEOs, in collaboration with relevant unions, professional associations and individuals, should create a process/mechanism to include front-line public health and health care workers in advance planning to prepare for related to outbreaks of infectious diseases and other health emergencies. Occupational health and safety issues should be given prominence in this process.

- Provincial/territorial ministries and departments of health should engage the Canadian Council for Health Services Accreditation to work with appropriate stakeholders to strengthen infection control standards, surveyor guidelines and tools that are applicable to emergency services as well as outbreak management within health care institutions. The standards should also include descriptors of the appropriate expertise required to maintain hospital infection control.

12C. Postscript

The SARS story as it unfolded in Canada had both tragic and heroic elements. The toll of the epidemic was substantial, but thousands in the health field rose to the occasion and ultimately contained the SARS outbreak in this country. The Committee emphasizes that in drawing lessons from the SARS outbreak, our intent has been not to 'name, shame, and blame' individuals, but rather to move and improve systems that were suboptimal. The challenge now is to ensure not only that we are better prepared for the next epidemic, but that public health in Canada is broadly renewed so as to protect and promote the health of all our citizens. It is to these latter ends that the Committee's recommendations have been offered. We believe the recommendations represent a reasonably comprehensive and affordable starting point for strengthening and integrating public health at all levels in Canada. As our colleagues in government contemplate these recommendations, the Committee commends to them the vision of Benjamin Disraeli (1804-1881) who, on introducing his Public Health Act to British Parliament in 1875, remarked that public health was the foundation for "the happiness of the people and the power of the country. The care of the public health is the first duty of a statesman." Less eloquently, the Committee in closing repeats the simple question we put earlier to all health ministers, finance ministers, and first ministers: If not now, after SARS, when?