Public Health in Canada: A Difficult History

COMMENTARY

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ABSTRACT

Although the outbreak of severe acute respiratory syndrome in 2003 was the event that focused attention on Canada's capacity in public health, there have been, and will be, many other public health challenges, not just in the form of outbreaks but of a diverse set of threats to health, both infectious and non-infectious.

Like many other countries, Canada must face the challenge of building and sustaining the capacity to respond to this broad range of challenges. Recently, there has been an emphasis on strengthening the public health infrastructure, including inter-jurisdictional agreements, research, knowledge translation, information systems and the workforce.

Public health in Canada has, over the past decade, been challenged by outbreaks of food- and water-borne disease, the threat of bioterrorism and, most significantly, the outbreak of severe acute respiratory syndrome (SARS) in 2003. This last event, although in retrospect not a major cause of mortality and morbidity, had powerful psychological and economic effects. Most importantly, it brought a spotlight to bear upon the strengths and weaknesses of the public health system in Canada.

Yet, the responses to outbreaks and the

prevention and control of infectious diseases are only part of the story. There has been less success in drawing the attention of the media and the public to the potential of public health to address other health issues of great and growing importance.

The Challenges

Using measures such as total life expectancy and life expectancy in good health, health status in Canada continues to improve and compares well to most, but not all, other countries. Although there are many challenges remaining related to infectious disease – including, of course, the threat of pandemic influenza, but also worrisome trends in the incidence of human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS), syph-ilis, antibiotic resistance organisms and other nosocomial infection – most of the burden of ill health and death, and therefore most of the opportunity for health improvement, relates to chronic diseases. Current trends, such as an increasing prevalence of obesity (36% of adults are overweight and 23% obese), lack of physical activity (55% of Canadians are not physically active or moderately active [Statistics Canada 2004]) and a rapidly increasing incidence of type 2 diabetes, might well halt or even reverse progress in life expectancy, and certainly pose a threat to the sustainability of the health services system. Tackling these problems solely by curative means or even individually-based preventive approaches is neither affordable nor feasible. Vigorous population-based approaches are essential if these trends are to be reversed.

Measurement of the overall health status of the Canadian population hides serious disparities. Differences in life expectancy at birth, and other measures of health status, are well known. For example, males in census tracts with average incomes in the poorest quintile lived five years less than those in the top quintile in 1996 (Wilkins et al. 2002). Aboriginal populations continue to have significantly poorer health than that of the population as a whole. For example, life expectancy for Aboriginal populations is 7.4 years less for males and 5.2 years less for females than the Canadian population as a whole (Health Canada 2001). The prevalence of diabetes is at least threefold higher and tuberculosis at least eightfold. All our efforts, including the provision of universally accessible healthcare services, have not succeeded in significantly reducing these disparities. Healthy, resilient individuals and communities are also less vulnerable to the effects of, and recover more quickly from, outbreaks and disasters. Therefore, the role of public health is not only to prepare for and respond to emergencies (of all types, infectious or non-infectious, human-made or natural) but also to improve the health status of the population, reduce disparities and enhance the sustainability of the health services system.

The Enterprise

The "public health enterprise" in Canada resembles that in the United States in that the lead role (including much of the legislative mandate) is undertaken by provinces or states; most public health legislation is provincial, but there are important roles for both federal and local organizations. Of course, the Canadian context differs in that there is universal, comprehensive publicly funded insurance for most healthcare services. Most clinical prevention services are provided by physicians and other primary care providers, not by public health agencies, which, in Canada, focus more on population-level interventions. Unfortunately, some confusion persists concerning the difference between *public health* and *publicly funded healthcare services.*

In most Canadian jurisdictions, public

health responsibilities are delegated to regional health authorities (or the equivalent), which are responsible for hospitals and some other healthcare services within a defined area. The governance and funding of public health is thus integrated with the rest of the system. The exception is Ontario, which has municipally-based health units, with some contribution from local taxes. Canada has relatively fewer large front-line public health organizations – approximately 130 – and, with the exception of a minor municipal contribution in Ontario, no dependence upon local taxes. Nevertheless, there are differences in the capacity of public health services in different parts of Canada, most often related to the level of funding or the ability to attract and retain skilled staff.

It is important to recognize that the public health enterprise extends well beyond provincial and territorial public health acts and local official public health agencies. Throughout its history, the concept of public health has encompassed regulatory functions, including those related to the environment, food, pharmaceuticals, consumer products, public safety and others. Much of this work is undertaken at the federal level, with significant involvement also by provinces and territories. Non-governmental organizations (NGOs), including health charities, professional associations, community-based organizations and others, are often engaged in public health activities and may be involved with other parts of the public health enterprise through involvement in coalitions and strategies, joint programs or funding arrangements. Of equal importance is the interface between public health and other components of the health system including primary care, mental health services, occupational health and emergency response services. It would be fair to say that much work remains to be done at these interfaces.

The Infrastructure

The concepts laid out by Tilson and Berkowitz of a public health system with certain key components and relationships is strikingly similar to the approach taken in the "Naylor Report" (National Advisory Committee on SARS and Public Health 2003). That report, commissioned by the federal minister of health in the aftermath of SARS, underlined the importance of strengthening the public health infrastructure and the need for public health to exhibit a broad competence to handle the full range of threats to health: known or unknown and emerging, acute or chronic.

Organizational Capacity

The organizational capacity of the public health system – its ability to set goals and priorities, develop strategies and manage relationships between components – was a priority of the Naylor Report, and, indeed, the past few years have seen broad advances in this area, including the development of a set of high-level aspirational health goals for Canada and several national public health strategies, including those for cancer control, health living and chronic disease prevention, diabetes and HIV/AIDS.

Work by federal/provincial/territorial committees has resulted in the development of a set of six public health functions:

1. Population health assessment
2. Disease and injury surveillance
3. Health promotion
4. Disease and injury prevention
5. Health protection
6. Emergency preparedness and response

These six functions contrast with the 10 essential services in the United States in the way that the functions are aggregated and expressed, but not greatly in substance.

There has been progress also in establishing the "rules of engagement," whether within a particular area of responsibility or in providing for predictability in interactions between components of the enterprise. The federal *Quarantine Act* (Department of Justice Canada 2005) has been modernized, and several provinces and territories have updated their public health acts or are in the process of doing so. Ultimately, there is interest in promoting convergence of the various pieces of legislation affecting public health.

Inter-jurisdictional agreements have been identified particularly in the Naylor Report as being a gap, but one that is quickly being filled. The Canadian Pandemic Influenza Plan for the Health Sector and the Memorandums of Understanding on Mutual Aid and Information Sharing for public health-related emergencies are all receiving urgent attention.

The global nature of public health threats is well known. Canada continues to be engaged with international partners, both bilaterally and multilaterally. Examples include the International Health Regulations of the World Health Organization (WHO), the Framework Agreement on Chronic Diseases and the WHO Commission on Social Determinants.

A key step in strengthening the capacity to work collaboratively has been the creation of the Pan-Canadian Public Health Network (Federal/Provincial/Territorial Special Task Force on Public Health 2005), a means of engaging federal, provincial and territorial governments as well as other experts through a series of expert groups responsible for communicable diseases, emergency preparedness and response, laboratories, surveillance and information, chronic disease and injury prevention and control, health promotion and public health human resources.

In September 2004, the Public Health Agency of Canada (PHAC) was created. The agency, headed by the chief public health officer, provides a focus for the activities of the federal government in public health. These include leadership, coordination, research, knowledge translation, development of guidelines and best practices and the provision of highly specialized services (such as the National Microbiology Laboratory), technical advice and quarantine services at the border.

Knowledge and Information Systems

The Naylor Report also identified information and knowledge systems as important components of the public health infrastructure. This encompasses the generation of knowledge, its translation into practice, surveillance and other forms of information of relevance to public health. A key funder and promoter of research and public health is the Institute of Population and Public Health of the Canadian Institutes of Health Research (CIHR). Some provinces and NGOs also fund research, and the PHAC has its own research programs, often undertaken with external collaborators. There has recently been a growing interest both in research immediately relevant to public health activities, such as intervention research, and in translating the results of research into decision-making for policies and programs. A new federally funded system of six National Collaborating Centres, distributed across Canada, focuses upon synthesizing existing research findings and working with policy makers and practitioners to promote their use in public health decision-making (Medlar et al. 2006). Three provinces either have or propose agencies to which their provincial governments delegate responsibility for surveillance, research, knowledge translation and some forms of training.

SARS also highlighted the need to improve the information systems used in public health. In 2004, Canada Health Infoway was provided with additional funds

to build upon and roll out existing systems in the form of Panorama, the Enhanced Public Health System, to improve the capacity to undertake surveillance of communicable diseases, to manage outbreaks and to exchange information.

The Public Health Workforce

There are several other noteworthy efforts under way to strengthen the public health infrastructure, including coordinating public health laboratories, developing standards and a national stockpiling of emergency drugs and equipment. Perhaps the most important issue, however, is the future of the public health workforce. The workforce is aging; positions in rural, remote and Aboriginal areas are difficult to fill; training programs for some professions are inadequate to meet the demand; and there are inadequate opportunities for continuing professional development. There is, however, a growing interest involving academia, professional associations and governments in addressing these issues, and collaborative work is under way (Joint Task Group).

Among the high priority issues are an expansion of professional master's programs, such as master's of public health (MPH), increasing the relevance of training programs, increasing access to opportunities to develop skills, developing schools of public health and increasing the provision of continuing professional development. These developments have obvious parallels in the United States. Also, as in the United States, we see the development of a set of competencies (core competencies applicable to all public health professionals, discipline-specific competencies and proficiency levels for each competency) as a foundational step for many other workforce-related activities. An initial set of guidelines for professional master's (MPH) programs has been developed. Accreditation of both programs and schools is under consideration. Developing better means of characterizing and enumerating the public health workforce – a precondition for better health human resources planning – is proving to be difficult and slow work.

Federal contributions to developing the public health workforce include a collaboration with CIHR to fund scholarships and the faculty positions for public health education, a Web-based distance continuing education program, the Canadian Field Epidemiology Program and support for the further development and implementation of the federal/provincial/territorial Public Health Human Resources Strategy. The aim of these efforts is to ensure that each local health agency across Canada has an adequate staff of public health professionals that have acquired, and have an opportunity to maintain, the relevant skills.

Conclusions

Public health in Canada shares with the United States, and many other countries, a difficult history. Recent decades have seen funding of personal health services take ever-greater priority over public health, in spite of a succession of reports calling attention to the needs of the latter (National Advisory Committee on SARS and Public Health 2003: 54–5). There is, however, every reason to believe that the initiatives undertaken to strengthen the public health enterprise described above, together with additional investments on the part of the federal and many provincial/territorial governments, have enhanced the capacity to protect and promote the health of Canadians. Public health providers and policy makers, governmental and non-governmental, are also developing means of ensuring better co-operation. Nevertheless, the challenges – whether in the form of the threat of pandemic influenza, the ever-increasing prevalence of risk factors

for chronic disease or persistent disparities in health status – show no signs of diminishing. As in the past, a strong, coordinated and effective public health enterprise is central to meeting these challenges and to continuing to produce improvements in health for Canadians.

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