Enhancing the Public Health Human Resource Infrastructure in Canada

Presentation by the Canadian Public Health Association to the House of Commons Standing Committee on Health

May 11, 2010
The Canadian Public Health Association is a national, independent, not-for-profit, voluntary association representing public health in Canada with links to the international public health community. CPHA’s members believe in universal and equitable access to the basic conditions which are necessary to achieve health for all Canadians.

CPHA’s mission is to constitute a special national resource in Canada that advocates for the improvement and maintenance of personal and community health according to the public health principles of disease prevention, health promotion and protection and healthy public policy.

Copyright © 2010

Canadian Public Health Association

Permission is granted for non-commercial reproduction only.

Cette publication est aussi disponible en français.

For more information, contact:
Canadian Public Health Association
400–1565 Carling Avenue, Ottawa, Ontario K1Z 8R1
Tel: 613-725-3769    Fax: 613-725-9826
E-mail: info@cpha.ca    www.cpha.ca
Executive Summary

There has been an active discourse in Canada over the past 45 years about the development and enhancement of the country’s health human resources. Recent reports have endorsed an enhanced health human resource planning strategy for public health. One of the critical elements of a strong, sustainable and effective public health system is the specialized professionals and practitioners who prevent disease and injury, and promote and protect the health of all Canadians. The country’s public health workforce also needs to be able to respond to emergency situations and simultaneous multiple public health events. A failure to invest in maintaining a surge capacity will result in a workforce that is under-resourced between crises, stretched to the breaking point during crises, and unable to respond to deferred or delayed public health needs after a crisis.

Some progress has been made in recent years to address the public health human resources issue. These include the development of a framework for public health human resources (Building the Public Health Workforce for the 21st Century: A Pan-Canadian Framework for Public Health Human Resources Planning), the elaboration and release of Core Competencies for Public Health in Canada, and the establishment of several Schools of Public Health. The federal government, through the Standing Committee on Health focus on the development of health human resources, is demonstrating leadership and a commitment to move forward on this issue.

As many health organizations and associations have remarked over the past few years, including in testimony before the Standing Committee on Health, although the federal government has invested many millions of dollars on health human resource studies, commissions and the like, a population health needs-based health human resources planning strategy that puts the right people, adequately resourced, in the right place at the right time to do the right thing, is lacking. There is an urgent need for long term investment to create a uniform public health system across Canada.

The Canadian Public Health Association (CPHA) is Canada’s leading civil society voice dedicated exclusively to public health. CPHA supports the full implementation of the
proposed *Pan-Canadian Framework for Public Health Human Resources Planning*. There remain, however, several critical elements and issues that warrant particular attention. These include taking stock about the application of the Framework, promoting common approaches across the country and sustained investment in public health strategies, approaches and practice, putting into place the conditions and mechanisms to support public health as a career choice, and addressing the capacity of the public health system to deal with multiple events simultaneously (its "surge capacity").

CPHA proposes six recommendations for the federal government’s consideration:

1. The implementation of the pan-Canadian public health human resources strategy;
2. The definition about what constitutes a pan-Canadian public health approach and public health practice;
3. F/P/T investment in continuing education and other training opportunities for public health practitioners;
4. Expansion of federally-funded scholarship programs to students pursuing studies in the health sciences and particularly in public health/population health;
5. Ensuring that the public health system has sufficient surge capacity to respond in a timely fashion to emergency situations and simultaneously able to deliver “regular” public health services; and,
6. The F/P/T institute a new pan-Canadian funding mechanism in support of public health.
What is public health? The long and short of it

The publicly-funded health system in Canada is highly valued by Canadians and is held up as a model in and for other countries. A health system includes all actors, organizations, institutions and resources whose primary purpose is to improve health. Much of the attention and most of the investment made by the federal, provincial and territorial governments is directed at the “health care” component of this system, because of the acute and episodic nature of illness and the need for treatment.

An approach that focuses on health promotion, disease and injury prevention, health protection and population health surveillance – the hallmarks of public health, a critical component of the health system – can achieve better health outcomes for Canadians, is cost-effective, and is the foundation for a sustainable health system. The health promotion, prevention and protection aspects of public health are particularly important as up to 80% of the current burden of disease in Canada is due to chronic diseases, the vast majority of which are preventable. In the long run, investing in the “up-stream” population-based public health components of the health system is more cost-effective than continually increasing support to the “down-stream” (emergency and acute care services) components. It serves to reduce the anticipated burden on these services.

Our lives depend on a fully-resourced, well-functioning and effective public health infrastructure. As noted recently by Canada’s Chief Public Health Officer, health promotion, disease prevention and health protection capacity can be built and maintained through collective will and leadership and by cultivating a whole-of-society approach. Public health is about more than being able to respond effectively and in a timely fashion to the factors that affect our health – it is keeping the population healthy so that the impact of conditions that affect human health can be mitigated. Our goal is to be the healthiest nation with the smallest gaps in health.

A brief history of public health human resource discussions in Canada

One of the critical elements of a strong, sustainable and effective public health system is the specialized professionals and practitioners who prevent disease and injury, and promote and protect the health of all Canadians. There was a strong recognition early on in Canada that the public/population health approach was the crucial foundation of the health care system.

Canada has a long history of commissions and other bodies tasked with examining the issue of health sector human resources in Canada. Consideration of workforce needs and issues pertaining specifically to the public health sector is a recent development. A 1994 expert working group meeting on emerging infectious disease issues called for the development of a national strategy on the capacity of the health system to respond to emerging and recurrent infectious diseases. Public health capacity was a focus of the Federal/Provincial/Territorial Advisory Committee on Population Health (2001). Although this body did not make any recommendations specific to the public health workforce, a brief submitted by the Canadian Public Health Association (CPHA) noted the lack of systematic planning of public health human resources and recommended the formulation of a national strategy for public health human resources planning and development.
Although the National Forum on Health Care (1997) and the Romanow Commission (2002) did not look specifically at public health workforce issues, a recommendation for an expansion in health professional enrolment and the establishment of a virtual school of public health was made in a response by a Senate standing committee in 2003. The “Kirby Commission” also called for the formulation of a plan for the rapid deployment of a fully trained “reserve” of health professionals during health emergencies.

It was a series of public health incidents early in the 21st century (the water quality situations in Walkerton and North Battleford, and the SARS outbreak, to name a few) which seem to have increased interest in and discussion about public health human resource planning and development. In 2003, the “Naylor Report” called for the formulation of a Pan-Canadian Public Health Human Resources Strategy through which the federal and provincial/territorial governments would invest funds and take leadership in the development and expansion of a public health workforce in Canada. The National Advisory Committee on SARS and Public Health maintained that every local health agency across Canada had to be adequately staffed with appropriately skilled and motivated public health professionals.

A national consultation on health human resource infrastructure development in Canada hosted by the Health Council of Canada in 2005 noted that:

(i) although a fair amount is known about nurses (the largest group of health professionals in Canada at the time) and physicians, relatively little is known about the many other groups and professions who make up almost half of the country’s health care system workers, and

(ii) Canada is not self-sufficient in training health professionals.

One of the consultation’s important recommendations was its advocacy of a population health approach as the basis for building forecasting tools to plan for health human resource requirements.

Building on the recommendations from the 2002 and 2003 federal government commissions, the First Minister’s Accord on Health Care Renewal and the 2004 Ten-Year Plan to Strengthen Health Care committed the federal and provincial/territorial governments to work together to improve health human resources planning and management. An outcome was the request by the Deputy Ministers of Health to the Advisory Committee on Health Delivery and Human Resources to prepare a framework for health human resource planning. The subsequent Framework for Collaborative Pan-Canadian Health Human Resource Planning and an associated action plan were endorsed by the FPT Health Ministers in September 2005 (revised in March 2007). In October of that same year, a pan-Canadian framework for the planning of public health human resources was released.

In summary, public health human resources have been repeatedly noted for their deficit and calls for planning and infrastructure development have ensued. But, as will be shown, action has been slow.
Positions/Statements on Public Health Human Resources/Infrastructure

Many health professions’ organizations and colleges have advocated for an expansion and additional investment in health human resources. The Canadian Public Health Association (CPHA) has a long history of constructive suggestions for the enhancement of an adequately-resourced public health workforce both for the publicly funded health care system and for the public health system specifically. Over the past several years, CPHA has prepared several statements and presented briefs for federal commissions and working groups on this issue. In 2000, CPHA commissioned a Board of Directors Discussion Paper on the future of public health in Canada. The following year, based on the findings and recommendations from this report, CPHA submitted a brief to the Federal/Provincial/Territorial Advisory Committee on Population Health noting the lack of systematic planning of public health human resources and recommended the formulation of a national strategy for public health human resources planning and development.

The issue of public health human resource development, deployment and sustainability ranks very high among Canada’s public health community in terms of priority issues upon which CPHA should focus its attention and resources over the next years. CPHA, in its own stead and in collaboration with other organizations, has called on several occasions for investment by the federal government to expand the public health workforce and for the development and application of a pan-Canada public health human resource strategy. In its pre-budget brief to the Standing Committee on Finance (October 2005), CPHA called “to allocate sufficient funds, through the Public Health Agency of Canada, to enable Human Resources and Skills Development Canada to conduct a multidisciplinary sectoral study of Canada's public health workforce and the development of a long-term strategy for its renewal and sustainability”.

CPHA remarked in its response to the federal government’s 2008 Budget the failure in previous budgets to earmark funds for a comprehensive improvement of Canada’s public health infrastructure, including the development and resourcing of public health human resources, although this was a principal recommendation from the Naylor Report. In its August 2009 brief to the Standing Committee on Finance, CPHA repeated its call for federal leadership and investment in the development and expansion of the country’s public health human resource infrastructure through a large-scale federal investment to expand the country’s health human resource infrastructure, and that, at a minimum, the budget be increased for the Canada Graduate Scholarship Program, including an increase in the scholarship budget allocated to the Canadian Institutes of Health Research (CIHR) to enhance its capacity to support scholarships for public/population health degrees.
Perhaps the most detailed calls for federal action on investing in and taking a leadership role in moving forward on an action plan for the development, deployment and resourcing of a public health workforce was enunciated in the statements prepared by the Coalition for Public Health in the 21st Century (CCPH21) as a backgrounder for all candidates at the time of the 2008 federal election. In its statement, CCPH21 called for a significant expansion of public health human resources, with a recommended plan of action to achieve this:

- Implement all strategies identified in *Building the Public Health Workforce for the 21st Century: A Pan-Canadian Framework for Public Health Human Resources Planning*;
- Develop a long-term strategy for the renewal and sustainability of public health, beginning with a study of current skills, knowledge and practices that includes an assessment of the ability of various health professions to work collaboratively (inter-professional preparation and practice). This workforce development plan should be developed and guided by a task force of representative organizations, institutions and experts;
- Increase recruitment and retention of public health practitioners to meet Canada’s geographically diverse demands on public health services and expertise;
- Enhance federally-funded programs to expand public health training/education;
- Increase collaborative partnerships between pan-Canadian public health personnel and educational institutions;
- Expand public health human resources by extending existing scholarships/grants;
- Create a pan-Canadian, multi-sectoral public health human resources strategy to include a national secretariat to develop better baseline information about the workforce and enhance competence as well as a joint task force to advise on public health human resources; and,
- Ensure coordination between Federal/Provincial/Territorial governments, educational institutions and community practice in order to translate public health policy, education and delivery into relevant clinical training, standards of practice, and capacity in all health settings.

Where are we now?

Some progress has been made in addressing the public health human resources issue. The development of a framework for public health human resources (*Building the Public Health Workforce for the 21st Century: A Pan-Canadian Framework for Public Health Human Resources Planning*) provides a clear and well-articulated framework for expanding and increasing the capacity of the country’s public health workforce. The Core Competencies for Public Health in Canada, released in April 2008, provide an on-line “one-stop shopping” portal for 36 core competencies for public health. Several Schools of Public Health have been established at various Canadian universities. The federal government, through the Standing Committee on Health focus on the development of health human resources, is demonstrating leadership and a commitment to move forward on this issue.
As a witness remarked to this Committee back in March 2008, a strategy exists, but it needs our full attention, all stakeholder buy-in, prioritized funding, and most of all, pan-Canadian coordination. Many health sector organizations and associations have made a similar plea to the federal government and its representatives for several years: while the federal government has invested many millions of dollars on health human resource studies, commissions and the like, a population health needs-based health human resources planning strategy that puts the right people, adequately resourced, in the right place at the right time to do the right thing, is lacking. xxvii A supply-based model for planning of health human resources predominates, focusing more on the facility-based provider-side part of the equation rather than understanding and responding to the conditions that create health problems.

The Pan-Canadian Framework for Public Health Human Resources Planning (also known as the Pringle/Emerson report) contains a framework for planning public health human resources for Canada (see Annex A). It is based on a systematic building block model, using a population health needs-based analysis to define public health human resource needs (the demand side of the equation). CPHA supports the full implementation of the Framework. There remain, however, several critical elements and issues that warrant particular attention:

i. **Taking stock about the application of the Framework**: Work has begun on some elements of the five foundational building blocks that form the base of the framework’s pyramid (e.g., defining the public health workforce for planning purposes, identification of core public health services, identification and development of modules for core and function-specific public health competencies). A status report on the first five of the framework’s ground-level building blocks would be a useful “next step”. This would assist in defining what has been achieved to date, what should be done next, what information is missing and needs to be generated, and the challenges faced to complete the task at hand;

ii. **Defining what constitutes a “public health” approach and practice**: There exists a significant variation across the country as to what constitutes public health services, approaches and practice. Some services are carried out as part of public health in one province. In others, they are implemented through other components of the health care system. The range of public health services also varies across the provinces and territories. Some services are offered in certain provinces and not others. The overall investment in public health services also varies across the provinces and territories. As pointed out in a recent CIHI document, a challenge in defining public health accounts in Canada is the inconsistency as to what provinces report as public health services and how they categorize and report on public health expenditures. xxviii There is considerable variation across provinces and territories in terms of immunization coverage, rates of inspections, the nature and scale of health promoting activities and programs, and chronic disease prevention and control. In some locations, staff providing public health services are also responsible for providing other types of medical services, be it acute care, occupational health nursing service, or even nurse practitioner service, thereby
further diluting the capacity to provide much-needed public health services. While a large proportion of what can be defined as the public health workforce in Canada is composed of physicians and nurses, a recent study noted that little is known about the numbers, qualifications, and professional activities of physicians who work in “public health”, let alone the myriad of other health sector and non-health sector disciplines.\textsuperscript{xxix} The Joint Task Force on Public Health Human Resources Planning (2005) listed 12 regulated and 14 non-regulated providers of public health services. It also points out the complex nature of the workforce, the highly inter-professional nature of practice and that a number of public health functions can be performed by a variety of practitioners.\textsuperscript{xxx}

\textbf{iii. Increasing public health competence, qualifications and accreditation:} Canada has a shortage of appropriately trained workers at all levels in public health. Many current front-line practitioners are physicians and public health nurses, but the workforce also comprises other disciplines and areas of specialization (e.g. health inspectors, nutritionists, health promoters, community development specialists, public health dentists, researchers, epidemiologists). Front line practitioners require a broad range of skills and knowledge to allow them to work effectively on increasingly complex public health issues. However, there are few resources dedicated to addressing their continuing education needs. The picture at management and leadership levels is similar. This was the situation as noted back in 2005.\textsuperscript{xxxi}

Engaged, prepared and proactive staff that are educated, trained, qualified and competent is an essential element of a fully functional and effective public health system.\textsuperscript{xxxi} Besides the educational programs offered by universities and community colleges, there are now a few continuing education opportunities in public health. One on-line continuing education (CE) program is offered through the Public Health Agency of Canada. It would be helpful to learn what has been the uptake of these courses, and how trainees have put into practice what they have learned through the CE opportunities. This requires coordination between Federal/Provincial/ Territorial governments, educational institutions and community practice in order to translate public health policy, education and delivery into relevant clinical training, standards of practice, and capacity in all health settings.

A well-trained and competent workforce is needed to respond in a timely and effective manner to the population’s health. Canada needs to increase the range of disciplines involved such as licensed practical nurses, community health workers, technicians, assistants to various professional staff to provide more entry level positions in public health and get away from what can be called an “over-professionalization” trend. By investing in both core and ancillary public health positions, the health system could then use the professional health practitioners more appropriately to their full and unique scope of practice. People interested in public health as a career choice should have entry level positions from which they can branch out, with appropriate training, to other areas of public health, should they so desire.

\textbf{iv. Increasing the pool of public health practitioners:} The aging of the country’s “public health workforce” is an issue that warrants immediate attention. As noted by a witness in March 2008 before the House of Commons Standing Committee on Health review of the 10-year plan to strengthen health care, the average age of individuals in health occupations was 41.9 years in 2005 – 2.3 years older than the average age of the general Canadian workforce. Over the next five years, 1/5 of physicians and 1/3 of nurses will be ready to retire. Although there is no evidence to date, local anecdotal
There exists a “salary gap” between public health physicians and other specialists. This gap does affect career choice. Public health physicians and other practitioners make decisions that affect the health of thousands of people at a time, often facing high stress situations, yet they are paid at a fraction of the salary of a surgeon or medical specialist who only deals with individual patients. It speaks to the implicit undervaluing of this field of practice, and leads to the perception among doctors that this is not a field of practice that is attractive or important.

Increasing the pool of qualified public/population health professionals and practitioners by making public health a career choice for young professionals is one means of responding to this situation. Efforts have been made in recent budgets to expand and increase scholarship support for post-secondary training. But, as a recent study pointed out, some challenges exist. The heavy debt burden of students graduating from university affect career choice. The salaries offered for “public health” positions are insufficient to pay off the debt load quickly. There is little understanding about public health and the role of a public health practitioner, at times perceived as “unglamorous” when compared to other medical specialties. Putting into place that encourage and facilitate the decision of young people to choose public health as a career would be an important step forward.

Several universities now offer undergraduate and post-graduate training in public health. It would be useful to assess whether and how the new Schools/Departments of Public Health are contributing to expanding the pool of qualified public health professionals. These programs are just getting started, and they are enrolling students with little regard to the needs of the field of practice of public health. Also, many of these programs encourage enrollment by a large proportion of international students that pay higher tuition. These schools and programs should be listening closely to the needs of the public health system as to the types of professionals needed, with the right balance between re-entry positions and distance education to upgrade skills in the existing workforce, and turning out new graduates who are ready to take up positions in the workforce.

v. **Addressing the capacity of the public health system to deal with multiple events simultaneously:** Just as the 2003 SARS situation demonstrated, last year’s H1N1 pandemic highlighted the capacity limitations of the country’s public health system. The system responded well to the two waves of H1N1 that arrived on our country’s shores. Nevertheless, the redeployment of staff and resources to deal with it came at the cost of other public health activities. Public health human resources were stretched to the limit. Not only did they deal with the largest-scale urgent national immunization program, with public health workers across the country largely deployed to the H1N1 campaign, some of their usual activities have been postponed or cancelled. Once the H1N1 situation was under control, public health workers had to deal with the backlog and reschedule missed public health services and appointments. In fact, some of these services will never be caught up. We await an assessment of the impact that the H1N1 situation will have on the cohort of people affected by deferred, delayed or cancelled public health interventions (missed or delayed screening, lower coverage rates,
ENHANCING THE PUBLIC HEALTH HUMAN RESOURCE INFRASTRUCTURE IN CANADA
Presentation by the Canadian Public Health Association to the House of Commons Standing Committee on Health

prevention campaigns dropped or delayed). Had any additional demands been placed on the public health system, the result could have been "system collapse". The public health system was stretched to its response limit. There was no surge capacity.

vi. Promoting the application and expansion of inter-sectoral action for health: The very nature of public health, being based on a population health approach, requires coordination, collaboration and integration/inter-sectoral action to achieve the goals of good health and health equity. Although the creation and application of public health human resource development and deployment strategies will be done jurisdiction by jurisdiction (given the provincial jurisdiction in areas of education and health care/social services), we can and should promote improved means of sharing information and examples about “what works” and “how it works”. Collaborative public health practice is an essential means of ensuring “better practice” for better health.

The Road Ahead: Completing the Application of the Pan-Canadian Public Health Human Resources Planning Framework

The framework exists. The challenge before us is to implement it fully and quickly, with well-defined timelines for achieving key milestones and the definition of roles and responsibilities of key players. The framework also needs leadership, championing and stewardship. It needs political and organizational commitment to get the job done, including adequate resources over a realistic time horizon. It also requires the active collaboration and cooperation among all levels of government, among both the governmental and non-governmental sectors, and across all professions that comprise what is defined as the “public health workforce”, including those from outside the traditional health sector who have a significant influence on human health.

As remarked by the WHO in a 2004 report, although most health systems spend the majority of their funds on the health workforce, there is a paradoxical absence of policy or programmatic discourse on this critical resource. Moreover, the workforce has suffered from being regarded as a recurrent cost that is to be minimized, rather than as a valued asset that enriches the system.

The Canadian Public Health Association, as its contribution to moving forward the full implementation of the Pan-Canadian Framework on Health Human Resources Planning, makes the following recommendations:

1. The federal government continue its leadership to implement the pan-Canadian public health human resources strategy that has been developed, with the funding required (in collaboration with the provinces and territories) to achieve its goals and objectives. The recently-reactivated Public Health Human Resource Task Group (PHHR TG) is one such mechanism;
2. Implement all the “building blocks” identified in the Framework, including defining what constitutes a public health workforce as well as a pan-Canadian public health approach and public health practice;

3. Invest in continuing education and other training opportunities for public health practitioners;

4. Expand the scale and increase support through federally-funded scholarship programs to students pursuing studies in the health sciences and particularly in public health/population health and increase support to the country’s three research granting councils;

5. Invest in and ensure an adequate number of public health providers who are able to deal with different types of crises, but between crises, allow them to work on disease prevention and health promotion activities above our current baseline. This could include the creation of a corps of experienced public health practitioners (a national public health “reserve corps”) who could be called upon in emergency situations and mobilized at short notice to supplement the existing public health workforce within public health units and Federal/Provincial/Territorial Ministries and public health agencies.

6. Create a National Public Health Infrastructure Fund. The intent of this targeted investment would be to assist public health units across the country to hire additional staff, purchase equipment and supplies and to implement the programs required to meet their client populations’ present needs and their potential surge capacity needs. An alternative approach could be a transfer payment scheme dedicated to public health that demands a certain percentage of matching dollars from the provinces and territories in order to ensure a stable level of funding for the public health system across the country,

Concluding Remarks

Public health human resources are an essential component of the country’s health system. At present, the public health workforce is stretched to the limit. There is no surge capacity should multiple events occur that require immediate and simultaneous response by the public health system.

A public health human resource framework exists, and has been in place for a few years. What is required urgently is a strong political commitment and leadership by the federal government to implement fully this framework with committed funding. Follow-through is also required by the federal, provincial and territorial governments and other jurisdictions that fund public health services to expand and support over the long term (1) a robust and adequately-resourced public health workforce; (2) promotion of public health as a career choice; (3) investment in the future generation of public health professionals and allied workers; and (4) transparent and regular monitoring and feedback on progress made in building a robust and sustainable public health workforce.

The time to implement a national, pan-Canadian public health human resource development program is upon us and has to be acted upon. CPHA is ready to assist in making this national endeavour a reality.
Annex A
Proposed Framework for Planning of Public Health Human Resources

page iv
Endnotes


viii  Standing Senate Committee on Social Affairs, Science and Technology, Reforming Health Protection and Promotion in Canada: Time to Act, Fourteenth Report, 37th Parliament, 2nd Session, November 2003

ix  Health Canada. Learning from SARS - Renewal of Public Health in Canada - A report of the National Advisory Committee on SARS and Public Health, October 2003


xii  Federal/Provincial/Territorial Advisory Committee on Health Delivery and Human Resources (ACHDHR). A Framework for Collaborative Pan-Canadian Health Human Resources Planning. September 2005 (Revised March 2007)


xvi  The Health Action Lobby. Investing in our most Important Health System Assets – People. A Proposal to Establish a National Health Human Resources Infrastructure Fund. A submission to the House of Commons Standing Committee on Finance, 2010 Pre-Budget Consultations, August 14, 2009


xix  Canadian Public Health Association. CPHA Advisory Council Environmental Scan. 2007 (internal document)

Canadian Public Health Association. *Beyond the Naylor Gap: Public Health & Productivity, brief to the Standing Committee on Finance*, October 24, 2005


Witnesses representing some of Canada’s health research community (CIHR, CIHI and CHSRF) remarked on the need to shift the focus to preventive services and the adoption of a population health needs-based approach for the planning of health human resources. The representatives from several health professional organizations (CMA, CNA, Royal College of Physicians and Surgeons and College of Chiropractors) stated in their presentations that there is an urgent need for (i) collaborative integrated approaches to addressing health issues, (ii) a needs-based rather than supply-based model for determining health human resource needs. Two special areas of concern that warrant particular attention with respect to the training and deployment of health human resources: (i) remote and rural communities, including the North, and (ii) First Nations/aboriginal communities.

Canadian Institutes for Health Information. *National Health Expenditure Trends, 1975 to 2009*, November 2009


Neudorf, ibid.

Pandemic straining Canada’s public health services. *The Gazette*, October 31, 2009. Interview with Dr. Cordell Neudorf, Chair of CPHA’s Board of Directors