



Lessons from the frontlines:

A collaborative report on H1N1

from
Canadian Medical Association
The College of Family Physicians of Canada
National Specialty Society of Community Medicine

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Family Physicians
of Canada

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The Canadian Medical Association (CMA) is the national voice of Canadian physicians. Founded in 1867, CMA's mission is to serve and unite the physicians of Canada and be the national advocate, in partnership with the people of Canada, for the highest standards of health and health care.

On behalf of its more than 72,000 members and the Canadian public, CMA performs a wide variety of functions. Key functions include advocating for health promotion and disease/injury prevention policies and strategies, advocating for access to quality health care, facilitating change within the medical profession, and providing leadership and guidance to physicians to help them influence, manage and adapt to changes in health care delivery.

The CMA is a voluntary professional organization representing the majority of Canada's physicians and comprising 12 provincial and territorial divisions and 51 national medical organizations.



The Canadian National Specialty Society for Community Medicine (NSSCM) represents the interests of community medicine specialists and public health physicians in Canada. With more than 200 members, NSSCM is the unique and vibrant voice for community medicine specialists/public health physicians and continues to grow each year in membership.

The NSSCM was established in 1998 and promotes the inclusion of a population and public health perspective in the development and implementation of health policy. Its objectives include:



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The College of Family Physicians of Canada (CFPC) is the voice of family medicine in Canada. Representing more than 24,000 members across the country, the CFPC is the professional organization responsible for establishing standards for the training, certification and lifelong education of family physicians and for advocating on behalf of the specialty of family medicine, family physicians and their patients. The CFPC accredits postgraduate family medicine training in Canada's 17 medical schools.

CFPC members belong to one of ten provincial Chapters which become involved in local healthcare activities. Many members serve on national and/or provincial committees, task forces and work groups to help advance family medicine policy, programs, education, research, advocacy and health care to patients.

- Supporting high standards of training and education for community medicine specialists and public health physicians;
- Promoting the role of the community medicine specialist and public health physician to the public, other health providers, governments and national organizations.

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Lessons from the frontlines

Background

One year ago, a novel influenza virus claimed its first victim in Mexico, and soon the world was plunged into its first influenza pandemic in 40 years. Although pandemic H1N1 (pH1N1) swept across the globe, we were fortunate this time as the virus was far less virulent than first feared. Now that pH1N1 has peaked and faded, it is time to look at what we learned and how it will help us plan for the next national public health emergency.

The College of Family Physicians of Canada, the National Specialty Society for Community Medicine and the Canadian Medical Association have joined together to present a picture of lessons learned from the front lines of the pandemic. Together we represent over 80,000 physicians, of whom almost 50,000 are family physicians, engaged in all aspects of Canada's health care and public health systems.

Canada's experience with SARS in 2003 was a "wake-up call"; much changed in its aftermath. The creation of the Public Health Agency of Canada led by a chief public health officer and the Pan-Canadian Public Health Network increased Canada's ability to respond to a public health emergency like pH1N1. The *Canadian Pandemic Influenza Plan for the Health Sector*, as well as complementary provincial and territorial plans, provides a framework and approach to responding to a pandemic.

In many ways, this planning paid off. Canada mobilized quickly in response to the pH1N1 threat. Morbidity and mortality were lower than feared, and 45% of the population was vaccinated. But this response can also be seen as a "dress rehearsal" for a more severe influenza pandemic or some other national public health emergency: a test of our plans and an opportunity to learn from experience, with the time to incorporate these lessons into our strategic planning.

Those on the front lines of response understand how health emergencies test our entire system — public health, acute and primary care and the community-based family physician. The success of our response depends on planning and practice, the effectiveness of public health and clinical countermeasures, our health human resources, the surge capacity within our health care and public health systems and our ability to reach the public. One of our greatest challenges in Canada is also to establish a coherent national and provincial/territorial strategy that can be implemented at a local level.

Although we believe that Canada's overall response to pH1N1 produced many success stories, there were circumstances that challenged us as health professionals. Both health care and public health need further strengthening, and their separate infrastructures and the interdependence between these structures need attention and bolstering. The following comments focus on two overarching areas that influenced our ability to respond to the pandemic: communications and health system integration.

Communications

Communication was a consistent source of concern. Channels of communication among the various levels of public health providers were stronger than those for primary care providers, especially family physicians. On 9 Aug. 2009, following the first wave of pH1N1, our leaders wrote to chief public health officer of Canada Dr. David Butler-Jones on behalf of our members to share their thoughts and recommendations on how to improve communications with physicians. Family physicians in particular, but also other front-line health care providers, needed communication that was tailored to the practice setting, resources that were easy to access, and clear messages written in a manner that allowed rapid implementation into clinical practice during health emergencies because the timing of clinical response was critical. We recommended that front-line clinical practitioners be involved in the development of guidelines and the strategies for their dissemination, so that the content could be linked directly to the clinical setting.

Family physicians are part of our first line of defence during infectious disease outbreaks. To ensure optimum patient care, they need clinical guidance quickly. Many physicians felt that the urgent need to provide consistent, clinically relevant information was not well recognized by the Public Health Agency of Canada (PHAC), the Public Health Network and, in some cases, provincial, territorial, regional or local levels.

It took three months after recognition of the emerging pandemic to publish *Interim Guidance for Ambulatory Care of Influenza-like Illness in the Context of H1N1*. The current Public Health Network process of federal/provincial/territorial (FPT) consultation and consensus building seemed ill-suited to the acute national need for clinical information on issues such as the use and prescription of anti-viral medications. As provincial authorities and professional medical organizations moved to fill the void, different approaches and recommendations arose independent from one another. Better integration of primary care response by a *national* organization such as PHAC and the provincial/territorial health ministries could address the needs of clinical practitioners in concert with public health responses. This would also ensure that care directives are translated into user-friendly formats appropriate to clinical settings.

We were pleased to be able to work with PHAC in fall 2009 to produce *Pandemic H1N1: Fast Facts for Front-line Clinicians*. This resource was highly valued by many of our members, and the collaboration demonstrated how health organizations can work effectively with government to contribute their expertise to the development and distribution of appropriate, clinically relevant information. Nevertheless, our critics declared that it was too little, too late.

In situations where scientific evidence is rapidly changing, the processes used to distribute information to both front-line public health and clinical professionals must be designed to avoid confusion. Coordinated, unified communication strategies are needed at the national, provincial/territorial and local levels. Regardless of the official source, the information must be consistent.

During the pandemic, many physicians and public health workers complained that multiple levels of government provided similar, but not the same advice. The differences led to skepticism, and the inundation of messages led to overload. The bottom line is that clinically relevant and trustworthy information should be provided on a timely basis, even if levels of certainty are fluctuating.

Jurisdictions with effective communication to the primary care sector were characterized by cooperation and consultation between the medical community and the provincial, territorial and regional health authorities, both before and during the crisis.

We recommend:

- 1. That the Public Health Agency of Canada, with the provinces and territories, evaluate the effectiveness of pH1N1 communications between public health and physicians and other front-line primary health care providers, and use the finding of this evaluation to research options for future response to a public health crisis.**
- 2. That federal, provincial/territorial public health authorities and health care professionals and their associations work together in the inter-pandemic period to develop a pan-Canadian communication strategy to be used during health emergencies.**
- 3. The establishment of a pan-Canadian centre within the Public Health Agency of Canada — similar to the Centre for Effective Practice — to undertake timely knowledge translation of clinical management guidelines for clinicians during public health crises.**

Surveillance and electronic communications

The national response to infectious disease would have been greatly facilitated if system-wide communicable disease surveillance had been in place to support the sharing of data between public health and the rest of the health care system, particularly at the regional and local levels of pandemic response. Clinicians' practices are highly influenced by illness patterns that develop regionally and locally within their practice populations; thus, surveillance data are useful in determining appropriate treatment. Real-time data were not available to most physicians and when data did become available, they were already several weeks old. Delayed clinical guidelines were not a suitable substitute for timely surveillance information.

Expansion of the use of electronic medical records (EMRs) in primary care, with bi-directional links to public health electronic health records (EHRs), could have facilitated surveillance and communications. Family practice clinics with EMRs were able to quickly identify high-risk patients, communicate with them to schedule vaccination appointments and collect the required data for public health. The varied levels of success of public pH1N1 vaccination clinics were further proof of the need to move to standard use of EMRs and EHRs in the health system.

Communications can be enhanced through the sharing of data between the public health and primary care systems. EMRs may help resolve the challenge of collecting data from primary care sites. Collaboration among the PHAC, the Canadian Medical Association and the Information Technology Association of Canada's Health Division led to development of a pilot project to demonstrate the use of primary care EMRs as real-time sentinel surveillance tools for public health action to supplement existing surveillance mechanisms. In addition, after a successful two-year pilot project, the College of Family Physicians of Canada is working with the PHAC, in association with the Canadian Institute for Health Information, to conduct surveillance for five chronic diseases using EMRs, local networks across Canada and a national central repository for standardized data. These studies represent the increasingly important role of electronic information in surveillance and the value of collaboration between public health and primary care.

We recommend:

- 4. That the federal and provincial/territorial governments provide EMR funding to enable clinical care and public health authorities to build interconnectedness and allow real-time information collection and analysis.**

System issues

FPT responsibilities

The division of responsibility between federal and provincial/territorial authorities for health care and emergency response influences how we respond to public health emergencies. Provincial/territorial governments have a primary role to play in regulating health matters within their boundaries. At the same time, the federal government has responsibilities related to national public safety and health protection. There can be no disputing the legitimacy of federal involvement in public health matters of an interprovincial/territorial nature.

Under International Health Regulations, the federal government also has a responsibility to report and monitor public health emergencies of potential harm to other countries.

Since Canada's SARS experience, there has been much progress in building FPT cooperation and increasing consultation on public health matters. However, the division of responsibility has led us to a situation where public health and clinical guidance in each province and territory was similar, yet different. Although the Pandemic Influenza Committee and the Special FPT Advisory Committee on H1N1 Influenza strove for consensus at the national level, individual provinces and territories were under no obligation to implement the guidance agreed to at the FPT level. Consultative and collaborative processes at the FPT level created delays in decision-making and directly interfered with the capacity of front-line professionals to respond to the urgent health needs of their patients. This led to a sense of confusion in the media and a loss of trust among the public and health professionals regarding Canada's capacity to respond to pH1N1.

System capacity

Canada's health system lacks surge capacity and can be sorely tested during a public health emergency, such as the recent experience with pH1N1. The underdeveloped public health infrastructure also means that it is a challenge to handle more than one national crisis at a time. To mount a response to pH1N1, public health units pulled human resources from other programs and many critical ones were delayed, suspended or cancelled altogether.

During the first wave of pH1N1, Manitoba experienced a severe outbreak that stretched the resources of its critical care infrastructure to its limits. Front-line health care providers were inundated with telephone calls from the worried well and an increase in visits from those with flu symptoms. If pH1N1 had been the severe pandemic that was expected and for which Canada had been preparing, our health system would have been brought to its knees.

In 2008, the Canadian Coalition for Public Health in the 21st Century noted that Canada remains vulnerable to the risks presented by epidemics and pandemics. This vulnerability remains today, and a long-range plan to build our public health capacity and workforce and to address the lack of surge capacity in our health system must become a priority if we are to be prepared for the next emergency.

We recommend:

- 5. That the federal government increase infrastructure funding to provinces/territories to assist local health emergency preparedness planning and response, to reduce variation across the country and to integrate clinical care structures into public health structures at the local level.**
- 6. That the Public Health Agency of Canada review the recommendations of the 2003 report of the National Advisory Committee on SARS and Public Health (Naylor report) in light of the pH1N1 experience and develop a national action plan to address the persistent gaps.**

Public health/primary care partnership

Family physicians, in particular, understand that primary health care happens at the local level. In fact, so does all public health. During times of public health crisis, it is crucial for public health and primary care to work together, each respecting, supporting and bolstering the efforts of the other. Strengthening local public health and primary care structures and the interface between them would have resulted in improved, shared understanding of each sector's roles and responsibilities during the pH1N1 epidemic, better communications, improved data sharing and, most important, better served populations.

Public health measures are directed toward the mitigation of disease through surveillance, research and outbreak management activities, while physicians provide information, education and clinical treatment to their patients.

A commitment from both sectors at the local and provincial levels — and the professionals within each sector — to work together in the inter-pandemic period to build on processes that allow sharing of perspectives and information is essential. It is crucial that local public health authorities receive financial resources to increase their ability to collaborate effectively with family physicians, specialist physicians and other front-line providers. A number of the challenges faced by front-line public health workers and front-line physicians during the pH1N1 outbreak could have been lessened if there had been stronger links within the health system.

We recommend:

- 7. That the Public Health Agency of Canada develop a focus on improving the interrelationship between primary care and public health to support collaboration during public health crises.**

Vaccination

A key measure to combat pandemic influenza is mass vaccination. On the whole, Canada mounted an effective campaign: 45% of Canadians were vaccinated, and the proportion was even higher in First Nations communities — a first in Canadian history. Canada was one of the first countries with sufficient vaccine for the population and, with one domestic vaccine supplier, Canada avoided the confusion of multiple formulations as seen in the United States. The outcome was positive, but many public health units were stretched as expectations exceeded the pre-existing constrained resources.

Although we recognize that the provinces and territories have quite different approaches to the delivery of their routine immunization programs, there is agreement that the pandemic immunization process did not adequately engage physicians in planning and delivery. A number of difficulties, such as the impact of bulk packaging, manufacturing delays that affected the agreed “sequencing” of patients and the logistics of inventory management, led to friction between front-line public health practitioners and family physicians. These could have been avoided with strengthened interdependence and mutual understanding before this crisis.

The great variation in mass vaccination programs between provinces/territories, and even between local public health units, led to public confusion. Recognition of the diversity of primary care settings in which physicians work and bilateral planning in advance of the event is essential, because it is simply not feasible to tailor responses to myriad settings in the heat of the moment. Television broadcasts of long lines of people waiting to be vaccinated contributed to a loss of confidence in the system at a time when public confidence was sorely needed to encourage vaccination. Nationally promulgated clinical practice guidelines had great potential to create consistent clinical responses across the country. Instead, the variation and lack of coordination in providing important clinical information during this crisis eroded the public’s confidence in the federal, provincial and territorial response.

Ensuring future consistency in clinical approaches will require examination of ethical principles for the allocation of resources, such as anti-virals, vaccines and hospital treatment. Public engagement in the discussion of ethical principles is essential and, as much as possible, the consultative process should be transparent and undertaken in advance.

We recommend:

- 8. That the Public Health Network seek advanced pan-Canadian commitment to a harmonized and singular national response to clinical practice guidelines, including mass vaccination programs, during times of potential public health crisis.**

Conclusion

In 2003, in its submission to the National Advisory Committee on SARS, the Canadian Medical Association noted that the uptake of new information is influenced by many qualitative factors, and that research is needed to determine how best to communicate with individual physicians and other health care providers in emergency situations. Communication processes should be based on sound research and build on existing communication networks and relationships. The College of Family Physicians of Canada has recommended that information networks be strengthened to promote the sharing of the most relevant information among family physicians, other primary care providers and public health at the local level.

We believe that PHAC is well positioned to undertake research on how health professionals can best receive information and to catalogue existing communication networks to build them into a well-coordinated national emergency response communication system. We must work together to translate pandemic information into practical messages relevant to front-line providers and employ trusted channels to deliver key messages to our patients and the public. Broad consensus is developing that our experience with the pH1N1 outbreak has shown that one of our greatest needs in preparing for the next public health emergency is for a national communications strategy that involves all levels of government, targets all sectors of our health system and uses the channels with which these targets are most familiar.

An effective response to infectious disease outbreaks depends on effective surveillance, data collection and sharing and tracking of clinical interventions. The absence of a national communicable disease/immunization monitoring system is an ongoing problem. In 2003, the report of the National Advisory Committee on SARS and Public Health recommended that “the [Public Health] Agency [of Canada] should facilitate the long 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... to relevant stakeholders.” In 2010, Canada still does not have a comprehensive national surveillance and epidemiological system.

A pan-Canadian electronic health information system is urgently needed and must become a priority during the inter-pandemic phase, with adequate federal funding and provincial/territorial collaboration. Greater adoption of the EMR in primary care and better public health EHRs with the ability to link systems will augment existing surveillance capacity and should be considered essential to a pan-Canadian system.

Many of the challenges front-line health practitioners faced during the pH1N1 were also challenges during the SARS outbreak in 2003. The Naylor report proposed a number of measures to improve Canada's readiness and strengthen public health. Although a great deal of work and effort has gone into building links with and between provinces/territories and the federal government within the public health and the health emergency management system, little has trickled down to the front lines. This is not to devalue the much-improved spirit of FPT cooperation and the important achievements that have been made. Rather it is to suggest that, as the roof is no longer leaking, it is time to focus attention on the foundation — the response at the local level.

Embedding primary care expertise in public health planning within the PHAC and at provincial/territorial and local levels will help circumvent problems and improve the effectiveness of our health system to respond to public health emergencies. A dialogue between primary care and the emergency management structures will help the response team understand and value the capabilities within primary care and build them into their planning and response systems.

At the end of the day, we need to nurture collaborative relations between public health and primary care. Our shared objective is protecting the health of Canadians, recognizing that, in reality, neither system can be successful in isolation. It is essential that we trust each other's professionalism and expertise and work together to ensure that a strong foundation is in place to protect Canadians from future health threats.

We have the will and expertise. We need the resources and a firm commitment to move forward. We have had two "wake-up calls" — SARS and pH1N1. Let's not wait for a third to find that we are not yet prepared.

Recommendations

1. That the Public Health Agency of Canada, with the provinces and territories, evaluate the effectiveness of pH1N1 communications between public health and physicians and other front-line primary health care providers, and use the finding of this evaluation to research options for future response to a public health crisis.
2. That federal, provincial/territorial public health authorities and health care professionals and their associations work together in the inter-pandemic period to develop a pan-Canadian communication strategy to be used during health emergencies.
3. The establishment of a pan-Canadian centre within the Public Health Agency of Canada — similar to the Centre for Effective Practice — to undertake timely knowledge translation of clinical management guidelines for clinicians during public health crises.
4. That the federal and provincial/territorial governments provide EMR funding to enable clinical care and public health authorities to build interconnectedness and allow real-time information collection and analysis.
5. That the federal government increase infrastructure funding to provinces/territories to assist local health emergency preparedness planning and response, to reduce variation across the country and to integrate clinical care structures into public health structures at the local level.
6. That the Public Health Agency of Canada review the recommendations of the 2003 report of the National Advisory Committee on SARS and Public Health (Naylor report) in light of the pH1N1 experience and develop a national action plan to address the persistent gaps.
7. That the Public Health Agency of Canada develop a focus on improving the interrelationship between primary care and public health to support collaboration during public health crises.
8. That the Public Health Network seek advanced pan-Canadian commitment to a harmonized and singular national response to clinical practice guidelines, including mass vaccination programs, during times of potential public health crisis.