

## PUBLIC HEALTH

## Canada's public health system: building support for front-line physicians

After the holiday revelry dies down and the new year begins, clinics and doctors' offices are typically filled with coughing, sneezing and aching patients. Most may have little more than the common cold: remedied by the age-old prescription of fluids, rest and the passage of time. Yet, front-line physicians and the public health care system must remain ever vigilant in light of a more serious threat that may lurk beneath the surface.

Most experts predict that the next influenza pandemic will begin with an avian influenza virus (bird flu) that acquires the ability to infect humans, cause severe illness and be transmitted rapidly from person to person. This may occur as a result of a genetic reassortment between human and avian viruses in an intermediate host, or possibly as the result of genetic mutations to an avian virus allowing it to infect humans. This process could begin here in Canada in an individual presenting with cough, fever and myalgia who has travelled to an area where avian influenza is endemic, or who has had contact with dead birds here or elsewhere.

The potential emergence of an influenza pandemic presents a unique challenge for health professionals and public health officials alike. There is still time to prepare for such a crisis; if we work together and adjust the way we practise, we will be ready and able to protect the health of the community.

Canadians have already made encouraging progress in the surveillance and control of influenza. Vaccination against influenza of health care professionals, those in high-risk groups and those caring for the very young and old is increasingly seen as routine "due diligence." Patient counselling and educational initiatives regarding vaccination and the importance of proper hand hygiene have elevated awareness of the need for routine respiratory infection

### Box 1: Infection control resources

Pan-Canadian Public Health Network

- [www.phn-rsp.ca](http://www.phn-rsp.ca)

Canadian Pandemic Influenza Plan

- [www.phac-aspc.gc.ca/influenza/pandemicplan\\_e.html](http://www.phac-aspc.gc.ca/influenza/pandemicplan_e.html)

Public Health Agency of Canada

- [www.phac-aspc.gc.ca/dpg\\_e.html#](http://www.phac-aspc.gc.ca/dpg_e.html#)

Community and Hospital Infection Control Association

- [www.chica.org/links\\_position.html](http://www.chica.org/links_position.html)

College of Physicians and Surgeons of Ontario

- [www.cpso.on.ca/publications/infectioncontrolv2.pdf](http://www.cpso.on.ca/publications/infectioncontrolv2.pdf)

British Columbia Centre for Disease Control

- [www.bccdc.org/downloads/pdf/lab/reports/Infection\\_Control\\_In\\_Physician\\_Office\\_Final.pdf](http://www.bccdc.org/downloads/pdf/lab/reports/Infection_Control_In_Physician_Office_Final.pdf)

control. A number of resources are available regarding appropriate general infection control practices in medical facilities (Box 1). We cannot underestimate the collective value of these measures. Because although it is imperative that we plan for the next pandemic, we must also keep in mind that more people die prematurely from seasonal influenza in between pandemics than die during a pandemic.

Clinicians are the first point of contact of what is, ultimately, a global early warning system for potentially deadly outbreaks. This is a system wherein all parts rely on each other. The Public Health Agency of Canada is working with physicians and other partners such as laboratories, public health authorities and professional organizations to better equip front-line physicians and health care professionals for the critical role they will play during a pandemic. This increased training includes a proposed national certification course in rapid diagnosis of influenza.

It is becoming increasingly important for physicians to inquire about the recent travels of their patients, especially to regions with confirmed activity of the influenza subtype H5N1, because global travel and trade facilitate the spread of virulent pathogens. Similarly, the spread of avian influenza means that it is increasingly important to ask whether patients reside in or have visited an area with unexplained deaths of domestic or wild birds, or whether they have had close contact with an ill traveller from an affected

area. To keep informed of travel health issues around the world, physicians can refer to the Public Health Agency's Travel Health web page at [www.phac-aspc.gc.ca/tmp-pmv/index.html](http://www.phac-aspc.gc.ca/tmp-pmv/index.html). Asking these questions and consulting your local Medical Officer of Health will be key to differentiating between a common cold, annual flu or the first human case of avian influenza in Canada.

Clinicians, nurses, public health workers and other health care practitioners are on the front line of the battle against an influenza pandemic. But none of us stands alone. As set out in the Canadian Pandemic Influenza Plan for the health sector ([www.phac-aspc.gc.ca/influenza/pandemicplan\\_e.html](http://www.phac-aspc.gc.ca/influenza/pandemicplan_e.html)), an organized and supportive network has been formed, stretching from physicians' offices to emergency departments across Canada and around the world.

Local Medical Officers of Health are your entry point into this vast network. In the event of a suspicious viral condition, local health authorities will be there to collect information and to feed it into a broader early warning system. They will also provide practical support: helping to get specimens to the nearest virology laboratory and to access pertinent health information and other resources. Local public health officials are linked to the provincial Chief Medical Health Officer who, in turn, has direct contact with Canada's Chief Public Health Officer. Moreover, Public Health Officials at the federal, provincial and territorial levels are connected

to their respective Health Ministers and other officials. This Canada-wide network is tied to the World Health Organization and to a global early warning system for emerging pathogens.

Although today these networks function on a sometimes ad hoc basis, the Pan-Canadian Public Health Network ([www.phn-rsp.ca](http://www.phn-rsp.ca)) serves to formalize and strengthen our public health infrastructure, which in turn can support you, the health care practitioner. This network facilitates the sharing of information and best practices, fosters the development of collaborative public health strategy, and provides advice, coordinated support and aid to health officials and jurisdic-

tions in need. Indeed, the streamlined and unified approach exemplified by the Pan-Canadian Public Health Network will be especially critical during emergencies such as an influenza pandemic. In the absence of a specific crisis, the network will concentrate on other important public health issues, such as health promotion, and chronic disease and injury prevention.

The next big challenge, which is beginning to be addressed through the Pan-Canadian Public Health Network, is to bring together community-based clinicians, public health authorities, viral laboratories and all levels of government to safeguard the health of Canadians against emerging infectious

diseases. Clinical suspicion, early recognition and diagnosis, and reporting suspicious cases to the public health system is a vital and concrete way of protecting not only the health of the individual, but also the health of the community at large.

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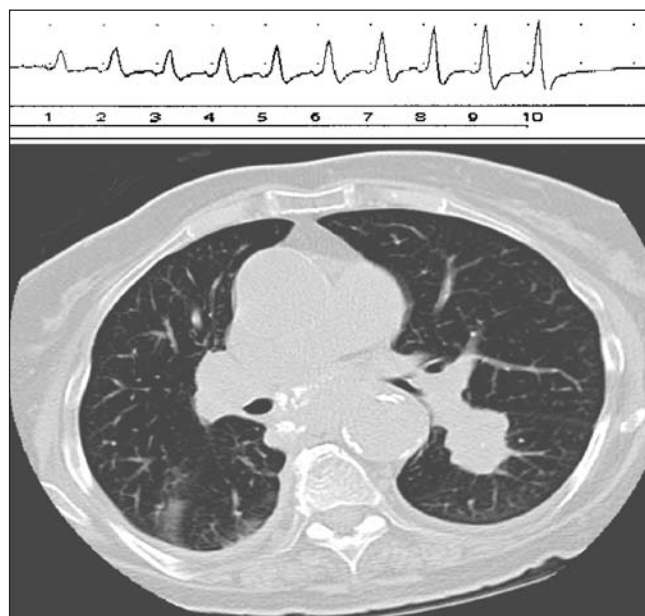
David Butler-Jones, a former clinician, local Medical Officer of Health in Ontario and Chief Medical Health Officer for Saskatchewan, is Canada's first Chief Public Health Officer and heads the Public Health Agency of Canada.

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## CLINICAL VISTAS BRIEFS

### What's your call?



A 72-year-old female smoker presented with morning fatigue, discrete left ptosis and absent reflexes in lower limbs. Top panel: Electromyogram showing evoked motor response of abductor of the fifth finger after stimulation of the left ulnar nerve with a 50-mA current at 50 Hz. Bottom panel: CT of thorax of the same patient 5 years later.



Radiograph with barium swallow from a 60-year-old emaciated man who presented with nonprogressive dysphagia of 8 months' duration.

See page 38 for diagnoses.