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Summary of CFNU's MP Breakfast on Pandemic Preparedness

The precautionary principle was the topic of the Canadian Federation of Nurses Unions 11th Breakfast for MPs, which took place on November 17th, 2009. MPs from all parties, senators and health care stakeholders came to hear Mario Possamai, Senior Advisor to the SARS Commission, speak on pandemic preparedness.

The Precautionary Principle

Many of the most important lessons from SARS have not been put in place, began Mr. Possamai. It is as if SARS never happened. The most important lesson from SARS is the precautionary principle, stated Justice Archie Campbell, chief investigator for the SARS inquiry. The precautionary principle was introduced in an earlier discussion of public health in Canada, the Commission of Inquiry on the Blood System in Canada. In it, Justice Horace Krever said:

> *Where there is reasonable evidence of an impending threat to public health, it is inappropriate to require proof of causation beyond a reasonable doubt before taking steps to avert the threat.*

In the SARS Commission, Justice Campbell applied the precautionary principle to public health and worker safety:

> *If the Commission has one single take-home message it is the precautionary principle that safety comes first, that reasonable efforts to reduce risk need not await scientific proof.*

The Case of the Pump Handle

The precautionary principle has been at the heart of safeguarding public health since the 1854 cholera outbreak in London. Whereas the science at the time dictated that cholera was caused by bad air, this was disputed by Dr. John Snow. Although he did not know the exact mode of transmission which is food or water contaminated with cholera bacterium, empirical research led him to conclude that the source of the outbreak was a public water pump. He removed the pump handle and stopped the outbreak, even though his chemical and microscopic examinations were unable to find conclusive proof. In removing the pump handle, Snow demonstrated the Precautionary Principle that reasonable efforts to reduce risk need not await scientific proof.

A Tale of Two Cities

In March 2003, the two index patients in the SARS outbreak in Canada were admitted to hospital within a three-hour period, one in Vancouver and one in Toronto. B.C. had four probable cases, one case of local transmission and no deaths. Ontario, in sharp contrast, had 247 probable cases, 77% of which were infected in a health care setting, and 44 deaths. Mr. Possamai posed the obvious question: Why did B.C. fare so much better? The SARS Commission stated:

> *It is important to recognize that Vancouver, which was spared the devastation that SARS inflicted on Ontario, had a far greater systemic commitment to the precautionary principle.*

This commitment was demonstrated in the way the index patient in Vancouver was treated. He was isolated in five minutes. Within 15 minutes, staff had put on N95 respirators. In less than three hours, the patient was in a negative pressure room. No transmissions occurred.

In Toronto, the index patient was not isolated for nearly 21 hours. Staff did not wear N95 respirators. SARS spread rapidly to 84 others, mostly health care workers and their households.

Each wave of transmission at the Toronto hospital contained failures of infection control (protection of patients) and worker safety (protection of workers at their place of employment).

In Vancouver, infection control worked hand in hand with occupational health and safety. For example, at one hospital, the supply of N95 respirators was running out and infection control and worker safety experts cooperated on how to keep health workers and patients safe despite the shortages.

Airborne vs. Droplet Transmission

During SARS, some experts believed that since, in their view, SARS was spread mostly by large droplets, surgical masks were sufficient in most situations. The Commission stated:

> *As a result, they said, an N95 was unnecessary except in certain circumstances and a surgicalmask was sufficient in most instances. They made this argument even thoughknowledge about SARS and about airborne transmission was still evolving. That more and more studies have since been published indicating the possibility under certain circumstances of airborne transmission, not just of SARS but of influenza, suggests the wisdom and prudence of taking a precautionary approach in the absence of scientific certainty.*
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> *The point is not who is right and who is wrong about airborne transmission. The point is not science, but safety. Scientific knowledge changes constantly. Yesterday's scientific dogma is today's discarded fable. When it comes to worker safety in hospitals, we should not be driven by the scientific dogma of yesterday or even the scientific dogma of today. We should be driven by the precautionary principle that reasonable steps to reduce risk should not await scientific certainty.*

Surgical Masks versus Respirators

Surgical masks are not designed or certified to prevent the inhalation of small airborne contaminants. They are worn by health workers to protect patients and limit the spread of infectious respiratory secretions from the wearer of the mask to others. Respirators, on the other hand, are designed to reduce an employee's exposure to airborne contaminants by providing a tight seal.

The precautionary principle would therefore dictate that, in the absence of scientific certainty in regards to the mode of transmission, health care workers at risk of exposure must have access to N95 respirators as the last line of defense in the hierarchy of controls.

It is not about the mask

Surgical mask vs. respirator is the canary in the health care worker's coal mine. Workers are asking, is my workplace safe? Have you integrated infection control (patient safety) with occupational health and safety? Are there effective internal safety protocols?

SARS demonstrated the importance of having a robust safety culture in the workplace in which workers play an integral role.

What role for the federal government?

This question was raised in the discussion. Mr. Possamai posited that the federal government can help break down the silos between occupational health and safety and infection control. A representative from the Aboriginal Nurses Association of Canada called for clear concise messages on what is right, adding her voice to the call for national standards for pandemic planning.

For copies of the Mario Possamai's PowerPoint presentation, please visit www.nursesunions.ca.

Sincerely,

Linda Silas, RN, BScN
President