How Canada Forgot The Lessons of SARS and Failed Our Health Care Workers

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How to Measure Canada's COVID-19 Performance?

SARS Peers: Canada, China, Hong Kong and Taiwan

- Canada, China, Hong Kong and Taiwan recorded:
  - A combined 94.8 per cent of all SARS cases and 94.0 per cent of its deaths.
  - A combined 91.7 per cent of all SARS cases involving health care workers.
  - Canada, largest outbreak outside Asia and one of the highest health worker infection rates in the world: 44 per cent.
- All four had the same opportunity to learn from SARS, and plenty of time to put those lessons into practice.
- Seventeen years later, the evidence suggests that China, Hong Kong and Taiwan used that time productively to learn from SARS. Canada largely did not.

COVID-19: Canada vs SARS Peers

- More than 21,000 Canadian health care workers infected with COVID-19 as of late July 2020; 19 per cent of all COVID-19 infections in Canada, almost double the global rate (10 per cent) reported by the WHO
- Chinese health care workers comprise 4.4 per cent of COVID-19 cases. Most were infected before airborne precautions were implemented in late January 2020.
- As of late July 2020, in Hong Kong, five health care workers were infected.
- Similarly, in Taiwan, just three health care workers were infected as of late July 2020.

On pandemic containment, as of August 31, 2020 Canada had:

- More COVID-19 cases (129,888) than China (85,048), Hong Kong (4,801) and Taiwan (488) combined; and
- More COVID-19-related deaths (9,164) than China (4,634), Hong Kong (88) and Taiwan (7) combined.

A Constellation of Problems

- Failure to follow the precautionary principle
- Failure to critically evaluate WHO guidance and performance
- Failure to heed the COVID-19 lessons of China, Hong Kong and Taiwan
- Failure to heed the pandemic preparedness lessons of SARS
- Absence of oversight and accountability over pandemic preparedness
- Absence of worker safety expertise as an integral part of decision-making on worker safety guidance and strategy

The Precautionary Principle

"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 …

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."

Mr. Justice Archie Campbell, SARS Commission, December 2007

The Precautionary Principle

- When facing a new pathogen, it calls for safety: protect health care workers at the highest level using airborne precautions until we better understand the new virus; scale the protection down if safe to do so.
- The precautionary also extends to other pandemic containment measures, like border closings, public masking and being open to the possibility a new pathogen acts in new unexpected ways (asymptomatic transmission).

The Precautionary Principle: N95 vs Surgical Mask

- Debate during SARS over whether N95 respirators were needed, or whether surgical masks were sufficient
- Best evidence of SARS's ability to spread through the air did not emerge until after the outbreak.
- Justice Campbell noted that this validated the precautionary approach:

  "Knowledge about how SARS is transmitted has evolved significantly since the outbreak. Some recent studies suggesting a spread by airborne transmission lend weight to a precautionary approach to protect health care workers against a new disease that is not well understood."
- Compared to the absence of evidence during the SARS outbreak itself, there is now growing evidence of possible airborne transmission of SARSCoV2.

SARS and the Precautionary Approach

- Justice Campbell was influenced by the experience of Vancouver General Hospital (VGH)
- VGH received's B.C.'s SARS index patient within a few hours of Toronto's Scarborough Grace Hospital (SGH) getting Toronto's index patient
- VGH isolated the patient within five minutes. Staff went to airborne precautions within 15 minutes.
- Toronto index patient was not isolated for nearly 21 hours, setting off the SARS outbreak in Toronto
- Some argued VGH was just lucky. Justice Campbell said VGH made its own luck by taking a precautionary approach.

WHO and the Failure to Learn from China

- China went to airborne precautions in late January in the face of mounting HCW infections using contract and droplet precautions.
- WHO China Mission found that China had been able to reduce transmission among health workers and in health care settings to very lower levels.
- Yet, it failed to tell the world that China had done this by taking a precautionary approach.
- Reference to China using airborne precautions buried in brief mention in a technical annex at the back of WHO China Mission Report
- This misleading omission never explained or corrected.
- Was this because it would have brought into question WHO's own worker safety guidance?
- Some suggest that if WHO had been transparent and frank it might have changed the course of health worker safety in Canada.
- CMAJ article erroneously suggested that Chinese health care workers infected as a result of airborne precautions

Western Exceptionalism

"I'd like to distinguish between the Chinese government and Chinese scientists and doctors because Chinese scientists and doctors actually worked tirelessly to describe this new disease, to sequence the genome of the virus, and to tell the world about it … The scientists in China actually did a spectacular job of tracking down this agent and telling the world about it. The failure was on behalf of Western governments to not taking their warnings seriously." Richard Horton, Editor of The Lancet

"From our Western arrogance, sometimes we believe that our systems are the best and there is nothing to be learned from other countries, especially, if you like, from the Asian continent." Dr. Saverio Stranges, chair, Department of Epidemiology, University of Western Ontario medical school

Canada’s Uncritical Adherence to WHO

- Late on border closing:

  Dr. Theresa Tam: “The WHO advises against any travel and trade restrictions, saying they are inappropriate and could actually cause more harm than good in terms of our global effort to contain.” (February 2020)

- **Late on public masking:**

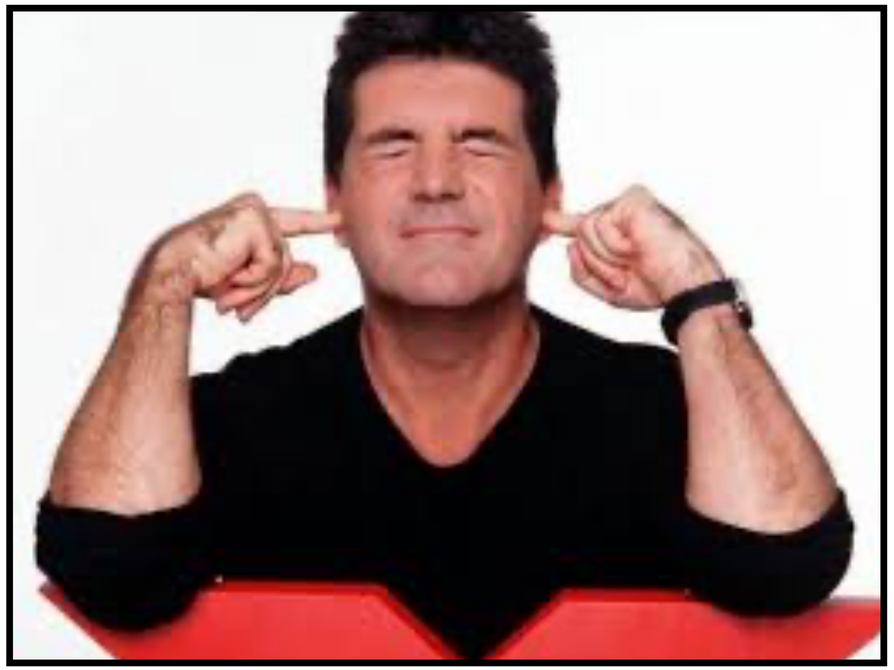
  Dr. Theresa Tam: “Putting a mask on an asymptomatic person is not beneficial, obviously, if you're not infected.” (March 2020)

- WHO did not recognize public masking until June 2020
- What is good for WHO not necessarily in Canada’s best interests

WHO and PHAC: The False Lure of Certainty

- On worker safety measures, public masking, border closings, etc., WHO and PHAC require the certainty of randomized controlled trials
- Vital for drug and vaccine safety
- Not applicable in worker safety
- There are no randomized controlled trials in community settings of hand washing, social distancing, closing schools, quarantining, closing borders or contact tracing
- “Natural experiments”

WHO and PHAC: Failure to Listen

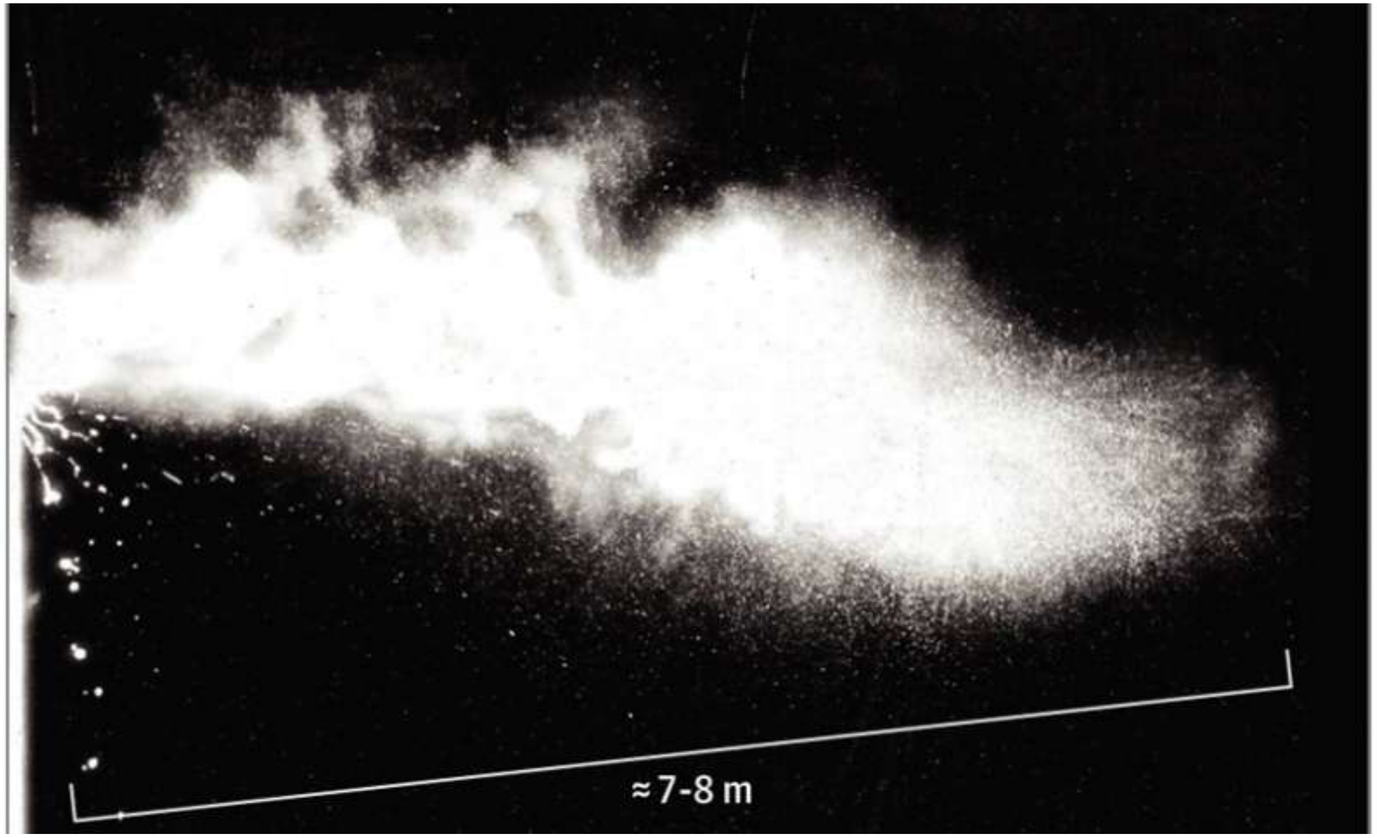


- On the possibility of airborne transmission, WHO and PHAC want the certainty required of drug and vaccine approvals.
- Worker safety experts say the point is not certainty, but safety
- June 2020 letter by 239 experts to WHO airborne transmission argued:

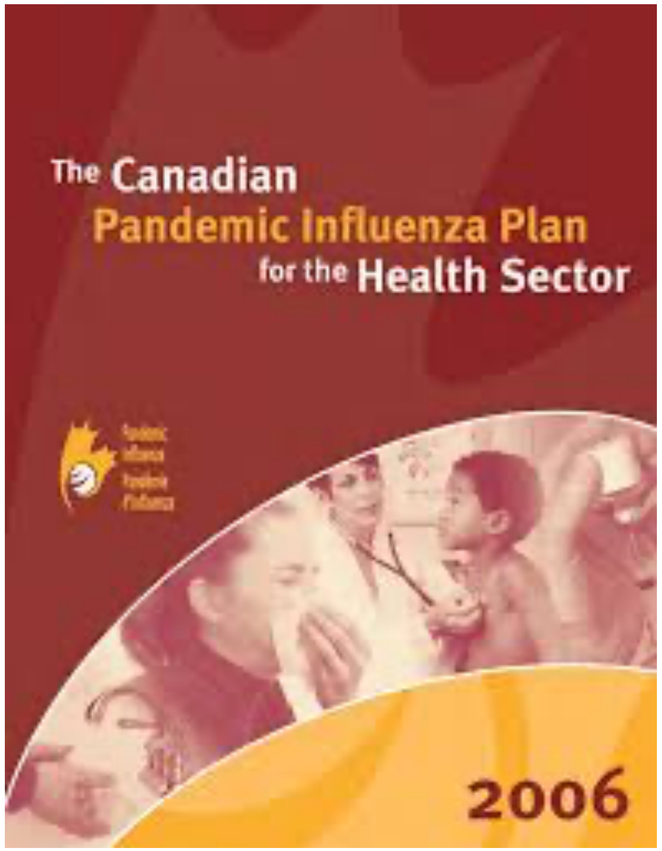
  “It is understood that there is not as yet universal acceptance of airborne transmission of SARS-110 CoV2; but in our collective assessment there is more than enough supporting evidence so that the precautionary principle should apply.”

WHO, PHAC and Debate Over Aerosol Transmission

"There [is] no way to humanly conduct the kind of experiment that would prove unequivocally that SARS-CoV-2 could infect people through respiratory aerosols.
It would involve putting healthy people in one room and COVID-19 patients in another, with only an air vent between them.
And you'd need to do it in large enough numbers to reach statistical conclusions.
No ethical body would sign off on such a study."
Dr. Lidia Morawska



Failure of Pandemic Preparedness



- Lesson of SARS: Stockpile N95 respirators
- Canadian Pandemic Plan silent on PPE stockpile, but very detailed on antivirals and vaccines
- Ontario destroyed as many as 55 million N95s in 2017
- Canada destroyed about two million N95s in 2019
- No one seems to have been worried about a lack of N95s
- Surprised that there were shortages
- Federal CMOH did not use her powers to warn Canadians and parliamentarians that Canada did not have enough PPE
- Require CMOH to certify annual preparedness for infectious disease public health emergency

Lack of Scientific Diversity

Dr. Benedetta Allegranzi, technical leader of the WHO task force on infection control, questioned the relevance of the expertise of many of the 239 signatories of letter to WHO:

> "There is this movement, which made their voice very loud by publishing various position papers or opinion papers …
>
> Why don't we ask ourselves … why are these theories coming mainly from engineers, aerobiologists, and so on, whereas the majority of the clinical, infectious-diseases, epidemiology, public health, and infection-prevention and control people do not think exactly the same? Or they appreciate this evidence, but they don't think that the role is so prominent?"

NIOSH - A Possible Model?

- An integral part of the CDC, NIOSH is among the world's top agencies in occupational safety and health research. It is committed to empowering "employers and workers to create safe and healthy work places."
- NIOSH's 1,300 employees come from a diverse set of fields including epidemiology, medicine, nursing, industrial hygiene, safety, psychology, chemistry, statistics, economics, and many branches of engineering.


QUESTIONS