



# SARS...

THE CANADIAN EXPERIENCE

A Presentation to the Kidney Community Emergency Response Coalition  
Pandemic Preparedness Response Team  
June 27, 2007  
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## SARS--Severe Acute Respiratory Syndrome

- Severe Acute Respiratory Syndrome -- or SARS -- is a mystery virus that that swept across parts of Asia and the Far East, and moved worldwide. The spread of the disease prompted Singapore and Hong Kong and parts of Canada to close certain public places and invoke a quarantine law affecting people thought to have had close contact with others who were infected with the disease.
- The main symptoms of SARS are high fever (greater than 38 C or 100.4 F), combined with a dry cough, shortness of breath, or breathing difficulties, with other possible symptoms including headache, muscular stiffness, loss of appetite, malaise, confusion, rash and diarrhea. A cocktail of drugs has been shown to be effective in combating the illness. SARS seems to be spread through close contact with an infected person, with the incubation period estimated to be between two and seven days.



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## Chronology of Events in Canada

- On February 23, 2003, Mrs. K, the 78-year-old matriarch of a large Scarborough, Ontario family, returned home from a visit to Hong Kong. Unknowingly infected with SARS after staying at the same hotel as a doctor from China's Guangdong Province, she died at home from apparent heart failure on March 5.
- Her son, Mr. T, was admitted to Scarborough Grace Hospital (Toronto, ON) on March 7. Suffering from a febrile respiratory illness, he waited in the crowded emergency ward for over 16 hours.
- During these hours he transmitted SARS to two other patients, sparking a chain of infection that spread through the Scarborough Grace Hospital, then to other hospitals through patient transfers and ultimately killed 44 and sickened more than 375 others.

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## SARS...THE CANDIAN EXPERIENCE

- SARS was a tragedy.
- In the space of a few months, the deadly virus killed 44 in Ontario and struck down more than 375 others with serious lung disease.
- It caused untold suffering to its victims and their families, forced thousands into quarantine, brought the health system in the Greater Toronto Area and other parts of the province to its knees and seriously impacted health systems in other parts of the country.

“SARS demonstrated how many earlier wake-up calls had been ignored, and how few of their warnings had been heeded.”

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## SARS...THE CANDIAN EXPERIENCE

- The Ontario Nurses' Association surveyed its members after the outbreak and found that almost two-thirds felt their health and safety had been compromised during the SARS outbreak. More than half felt their SARS work was not adequately respected or they were unsure if it was respected.
- Hospitals closed; cancer treatments and heart surgery were postponed. Patients were denied visitors. The sick and the dying suffered without the consolation of their families.
- The dead were disposed of quickly and in the absence of family and friends. The wider impact of SARS through cancelled heart surgery and delayed cancer treatments will never be known. And SARS was also an economic disaster for the country, the province and the GTA in particular.

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## What Went Right?

- Despite its deep flaws, the system was supported by people who demonstrated extraordinary commitment, hard work and courage in the fight against SARS.
- SARS could not have been contained in Toronto without the tremendous public cooperation and without the individual sacrifice of those who were quarantined.

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## What Went Wrong?

- SARS took hold because of a confluence of systemic weaknesses in worker safety, infection control and public health as well as serious shortcomings in health protection and emergency management laws.
- The public health system was broken, neglected, inadequate and dysfunctional. It was unprepared, fragmented, uncoordinated. It lacked adequate resources, was professionally impoverished and was generally incapable of fulfilling its mandate.
- Ontario was not prepared for a public health crisis like SARS. It didn't even have a pandemic plan.

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## What Went Wrong?

- There was a grave lack of worker safety expertise, resources and awareness in the health system, a lack whose impact was compounded by a similar lack of infection control expertise and resources.
- Not only that, but infection control and worker safety operated as two solitudes, and public health and hospitals operated as separate silos and the Ministry of Labour was sidelined.
- Also missing were two key components of a safe workplace: Neither internal responsibility systems nor joint health and safety committees were, in general, fulfilling their intended roles and responsibilities.
- The trust of health workers in the ability of government, safety laws, and their employers to safeguard them and their colleagues was broken. Health workers learned that those in charge were poorly informed and inadequately advised to make pronouncements on worker safety and personal protective equipment. A prime example was the lack of awareness throughout the health and hospital system of the legal requirement for respirator fit testing.

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## Were Precautions Relaxed Too Soon?

- In May 2003, the government implemented a series of measures that led to the relaxation of precautions on May 13, 2003 and to the lifting of the provincial emergency four days later.
- But SARS had not gone away.
- In hindsight it turned out to be a mistake because as soon as precautions were relaxed the SARS cases simmering undetected at North York General flared up into the second outbreak. But the decision was made at the time in good faith on the best medical advice available and after two incubation periods with no new detected cases did it appear appropriate to relax the precautions and institute the "new normal" with precaution levels higher than they were before SARS.
- Although the relaxation of precautions triggered the second outbreak, its more underlying cause has more to do with the lack of systems to ensure adequate surveillance.

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## Who Is There to Blame?

This was a system failure. The lack of preparation against infectious disease, the decline of public health, the failure of systems that should protect nurses and paramedics and doctors and all health workers from infection at work.

Accountability was so blurred during SARS that it is difficult even now to figure out exactly who was in charge of what.

Accountability means that when something goes wrong you know who to look for and you know where to find them. That kind of accountability was missing during SARS and remains blurred even today. What we need is a system with clear lines of authority and accountability to prepare us better for the next infectious outbreak.

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## Was Information Withheld?

- Bad communication is a steel thread throughout the story of SARS. Poor communication exacerbated a confusing and terrible time. This happened again and again.
- In February and early March 2003, health workers in Ontario, unlike their colleagues in B.C., were not alerted to the emergence of a mysterious new disease in China and Hong Kong.
- Until mid-May 2003, directives failed to remind employers of their worker safety legal obligations. And over and over when new hospital outbreaks were detected, there were inordinate delays before all workers who might have been exposed were contacted.
- Bad communication between governments and agencies and hospitals dominated.
- Although a real effort was made by government and public health to give the public timely and accurate information, performance was mixed.

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## Did Politics Intrude?



There was no political or economic pressure brought to bear on the health system or public health or hospitals in order to minimize or hide SARS or to say that a SARS case was not SARS or to declare prematurely that SARS was over.

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## Was SARS I Preventable?

- In short...NO
- It cannot be proven that SARS I could have been prevented if Ontario's systemic weaknesses in preparedness, surveillance, worker safety, infection control and public health had been adequately addressed before SARS. It is likely that SARS I could have been contained more quickly and with less damage had the right systems been in place in Ontario.
- In B.C., even if the province was luckier than Ontario in the presentation of its index case, SARS was, nonetheless, more effectively contained in a jurisdiction with better preparation and more robust and more collaborative worker safety, infection control and public health systems.

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## Was SARS II Preventable?

- The opportunity was greater to prevent SARS II than to prevent SARS I
- SARS II could have been caught earlier and its impact lessened had the right systems been in place.
- SARS spread primarily within the contained space of health workplaces that should be optimally prepared to protect patients, visitors and workers from infectious diseases.
- It occurred more than two months after Mr. T presented at Scarborough Grace Hospital. It is one thing to be caught off guard, as Ontario was, at the start of SARS. It is another to have failed to learn enough over a two-month period to prevent a major recurrence.

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## Were Health Workers Adequately Protected?

- Health care workers were not adequately protected. This is demonstrated by the heavy burden of disease on hospital workers, paramedics and others who worked in Ontario's health system during SARS.
- Two nurses and a doctor died from SARS. Other health workers fell ill, including paramedics, medical technicians and cleaners, and many of them unknowingly infected their families.
- Almost half of those who contracted SARS were health workers who got it on the job. The full extent of worker safety failings during SARS is revealed by the fact that workers continued to get sick in April and up to the end of May, long after the Scarborough Grace outbreak.
- Many factors contributed to this. There was a lack of worker safety resources and expertise in the health system heading into SARS. The health system generally did not understand its obligations under worker safety laws and regulations.
- There was a lack of understanding of occupational safety as a discipline separate from infection control. Infection control and occupational safety operated as two silos. The Ministry of Labour was largely sidelined during SARS; its ability to play a greater

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## Are We Safer Now?

- The short answer is yes, somewhat safer. The long answer that we are not yet as safe as we should be.
- Although the Ontario government and individual hospitals have taken significant steps to improve our level of protection from infectious outbreaks such as SARS following the SARS Commission recommendations, serious problems persist.
- Much remains to be done. We strive for a health system with robust and collaborative infection control, worker safety and public health functions.

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## 13. What Must Be Done?

SARS revealed a broad range of systemic failures:

1. the lack of preparation against infectious disease outbreaks,
2. the decline of public health,
3. the failure of systems that should protect nurses and paramedics and others from infection at work,
4. the inadequacy of infection control programs to protect patients and visitors to health facilities,
5. and the blurred lines of authority and accountability.

SARS demonstrated over and over the importance of the precautionary principle that we cannot wait for scientific certainty before we take reasonable steps to reduce risk. This principle should be adopted as a guiding principle throughout health, public health and worker safety systems.

SARS taught us that we must be ready for the unseen. SARS taught us that new microbial threats like SARS have happened and can happen again. And it gave us a first-hand glimpse of the even greater devastation a flu pandemic could create. There is no longer any excuse for governments and hospitals to be caught off guard, no longer any excuse for health workers not to have available the maximum reasonable level of protection through appropriate equipment and training, and no longer any excuse for patients and visitors not to be protected by effective infection control practices.

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## SARS and a Dialysis Unit Experience

- "The second incident occurred on the morning of Thursday June 5, when two nursing home residents arrived on site for their morning dialysis. They proceeded through the screening process at the door, answered the required questions. They had their temperatures taken, and were escorted to their dialysis chairs for treatment. However, unknown to the screeners, both of these patients are somewhat vague and may not have really understood the importance of the screening process. It was soon discovered that each patient was carrying a note from the nursing home informing us that they were symptomatic and should be treated as potential SARS cases.

I clearly remember the chill I felt when I was the nursing staff scrambling in to the protective gear. Very quickly, all staff entering our dialysis units were in gowns, masks, gloves and goggles. All patients were wearing masks and told not to remove them through the entire treatment. Working under these conditions is extremely difficult. The masks are hot and uncomfortable. Anyone wearing glasses often had problems seeing due to fogging because of the masks. Communication was not easy when facial expression is covered and sound is muffled. Stress levels were high because we were dealing with a new and unknown threat. However, we adjusted to these new procedures reasonably quickly over the weekend, but the situation got much worse the following week."

SARS BEETES, Stockwell, LLC



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