THE SARS COMMISSION

Executive Summary

Spring of Fear

Volume 1

The Honourable Mr. Justice Archie Campbell

December 2006

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VOLUME ONE

Dedication

This report is dedicated to those who died from SARS, those who suffered from it, those who fought the disease, and all those affected by it.

Letter of Transmittal

COMMISSION TO INVESTIGATE THE INTRODUCTION AND SPREAD OF SARS IN ONTARIO
The Honourable Archie Campbell
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December 11, 2006

The Honourable George Smitherman MPP
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Dear Mr. Minister:

Pursuant to the terms of reference, letter of appointment, and Order in Council establishing the independent SARS Commission I submit the attached third and final report.

Yours truly,

Archie Campbell
Commissioner

Introduction

SARS was a tragedy. In the space of a few months, the deadly virus emerged from the jungles of central China, killed 44 in Ontario and struck down more than 330[1] 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.

Nurses lived daily with the fear that they would die or infect their families with a fatal disease. The nine-year-old daughter of one nurse asked:

> Mommy, are you going to die?

Respiratory technicians, doctors, hospital workers, paramedics and home care workers lived with the same fear.

1. For the purpose of this report, the Commission will use the number of SARS cases presented at its public hearings by Dr. Colin D'Cunha on September 29, 2003: 247 probable cases and 128 suspect cases for a total of 375. These numbers were also contained in the final version of the Health Canada document "Canadian SARS Numbers" issued on September 3, 2003 (see http://www.phac-aspc.gc.ca/sars-sras/cn-cc/20030903_e.html). This was the final tally of SARS cases reconciled between Ontario authorities and Health Canada. It is this number (375) that is used in the report.

   A retrospective study by the Ministry of Health and affected public health units issued in July 2006 suggested there were 351 SARS cases in Ontario, 301 probable and 50 suspect. We may never know how many people actually had SARS. The numbers are uncertain because SARS mimicked other diseases such as community acquired pneumonia, because there was no ready diagnostic test and because governments never seemed able to agree fully on how to count the cases. The retrospective study of SARS cases in Ontario cautioned: "As a result of only including cases meeting the Health Canada definition, it is not possible to know the range of the clinical spectrum of SARS illness; this report would likely represent cases at the more severe end of the clinical spectrum for SARS. For example, there were children who were part of family clusters of SARS and had either fever or mild respiratory symptoms, but did not meet the clinical criteria of the case definition and were not included in the case count. Some of these children had serological testing and were positive for antibodies to SARS-CoV, therefore it is possible that SARS is a milder illness in children than in adults". (Ministry of Health and Long-Term Care, in conjunction with the SARS Outbreak Analysis Committee, "Descriptive epidemiology of the severe acute respiratory syndrome (SARS) outbreak" Ontario, Canada, 2003, July 2006).

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.

Their concerns were reflected in comments such as these:

> I was torn between staying and quitting because my husband was scared.
>
> Nobody listens to nurses.
>
> Totally devastating on family life.

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.

Things happened that should never have happened: deaths, unspeakable loss, untold suffering. Where should we direct our outrage, our anger?

The evidence discloses no scapegoats. 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 others from infection at work – all these declines and failures went on through three successive governments of different political stripes. So too, in a sense, we as citizens failed ourselves because we did not insist that these governments protect us better.

SARS taught us lessons that can help us redeem our failures. If we do not learn the lessons to be taken from SARS, however, and if we do not make present governments fix the problems that remain, we will pay a terrible price in the face of future outbreaks of virulent disease.

Why was Ontario so unprepared for SARS? Our public health and emergency infrastructures were in a sorry state of decay, starved for resources by governments of all three political parties. The health system's capacity to protect its workers was in a state of neglect: what little existed was badly malnourished. There was no system in place to prevent SARS or to stop it in its tracks. The only thing that saved us from a worse disas-

ter was the courage and sacrifice and personal initiative of those who stepped up – the nurses, the doctors, the paramedics and all the others – sometimes at great personal risk, to get us through a crisis that never should have happened. Underlying all their work was the magnificent response of the public at large: patient, cooperative, supportive.

But once is enough. If the deep systemic problems revealed by SARS are not fixed before the next crisis, will these individuals and the public step up once more? Will they throw themselves again into the breaches left open by the inaction of governments?

While SARS was a vicious disease, it presented us an opportunity to see a window into our strengths and weaknesses and to ask "what if" about many health issues. Asking those questions and holding governments accountable for their answers is the only way to ensure that we are protected when we are hit with the next outbreak or pandemic.

In the wake of SARS many questions arise, including:

Why does SARS matter today?
How bad was SARS?
What went right?
What went wrong?
Were precautions relaxed too soon?
Who is there to blame?
Was information withheld?
Did politics intrude?
Was SARS I preventable?
Was SARS II preventable?
Were health workers adequately protected?
Are we safer now?
What must be done?

This third and final Commission report, based on public hearings, government and hospital documents, and confidential interviews of more than 600 people connected with SARS, tells the story of SARS and addresses these questions.

The Commission's first interim report, in April 2004, addressed the deep problems of public health infrastructure in Ontario and what must be done to make us safer. The Commission's second interim report, in April 2005, addressed glaring deficiencies in Ontario health protection and emergency response laws and what must be done to correct them.

Although the Ontario government has taken significant steps to improve our level of protection from infectious outbreaks like SARS, serious problems persist and much remains to be done.[2]

Why should we care about SARS now, three years after the event?

We should care about SARS because we should never forget the loss and suffering, and we should never forget the courage shown by so many. We should care about SARS because it was a wake-up call and it holds the lessons we must learn to protect ourselves against future similar outbreaks and against the global influenza pandemic predicted by so many scientists.

On February 23, 2003, Mrs. K, the 78-year-old matriarch of a large Scarborough 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 (the Grace)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 330 others.

On March 7, British Columbia's index patient, who had stayed at the same hotel in Hong Kong as Mrs. K, was admitted to Vancouver General suffering from SARS, but there was no further spread. A combination of a robust worker safety and infection control culture at Vancouver General, with better systemic preparedness ensured that B.C. was spared the devastation that befell Ontario.

By contrast, at the Grace, the early chain of transmission from Mr. T to the first 84 cases, as shown in the following chart,[3] took place very quickly. The transmission of these 84 probable and suspect cases could be linked to the six members of the index family (the index case, her son and four members of the son's family).

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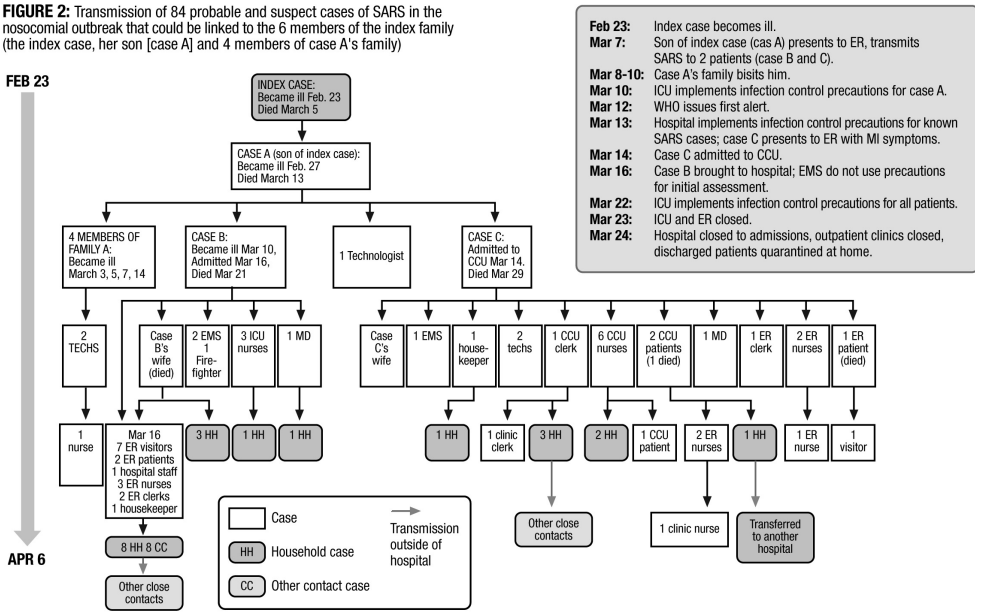
2. *The Health System Improvements Act*, 2006 was introduced to the Legislative Assembly on Tuesday December 12 after this report was in the hands of the typesetter. The Commission has had no opportunity to analyze it in detail and this footnote is added in the stage of proof correction. Bill 171 is a step forward in the sense that it proposes to implement approximately seven of the unimplemented recommendations of the Commission set out in the April 2004 and April 2005 interim reports. For concerns about the lack of accountability of the proposed CDC North to the Chief Medical Officer of Health see the recommendations in this final report.
3. Varia et al., "Investigation of a nosocomial outbreak of severe acute respiratory syndrome (SARS) in Toronto, Canada," Canadian Medical Association Journal 170, no. 6 (March 16, 2004): 927 (Varia et al., "Investigation of a nosocomial outbreak of SARS.").

FIGURE 2: Transmission of 84 probable and suspect cases of SARS in the nosocomial outbreak that could be linked to the 6 members of the index family (the index case, her son [case A] and 4 members of case A's family)



SARS spread rapidly from the Scarborough Grace Hospital through the Toronto-area hospital system. The largest group of victims was health workers, because occupational safety[4] and infection control systems,[5] which are supposed to act together seamlessly, one focused on safeguarding workers, the other on protecting patients,[6]

4. "The purpose of an Occupational Health (OH) program is to promote the health and well-being of employees by providing a safe and healthy workplace, to prevent or decrease transmission of infection to or from health care workers due to workplace hazards, including biohazards, and to adhere to legislation". (Health Canada, *Prevention and control of occupational infections in Health Care: An infection control guideline* [Ottawa: Health Canada, 2002], p. 1).
5. "Nosocomial infections, acquired by patients as a result of receiving health care, are under the purview of IC [Infection Control]" (Health Canada, *Prevention and Control of Occupational Infections in Health Care*, p. 2).
6. Close cooperation between these two medical disciplines is essential for the safe operation of a health care facility. Health Canada's *Prevention and Control of Occupational Infections in Health Care* (2002) states:

> A component of the OH [occupational health] program relates specifically to infection control and must be planned and delivered in collaboration with the Infection Control (IC) program of the workplace. While this document supports the close collaboration of OH personnel with those responsible for the IC program, it does not discuss measures that IC practitioners use to assess and control infections in the patient population. Rather, it notes the essential collaboration of both groups working together where responsibilities overlap, especially in the management of outbreaks. Various workplaces will define the distinct roles of OH and IC practitioners differently

failed to save them from harm. Two nurses and a doctor died. A provincial emergency was declared on March 26 and strict measures were taken to contain the outbreak. "Code Orange" froze hospital transfers and admissions, paralyzing the health system.

There was very little spread into the community. Community spread was stopped immediately by bold public health efforts and stringent quarantine measures. By the last week in April, the tough countermeasures had proved successful and the outbreak subsided.

Ironically, it was just then, on April 23, that the World Health Organization (WHO) issued a travel advisory against Toronto, an economic disaster for the city and the province. Ontario's Minister of Health and others flew to Geneva and the travel ban was revoked after a week.

On May 1, Ontario and Health Canada took out large newspaper ads saying "Canada Has Turned the Corner on SARS," that Toronto was safe for business and tourism. Muted declarations of victory were heard. Soon it became official. The emergency was lifted on May 17, the province breathed a big sigh of relief, infection control and worker safety precautions were relaxed, hospitals held celebrations and the health system returned to the "new normal."

Then something terrible happened. On May 23, officials called a press conference to announce that a few new SARS cases had been discovered at St. John's Rehabilitation Centre. It was revealed, almost as an afterthought, that a "few" patients at North York General Hospital also were being investigated for possible SARS. Under questioning by the media, the truth emerged. A major outbreak of SARS had erupted at North York General Hospital. SARS was back with a vengeance.

We know now that SARS never went away. It had continued to simmer undetected at North York General Hospital. As soon as precautions were relaxed in early May, the disease surged back and spread, again undetected, to patients, staff, visitors and their families.

Stringent infection control and worker safety precautions, so recently relaxed, were imposed once more. Health workers donned their N95 respirators and gowns and gloves again. As soon as precautions were reinstated, the disease again subsided. We

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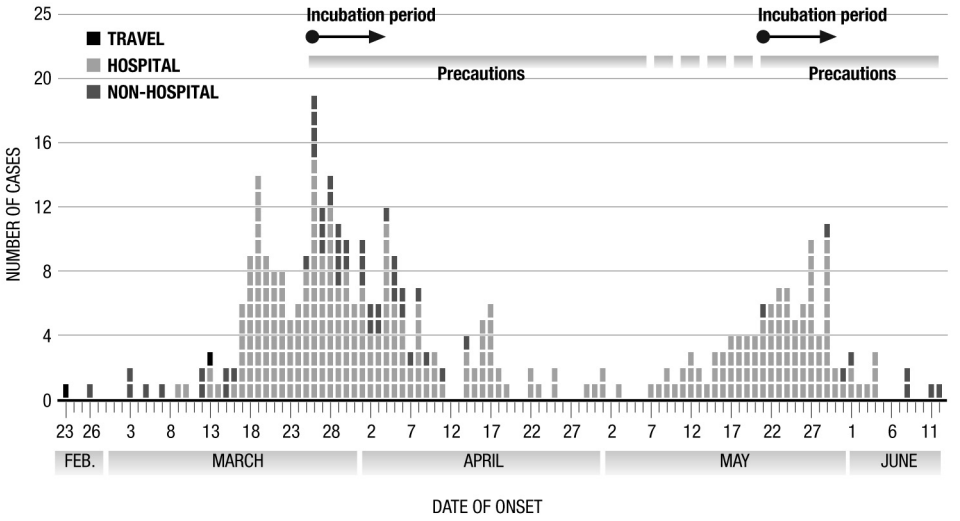
outbreaks. Various workplaces will define the distinct roles of OH and IC practitioners differently to suit their health care environment, p.17.

know now that behind the scenes a simple rule of nature was at work. Precautions up, disease down; precautions down, disease up. This chart[7] shows the remorseless pattern.

The Distribution of Cases in the Severe Acute Respiratory Syndrome (SARS) Outbreak in Ontario, Canada, from February 23 to June 12, 2003.



The second outbreak was devastating. In the end, 118 people contracted SARS through their affiliation or contact with North York General Hospital. Of these 118 people, 54 were health workers and 64 were patients or visitors.[8] Of these of the 127 people, 17 died. Of these 17, one was Nelia Laroza, a highly respected and much loved nurse who worked on 4 West, the orthopedic unit where SARS simmered undetected and undiagnosed. For those who fell ill and for those who lost loved ones, the cost of SARS II is immeasurable.

Whenever one speaks of cost, the cost to the government to protect us better, the cost to hospitals of better infection control, surveillance, and worker safety, we should never forget the cost of SARS in sickness, pain, suffering, and unspeakable loss.

The second outbreak also had a terrible impact on the morale of health workers. Many lost faith in the system and the ability of their employers to protect them. It was not only the public who had been led to believe that SARS was gone. Nurses and health workers were told that SARS was contained and that there were no new cases

7. Dr. Donald Low and Dr. Allison McGeer, "SARS – One Year Later," NEJM 349:25, December 2003.
8. Presentation of Dr. Colin D'Cunha, SARS Commission Public Hearings, September 29, 2003.

of SARS. SARS was over. Nurses at North York General, concerned about outbreaks of staff illness and clusters of SARS-like illness were told again and again by the hospital "Not SARS" when it turned out that these cases were in fact SARS.

On May 23rd, 2003, nurses and others at North York General learned, along with the rest of the world, that SARS was not in fact over. It was not contained. There were new cases of SARS right in their midst. Many of their colleagues were ill with SARS. In the coming days it turned out that 39 workers[9] at North York General had fallen ill with SARS, after they had been told SARS was over.

But yet again these nurses and doctors and clerks and technicians were asked to step into danger. And once again they did. Once again they risked their lives and health for the sake of others. What is it in their character and their professional culture that produced this courage? Will they heed that call the next time if they lack confidence that governments and hospitals will protect them better?

The stories of the outbreaks at Scarborough Grace Hospital and North York General Hospital reveal the systemic province-wide inadequacy of preparedness, infection control and worker safety systems. Common problems and themes emerge from the stories of both outbreaks. They reflect seven systemic problems that run like steel threads through all of SARS, through every hospital and every government agency.

- Communication
- Preparation, planning
- Accountability: who's in charge, who does what?
- Worker safety
- Systems: infection control, surveillance, independent safety inspections
- Resources: people, systems, money, laboratories, infrastructure
- Precautionary principle: action to reduce risk should not await scientific certainty

The lesson from the stories of Scarborough Grace and North York General, and others, is not that they deserve blame. The lesson is that because of systemic weaknesses what happened there could have happened at almost any other hospital in the province.

We must also remember that both Scarborough Grace Hospital and North York General are home to some of the finest and most dedicated physicians, nurses, administrators and health workers in Canada. Many of those doctors, nurses and

9 Presentation of Dr. Colin D'Cunha, SARS Commission Public Hearings, September 29, 2003.

other health workers worked tirelessly on the front lines during SARS, putting their lives at risk to help others. They watched their friends and colleagues fall ill, at times they had to care for them, all the while hoping they would not be next. As one Scarborough Hospital nurse so eloquently described her SARS experience:

> To watch this unfold, I don't have vocabulary to express it. Just thinking about it has been difficult. I think you can't comprehend especially SARS I how scary it was at that time because we had no idea. As we were shipping these people out to West Park and we are gloved, gowned and masked and you are reaching to touch these people not knowing if you will ever see them again, helping them get onto bus, all we knew in media was that people were dying. They probably had no idea what they were facing either. In my nursing career I have never faced anything so frightening. Looking back I think at the time because we were tired and we were working, because it was so surreal you didn't have the opportunity to absorb it. That's when the nightmares came. The going in circles, the questioning, did we do it right, could we have done it better?

One nurse from 4 West, the epicentre of the second outbreak at North York General Hospital, who worked the weekend of May 24 and 25, 2003, after learning that SARS was back and that many of her friends and colleagues were ill, recalled how afraid she and her family were, knowing she had to go back to work the next day, in the epicentre of the outbreak:

> I remember going Saturday morning and I said to my husband, he was in the other room, and I said, I'm going to go, but I am so afraid, and I saw my husband's face and we both had tears in our eyes because I thought I was the next one to get it. I was just so emotional. I just felt so awful. I have to go in, I'm still standing here, I haven't got SARS-well, to me I didn't have SARS-but I thought I was going to be the next one, cause all our nurses were falling down.

When she was asked by the Commission if she ever considered not going to work, she said:

> I was one of the ones that could go in, to help my work. I think it's your duty to go in as a nurse, to go to the last, to the very end.

These are the heroes of SARS. Nothing in this report detracts from their dedication, hard work and sacrifice. Nor does it detract from the distinction of the Scarborough

Hospital or North York General as excellent hospitals. To tell their stories is not to point fingers or assign blame, it is simply to tell what happened without any findings of civil or criminal liability and without any adverse finding against the hospitals or anyone associated with it.

The surprise is not that Ontario's response to SARS worked so badly, but that it worked at all, given the lack of preparation and systems and infrastructure. Despite these problems, and despite the inevitable mistakes with a new disease and a system unprepared for it, SARS was stopped by the front-line workers and the scientists and specialists who stepped up and who were not afraid to take the strong measures that worked in the end.

One of the most contentious issues during SARS was the N95 respirator, which was supposed to protect nurses and other workers during close contact with SARS patients.[10] Although Ontario law required, since 1993, that anyone using an N95 had to be properly trained and fit tested to ensure full protection, few hospitals complied with this law and some even denied its existence. Fit testing was the subject of official confusion and heated public debate. It became a lightning rod for all the underlying problems of worker safety in hospitals.

The real problem is not the N95 respirator but the deep structural contradictions in hospital worker safety. These problems include a profound lack of awareness within the health system of worker safety best practices and principles. They include the failure of the Ministry of Labour to proactively inspect SARS hospitals until June 2003, when the outbreak was virtually over. In B.C., by contrast, the workplace regulator took decisive action and began inspections in early April, wanting to ensure that workers were being protected from the start as required by law. The problems include those in hospital administration and health bureaucracies who resist advice and enforcement on hospital turf by independent worker safety experts and the provincial Ministry of Labour. Most important, the problems include Ontario's failure to recognize in hospital worker safety the precautionary principle that reasonable action to reduce risk, like the use of a fitted N95 respirator, need not await scientific certainty.

There were during SARS two solitudes: infection control and worker safety. Infection control relies on its best current understanding of science as it evolves over time. It is unnecessary to point out again that infection control failed to protect nurses during SARS.

10. The N95 was sometimes required in other areas of a hospital even when not caring for SARS patients. The provincial directives for the use of the N95 changed throughout SARS were not always clear or consistent.

Worker safety relies on the precautionary principle that reasonable action to reduce risk should not await scientific certainty. More will be said below about these two solitudes.[11]

The debate about the N95, respiratory protection and fit testing can be understood only in the context of the heavy burden of disease that fell on hospital workers, paramedics and others who worked in Ontario's health system during SARS. Two nurses and a doctor died from SARS. Almost half those who got SARS in hospital were people who got SARS on the job from working there.

Part of the heated debate during the SARS outbreak was over whether N95 respirators were really necessary. Those who argued against the N95, which protects against airborne transmission, believed SARS was spread mostly by large droplets. As a result, they said, an N95 was unnecessary except in certain circumstances and a surgical mask was sufficient in most instances. They made this argument even though knowledge about SARS and about airborne transmission was still evolving. That more and more studies[12] have since been published indicating the possibility under certain circumstances of airborne transmission, not just of SARS but of influenza,

11. This is a good place to note that Chief Medical Officer of Health Dr. Sheela Basrur has taken steps to improve this situation. Only time will tell if these steps are effective. Dr. Basrur notes in her letter of March 9, 2006, to Linda Haslam-Stroud, RN, President, Ontario Nurses Association:

> We recognize the need to ensure that the perspectives of occupational health and infection control receive consideration. In light of this, an occupational health physician is included in the membership of PIDAC and has been sitting on the committee since the inception of PIDAC in 2004. However, we see the importance in continuing to strengthen our links with the occupational health field and a physician delegate from the Ministry of Labour is now also sitting on PIDAC. This highlights our commitment to ensuring that occupational health and safety expertise is brought to the table during all PIDAC deliberations now and in the future. We are confident that building on this approach will assist in ensuring stronger linkages between occupational health and infection control on matters of science.

12. I.T.S. Yu, Y.Li, T.W. Wong, et al., "Evidence of airborne transmission of the severe acute respiratory syndrome," *New England Journal of Medicine* 350 (2004): 1731-1739; Chad J. Roy and Donald K. Milton, "Airborne transmission of communicable infection-the elusive pathway," *New England Journal of Medicine* 350 (2004), www.nejm.org; I.T.S. Yu et al., "Temporal-spatial analysis of severe acute respiratory syndrome among hospital inpatients," *Clinical Infections Disease* 40 (2005): 1237-1243; Booth et al., "Detection of airborne severe acute respiratory syndrome (SARS) coronavirus and environmental contamination in SARS outbreak units," *Journal of Infectious Diseases* 191 (2005): 1472-1477; Tommy R. Tong, "Airborne severe acute respiratory syndrome coronavirus and its implications," *Journal of Infectious Diseases* 191 (2005): ; National Academy of Sciences, *Reusability of Face Masks During an Influenza Pandemic* (Washington, D.C.: National Academy of Sciences, April 2006); R. Tellier, "Review of aerosol transmission of influenza A virus," *Emerging Infectious Disease* (November 2006), www.cdc.gov/ncidod/EID/vol12noll/06-0426.htm.

suggests the wisdom and prudence of taking a precautionary approach in the absence of scientific certainty.

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.

Until this precautionary principle is fully recognized, mandated and enforced in Ontario's hospitals, workers will continue to be at risk.

Of the almost 375 people who contracted SARS in Ontario, 72 per cent were infected in a heath care setting. Of this group, 45 per cent were health workers. Most of these workers were nurses whose jobs brought them into the closest contact with sick patients. And this does not show the full burden of SARS on nurses and paramedics and other health workers. In many cases nurses sick with undetected SARS brought illness, and in some cases death, home to their families.

One nurse answering the Ontario Nurses' Association questionnaire wrote:

> Fear … job not worth risk of dying. Lack of trust that nursing was being protected.

The Commission is not surprised that in Vancouver, with its greater systemic awareness of and commitment to worker safety, only one health worker contracted SARS.

Again and again, health workers in Ontario were told they were safe if they would only do what they were directed to by the hospitals and the government. Again and again, these confident scientific assurances turned out to be tragically wrong. The March 17 Scarborough Grace Hospital incident, the March 24 Mount Sinai Hospital incident, the April 13 Sunnybrook Hospital incident and the May 28 North York General Hospital incident show dramatically that the system, despite its scientific self-confidence, was incapable of protecting workers from SARS.

It is no wonder that health workers became alarmed when they saw their colleagues sicken and die. It is no wonder that they became angry when they saw such incidents recur again and again with no apparent improvement in their safety. Nurses protested that hospitals did not comply with the safety law that required that N95 respirators

had to be fitted to ensure proper protection.

It is easy to forget that everyone makes mistakes and that hospitals acted and continue to act in good faith. Ontario was not alone in its failure to protect health workers during SARS. The challenge of this new disease overcame the extent of their current scientific understanding. That is why it is better to forget dogmatic arguments based on current scientific understanding. That is why it is better to follow the precautionary principle that reasonable action to reduce risk should not await scientific certainty. And that is why 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.

Hospitals did their best within the limits of their lack of preparation, their generally inadequate infection control systems and their inadequate worker safety systems. Inevitably they made mistakes in the fog of war against an invisible enemy. There was no lack of good faith in the administration of the existing systems, flawed though they were. Hospitals learned a lot from SARS, and a lot is better now. Hospitals are more conscious of infection control and worker safety. North York General Hospital, for instance, now has infection control and worker safety systems that have earned the praise of its nurses.

The Ministry of Labour learned a lot too. It now has staff with health care–specific expertise, and it has conducted stringent proactive inspections of all acute care facilities.

Our hospitals still have a long way to go, especially in worker safety and with the pushback from some against outside advice and help from the safety standards community and the Ministry of Labour. Hospitals are dangerous workplaces, like mines and factories, yet they lack the basic safety culture and workplace safety systems that have become expected and accepted for many years in Ontario mines and factories and in British Columbia's hospital.

Some of the same Ontario hospital leaders who argued against the N95 respirator required to protect nurses and who actually denied there was a safety law that required the N95 to be fit tested[13] still insist that science, as it evolves from day to day, comes before 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

13. See "It's Not About the Mask."

await scientific proof. Ontario needs to enshrine this principle and to enforce it throughout our entire health system.

The Commission has not heard of any country or any health system that foresaw SARS. No one foresaw the sudden emergence of an invisible unknown disease with no diagnostic test, no diagnostic criteria, uncertain symptoms, an unknown clinical course, an unknown incubation period, an unknown duration of infectivity, an unknown virulence of infectivity, an unknown method of transmission, an unknown attack rate, an unknown death rate, an unknown infectious agent and origin, no known treatment and no known vaccine.

SARS taught us that we must be ready for the unseen. That is one of the most important lessons of SARS. Although no one did foresee and perhaps no one could foresee the unique convergence of factors[14] that made SARS a perfect storm, we know now that new microbial threats like SARS have happened and can happen again. However, there is no longer any excuse for governments and hospitals to be caught off guard and no longer any excuse for health workers not to have available the maximum level of protection through appropriate equipment and training.

14. See Institute of Medicine, Microbial threats to health: emergence, detection, and response, (March 2003). This paper noted, ironically just as SARS hit us, earlier warnings, and said, "We must do more to improve our ability to prevent, detect, and control emerging – as well as resurging – microbial threats to health." It warned presciently against a potentially "catastrophic storm of microbial threats."

Thirteen Essential Questions

Introduction

SARS raised serious questions. Thirteen of the most important ones are addressed here. Some answers are terribly clear. Were health workers adequately protected? Clearly not. Other answers are less obvious. Could SARS II have been prevented? If so, how? This section will summarize these answers as they emerge from the Commission's evidence and findings.

It is too easy after a public health crisis to assign individual blame. This is not to say in hindsight that mistakes were not made or that systems should not be blamed. But honest mistakes are inevitable in any human system. There is always more than enough blame to go around if good faith mistakes made in the fog of crisis are counted in hindsight as blameworthy.

The approach of this Commission as set out in its mandate and as reflected in its approach is not to apportion blame but to find out what happened, to figure out how to fix the problems revealed by SARS, to learn from these tragedies and to give a legacy of betterment to those who died, those who fell ill, those who suffered so much and those who fought it with such courage.

1. Why Does SARS Matter Today?

It is fair to ask, in respect of this final report, after so many reports and investigations, the Naylor Report and the Walker Report and the Commission's 2004 and 2005 interim reports, so what? What is gained now by telling in detail the story of SARS?

Why does SARS matter today, more than three years after the event, after the government and the media have moved on to other crises, after those who suffered from SARS have moved on as best as they can?

After every disaster like SARS the years recede and memories fade. There is always pain that has been forgotten, and things we choose not to recall. If we forget the suffering and courage seen in the SARS crisis we diminish the sacrifices of Tecla Lin, Nelia Laroza, Dr. Nestor Yanga and all those who died and those who suffered. Their suffering and courage should not be in vain.

We must remember SARS because it holds lessons we must learn to protect ourselves against future outbreaks, including a global influenza pandemic predicted by so many scientists. If we do not learn from SARS and we do not make the government fix the problems that remain, we will pay a terrible price in the next pandemic.

2. How Bad Was SARS?

The numbers, that 375 people contracted SARS and 44 died, do not tell the complete story of how bad SARS was. They do not reflect the unspeakable losses of families affected by SARS. They do not reflect the systemic failures that permitted these deaths and illnesses.

SARS had Ontario's health system on the edge of a complete breakdown. The wonder is not that the health system worked so badly during SARS, but that it worked at all. SARS also badly hurt Ontario's international reputation, setting up an unfortunate link in the minds of many in other countries between Toronto and a mysterious deadly disease.

Worst of all, SARS demonstrated how many earlier wake-up calls had been ignored, and how few of their warnings had been heeded. Many of the fault lines that appeared during SARS were identified by earlier investigations and commissions, notably the Krever Inquiry into tainted blood and the O'Connor Inquiry into tainted water.

SARS may be the last wake-up call we get before the next major outbreak of infection, whether it turns out to be an influenza pandemic or some other health crisis. That is why we cannot forget how bad SARS was, and how much terrible suffering and loss we must avoid the next time around. The tragedy of SARS, these stories of unbearable loss and systemic failure, give the public every reason to keep the government's feet to the fire in order to complete the initiatives already undertaken to make us safer from infectious disease.

3. What Went Right?

Despite its deep flaws, the system was supported by people of extraordinary commitment. What pulled us through was the hard work and the courage of those who stepped up and fought SARS. What went right in a system where so much went wrong is their dedication in the midst of chaos and enormous workload pressures. It was a tireless fight in the fog of battle against a deadly and mysterious disease. We should be humbled by their efforts.

SARS produced so many heroes that it is impossible to identify them all and no attempt has been made to do so. Some happen to be mentioned in this report when their names are essential to the narrative.

One hero was the public, which rose magnificently to meet the challenge. Any fight against infectious disease depends above all on public cooperation. SARS could not have been contained in Toronto without the tremendous public cooperation and without the individual sacrifice of those who were quarantined. It is essential to ensure that the spirit of cooperation shown during SARS is not taken for granted. It must be nurtured and promoted.

4. What Went Wrong?

SARS took hold because of a confluence of systemic weaknesses in worker safety, infection control and public health. The Commission's first interim report identified 21 deep systemic flaws in public health infrastructure. The second interim report identified serious shortcomings in health protection and emergency management laws. This final report identifies further areas of unresolved problems, particularly in the domain of health worker safety. Because of these systemic weaknesses, SARS was a disaster waiting to happen.

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.

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.

5. 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 and to the lifting of the provincial emergency four days later. But SARS had not gone away. How could victory over SARS have been declared when it was spreading undetected at North York General Hospital? Were precautions relaxed too soon?

Knowing when to announce the "all clear" is very difficult. There were similar instances during the Spanish flu pandemic of 1918–1919, when victory was declared too early. Decision makers are in a tough spot during a public health emergency. React too early in a preventive mode and they may be accused of having generated another "swine flu" problem. Lift precautions too early and they may be accused of recklessness and bowing to political pressure.

There is no easy answer to the question of whether precautions were lifted too soon. 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.

As noted in the report, one of the underlying reasons for the second outbreak was the lack of any system to ensure surveillance of the kind that would have detected the North York General cases before they spread. 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.

6. Who Is There to Blame?

No one. The evidence throws up no scapegoats. This will disappoint those who seek someone to blame.

It is too easy to seek out scapegoats. The blame game begins after every public tragedy. While those who look for blame will always find it, honest mistakes are inevitable in any human system. There is always more than enough blame to go around if good faith mistakes made in the heat of battle are counted in hindsight as blameworthy.

More important than blame is to find out what happened, to figure out how to fix the problems, to learn something from these tragedies, to give a legacy of betterment to those who died and those who fell ill and those who suffered so much.

This was a system failure. We were all part of it because we get the public health system and the hospital system we deserve. We get the emergency management system we deserve and we get the pandemic preparedness we deserve. 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, all these declines and failures went on through three successive governments of different political stripes. We all failed ourselves, and we should all be ashamed because we did not insist that these governments protect us better.

It is also hard to find blame because blame requires accountability. 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.

7. Was Information Withheld?

There is no evidence that information was deliberately withheld. But there is much evidence of serious communication failure.

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 is evidenced in many cases throughout this report. Although a real effort was made by government and public health to give the public timely and accurate information, performance was mixed. In some instances public communication was excellent, as in the work of Dr. Sheela Basrur, the Chief Medical Officer of Health for Toronto. In some instances, like the disastrous May 23 press conference, public communication was like a train wreck.

8. Did Politics Intrude?

The Commission finds on the basis of the evidence and analysis set out in this chapter that 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.

9. Was SARS I Preventable?

There is an element of speculation in any attempt to say whether a disaster could have been prevented by this measure or that measure. History is full of what-ifs. Like every other historical what-if, there is an element of speculation in any attempt to say whether the SARS disaster could have been prevented, by earlier isolation and investigation, by a differently configured emergency room, by different infection control procedures, worker safety precautions or training or alertness.

The short answer is no, SARS I was not preventable. No country escaped SARS entirely. Vancouver certainly did better than Toronto. Although the presentation of the index cases was much different in each case, there are enough similarities to warrant comparison in terms of preparedness and worker safety systems. There was undoubtedly an element of good fortune that saved Vancouver from the devastation that SARS wrought on Ontario. But it must also be said that Vancouver made its own luck with better preparedness and systemic strengths.

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.

British Columbia provides a useful example of how well things can work and how well health workers can be protected when there is a strong safety culture. It provides an example of how things can and should work in Ontario.

10. Was SARS II Preventable?

We will never know if SARS II could have been prevented.

What can be said, for the reasons set out below, is that the opportunity was greater to prevent SARS II than to prevent SARS I, and that SARS II could have been caught earlier and its impact lessened had the right systems been in place.

First, as a mostly nosocomial outbreak, SARS spread primarily within the contained space of health workplaces. Unlike a flu pandemic, it did not spread uncontrollably in the community. Second, it spread precisely in the kind of workplaces that should be optimally prepared to protect patients, visitors and workers from infectious diseases. Third, 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.

The problem was that these factors, which should have made it easier to prevent and control SARS II, were undermined by the many systemic flaws revealed by SARS, including insufficient surveillance, inadequate infection control expertise and resources, a lack of worker safety resources and expertise, blurred accountability, and inadequate communication systems between hospitals and public health.

11. Were Health Workers Adequately Protected?

The answer is no. It is tragically clear that health 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. It would have been one thing if all had been infected at the start of the outbreak when little was known about the disease. 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.

Table 1 – Probable and Suspect SARS Cases Contracted in Health Care Settings[15]

Category	Phase 1	Phase 2	Total Number of Suspect and Probable Cases	Percentage of Total Number of Cases (375)
Health Workers	118	51	169	45%
Patients	23	35	58	15%
Visitors	20	23	43	11%
Total	161	109	270	72%

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 solitudes. The Ministry of Labour was largely sidelined during SARS; its ability to play a greater

15. Presentation of Dr. Colin D'Cunha, SARS Commission Public Hearings, Sept. 29, 2003.

enforcement and regulatory role as required by law to protect workers had been seriously undermined by funding and resource cuts in the 1990s.

12. 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.

The Commission's first interim report, in April 2004, addressed the deep problems of public health infrastructure in Ontario and what must be done to make us safer. The Commission's second interim report, in April 2005, addressed glaring deficiencies in Ontario's health protection and emergency response laws and what must be done to correct them.

Although the Ontario government and individual hospitals have taken significant steps to improve our level of protection from infectious outbreaks such as SARS, serious problems persist. Much remains to be done. What has been accomplished thus far, though commendable, marks the beginning of the end of the effort to fix the problems revealed by SARS. The end will not be reached until Ontario has a health system with robust and collaborative infection control, worker safety and public health functions.

As the Commission's second interim report said:

> After long periods of neglect, inadequate resources and poor leadership, it will take years of sustained funding and resources to correct the damage.[16]

13. What Must Be Done?

SARS revealed a broad range of systemic failures: the lack of preparation against infectious disease outbreaks, the decline of public health, the failure of systems that should protect nurses and paramedics and others from infection at work, the inade-

16. SARS Commission, second interim report, p. 297.

quacy of infection control programs to protect patients and visitors to health facilities, and the blurred lines of authority and accountability.

SARS taught us lessons that can help us redeem our failures. These lessons are reflected in the Commission's recommendations for change.

Perhaps the most important lesson of SARS is the importance of the precautionary principle. SARS demonstrated over and over the importance of the 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 Ontario's health, public health and worker safety systems.

If we do not learn this and other lessons of SARS, and if we do not make present governments fix the problems that remain, we will leave a bitter legacy for those who died, those who fell ill and those who suffered so much. And we will pay a terrible price in the face of future outbreaks of virulent disease, whether in the form of foreseen outbreaks like flu pandemics or unforeseen ones, as SARS was.

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.

As the Commission warned in its first interim report:

> Ontario … slept through many wake-up calls. Again and again the systemic flaws were pointed out, again and again the very problems that emerged during SARS were predicted, again and again the warnings were ignored.
>
> The Ontario government has a clear choice. If it has the necessary political will, it can make the financial investment and the long-term commitment to reform that is required to bring our public health protection against infectious disease up to a reasonable standard. If it lacks the necessary political will, it can tinker with the system, make a token

investment, and then wait for the death, sickness, suffering and economic disaster that will come with the next outbreak of disease.

The strength of the government's political will can be measured in the months ahead by its actions and its long-term commitments.[17]

17. SARS Commission, first interim report, p. 210.

Recommendations

Introduction

The first interim report, *SARS and Public Health in Ontario*, focused on public health renewal. The Commission said:

> Because government decisions about fundamental changes in the public health system are clearly imminent, this interim report on the public health lessons of SARS is being issued at this time instead of awaiting the final report … The fact that the Commission must address public health renewal on an interim basis is not to say it is more important than any other urgent issue such as the safety and protection of health care workers. It is simply a case of timing.[18]

The Commission set out 21 principles for reforming the shortcomings of the public health system demonstrated by SARS. It also made recommendations to address urgent problems that had to be corrected to prevent another tragedy like SARS, including a lack of provincial public health leadership, insufficient public health capacity and resources, inadequate provincial laboratory capacity, a lack of central public health coordination and expertise, an absence of public health emergency preparedness, and a lack of public health links with hospitals, health workers and others.

The second interim report, *SARS and Public Health Legislation*, focused on public health legislation. The Commission said:

> This second interim report deals with legislation to strengthen the *Health Protection and Promotion Act* and to enact emergency powers for public health disasters like SARS or flu pandemics. It is produced now to respond to current government plans for further amendments to *Health*

18. SARS Commission, first interim report, p. 1.

> *Protection and Promotion Act* and radical changes to the *Emergency Management Act*.[19]

The Commission made recommendations regarding Chief Medical Officer of Health independence and leadership, local public health governance, public health legal preparedness and emergency legislation, public health resources, and overhauling the *Health Protection and Promotion Act*, including strengthening health protection powers and clarifying infectious disease reporting requirements.

This third and final report makes recommendations arising from the story of how SARS devastated Ontario and was not contained until 375 people contracted the disease and 44 died. Not surprisingly in an outbreak where nurses, doctors and other health workers constituted the largest single group of SARS cases, many of the recommendations address worker safety issues. As the Commission noted in its second interim report:

> Suggestions have been received for legislation to strengthen occupational health and safety protection for health workers. That issue will be dealt with in the final report. Occupational health and safety is a vital aspect of the Commission's work.[20]

The Commission benefited greatly from written and oral submissions delivered during the course of the public hearings and in response to several calls for submissions from the beginning to the end of the investigation. Many submissions and presentations from the public hearings are on the Commission's website.

The submissions from government, hospitals, unions and many sectors of the health community noted significant improvements since SARS and significant areas where more needs to be done. These submissions constitute just under a banker's box of material. This material, together with all public records of the Commission's work, have been transmitted to the Archives of Ontario[21] and will be available to the public according to archival policy.

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19. SARS Commission, second interim report, p. 1.
20. SARS Commission, second interim report, p. 1.
21. The Commission has transmitted to the Archives of Ontario all non-confidential material. The Commission's report is by its terms of reference subject to Ontario's privacy and freedom of information legislation, in the sense that the report itself is publicly available and must respect the confidentiality of personal health information. Because the Commission is independent from government, its confidential work product is not subject to those statutes. Much of the

Precautionary Principle

In *The Commission of Inquiry on the Blood System in Canada*, Mr. Justice 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.[22]

The importance of the precautionary principle that reasonable efforts to reduce risk need not await scientific proof was demonstrated over and over during SARS. The need to apply it better is noted throughout this report.

One example was the debate during SARS over whether SARS was transmitted by large droplets or through airborne particles. The point is not who was right and who was wrong in this debate. 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.

A precautionary approach also was in use at Vancouver General Hospital when it received B.C.'s first SARS case on March 7, 2003, the same day Ontario's index case presented at Scarborough Grace Hospital. When dealing with an undiagnosed respiratory illness, health workers at Vancouver General automatically go to the highest level of precautions, and then scale down as the situation is clarified. While the circumstances at Vancouver General and the Grace were different, it is not surprising that SARS was so effectively contained at an institution so steeped in the precautionary principle.

In Ontario there was a systemic failure to recognize the precautionary principle in health worker safety, and in the identification and diagnosis of a respiratory illness that mimicked the symptoms of other, better-known diseases. Amid this systemic absence of the precautionary principle, it is not surprising that in Ontario, unlike in Vancouver, SARS caused such devastation, infecting 375 people, including 169 health workers, and killing 44, including two nurses and a physician.

Commission's work product consists of confidential informant interviews, notes and documents produced or obtained under a promise of confidentiality that attracts in law.

22. The Krever Report, p. 295; see also pp. 989-994.

The Commission therefore recommends:

- That the precautionary principle, which states that action to reduce risk need not await scientific certainty, be expressly adopted as a guiding principle throughout Ontario's health, public health and worker safety systems by way of policy statement, by explicit reference in all relevant operational standards and directions, and by way of inclusion, through preamble, statement of principle, or otherwise, in the *Occupational Health and Safety Act,* the *Health Protection and Promotion Act*, and all relevant health statutes and regulations.

- That in any future infectious disease crisis, the precautionary principle guide the development, implementation and monitoring of procedures, guidelines, processes and systems for the early detection and treatment of possible cases.

- That in any future infectious disease crisis, the precautionary principle guide the development, implementation and monitoring of worker safety procedures, guidelines, processes and systems.

Public Health System

SARS showed that Ontario's public health system is broken and needs to be fixed. Since then, while much progress has been made, after long periods of neglect, inadequate resources and poor leadership, much more remains to be done. Every recommendation to the Commission in respect of public health noted the need for more resources.[23]

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23. One of the best examples is the July 19, 2006, submission by Dr. David McKeown, the Toronto Medical Officer of Health, who noted in particular these six problems:

    1. The role and authority of Public Health with respect to non-reportable diseases must be strengthened.

    2. The reporting capability of iPHIS [the integrated Public Health Information System] must be improved. In addition, the Ministry of Health and Long-Term Care (MOHLTC) must move forward more rapidly to enable electronic reporting of cases from laboratories, hospitals and physicians to local Public Health.

    3. The MOHLTC and the College of Physicians and Surgeons of Ontario must develop mech-

As the Commission's second interim report said:

> As the province moves into the latter stages of Operation Health Protection, stages when significant funding will be required, the challenge will be to provide the necessary resources to sustain the momentum for change despite the government's other budgetary pressures.
>
> The point has to be made again and again that resources are essential to give effect to public health reform. Without additional resources, new leadership and new powers will do no good. To give the Chief Medical Officer of Health a new mandate without new resources is to make her powerless to effect the promised changes. As one thoughtful observer told the Commission:
>
> > The worst-case scenario is basically to get the obligation to do this and not get the resources to do it. Then the Chief Medical Officer of Health would have a legal duty that [he or she] can't exercise.
>
> To arm the public health system with more powers and duties without the necessary resources is to mislead the public and to leave Ontario vulnerable to outbreaks like SARS.[24]

SARS also disclosed many problems with the *Health Protection and Promotion Act* that

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anisms to enable all licensed physicians in the province to receive urgent health alerts electronically.

4. The MOHLTC must clarify the role and authority of Public Health with respect to infection control in hospitals and other institutions.

5. Overall public health capacity must be strengthened. This requires an enhanced budget, not just a change in the cost-sharing formula. In addition the human resources issues are serious and growing, in particular with respect to Community Medicine physician specialists who are critical in an infectious disease emergency.

6. The full independence of the Chief Medical Officer of Health role is required. The current position combines this independent role, which may lead to conflict between government interests and health needs of the public.

24. SARS Commission, second interim report, p. 303.

were the subject of extensive recommendations in the second interim report.[25] These included problems arising from the necessary use of a blunt instrument like the Code Orange status, and confusion about infectious disease reporting obligations.

The Commission therefore recommends:

- That the Government complete the process of fixing the public health system, including:
  - — Conducting the major overhaul of the *Health Protection and Promotion Act* recommended in the Commission's second interim report to remove dangerous uncertainties like the confusion about infectious disease reporting obligations that occurred during SARS, and to provide authorities with the ability to provide a more tightly focused response than was possible under the blunt instrument of the Code Orange status;
  - — Completing the review of the Mandatory Health Programs and Services Guidelines, and moving from a system of guidelines to a more accountable one based on performance-linked program standards;
  - — Establishing the Ontario Health Protection and Promotion Agency;
  - — Revitalizing the Central Public Health Laboratory; and
  - — Providing sufficient and sustained funding for public health.

Ontario Agency for Health Protection and Promotion, and the CMOH

Although there is much wisdom in the proposal for an Ontario Agency for Health Protection and Promotion, the recommended structure[26] fails to take into account the major SARS problem of divided authority and accountability.

25. SARS Commission, second interim report, pp. 404-416.
26. See Final Report of the Agency Implementation Task Force, *From Vision to Action: A Plan for the Ontario Agency for Health Protection and Promotion*, March 2006; Report of the Agency Implementation Task Force, *Building an Innovative Foundation: A Plan for the Ontario Agency for Health Protection and Promotion*, October 2005.

As the Commission noted in its second interim report:

> … the SARS response was also hamstrung by an unwieldy emergency leadership structure with no one clearly in charge. A *de facto* arrangement whereby the Chief Medical Officer of Health of the day shared authority with the Commissioner of Public Safety and Security resulted in a lack of clarity as to their respective roles which contributed to hindering the SARS response.[27]

An important lesson from SARS is that the last thing Ontario needs, in planning for the next outbreak and to deal with it when it happens, is another major independent player on the block.

The first report of the Agency Implementation Task Force said:

> A body at arm's-length from the government was recommended in the Walker, Campbell and Naylor reports, was a commitment in *Operation Health Protection* and aligns with the successful experience of the INSPQ [L'Institut national de santé publique du Québec].[28]

The Commission in fact recommended a much different arrangement in its first interim report, and warned against creating another "silo," another autonomous body, when SARS demonstrated the dangers of such uncoordinated entities:

> First, the structure of the new agency or centre, which will combine advisory and operational functions, must reflect the appropriate balance between independence and accountability whether it is established as a Crown corporation or some other form of agency insulated from direct Ministerial control.
>
> Second, it should be an adjunct to the work of the Chief Medical Officer of Health and the local Medical Officers of Health, not a competing body. SARS showed that there are already enough autonomous players on the block who can get in each other's way if not properly coordinated. There is always a danger in introducing a semi-autonomous body into a

27. SARS Commission, second interim report, p. 323.
28. Report of the Agency Implementation Task Force, *Building an Innovative Foundation: A Plan for the Ontario Agency for Health Protection and Promotion*, October 2005, p. 16.

> system like public health that is accountable to the public through the government. The risk is that such a body can take on a life of its own and an ivory tower agenda of its own that does not necessarily serve the public interest it was designed to support.[29]

Consequently, the Commission recommended that the Chief Medical Officer of Health have a hands-on role at the agency, including a seat on the board.[30]

The Agency Implementation Task Force took a completely opposite approach, recommending against giving the Chief Medical Officer of Health a seat as a voting member of the board, and recommending a very autonomous role for the agency.

This proposed arrangement ignores important lessons from SARS.

The Commission, far from recommending a completely arm's-length organization, pointed out the need for the Chief Medical Officer of Health to be in charge with the assistance of the agency, which should, albeit with a measure of policy independence, be operationally accountable to the Chief Medical Officer of Health.

The Commission therefore recommends:

- That the government reconsider in light of the lessons of SARS the Agency Implementation Task Force's recommendation regarding the relationship between the Chief Medical Officer of Health and the agency.

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29. SARS Commission, first interim report, p. 19.
30. The first interim report said:

> To ensure that the new Ontario agency complements the service mandate of the public health system, the relationship must be clear between the new Ontario agency and the Chief Medical Officer of Health. Unless he or she has a clear say in the ongoing work and overall direction of the agency, and the ability to mobilize the resources of the agency to meet a public health problem when required, the agency will not fulfill its role as a source of support to public health operations. The Chief Medical Officer of Health must have more than a token role in the direction of any such agency. If the new agency is to have a Board of Directors, the Chief Medical Officer of Health, if not its Chair, should be at least its Associate Chair. To the extent the agency is operational as opposed to purely advisory, the Chief Medical Officer of Health must, in the face of a public health problem, be able to direct the operational resources of the agency so as best to meet the problem at hand, whether the resources are epidemiological, laboratory, or other.

SARS Commission, first interim report, p. 188.

Emergency Plans for Orderly Hospital Closure

Before SARS no one was prepared for the possibility that a hospital might need to be closed to contain an infectious disease outbreak. Yet this is what happened on three occasions during SARS, at the Scarborough Grace Hospital, York Central Hospital and North York General Hospital. No one in Ontario had had to do this before. SARS demonstrated the immense difficulty of closing a hospital in the middle of an outbreak, when no one had done it before, when no one had planned for this possibility, and when no exercises and education had been conducted to train staff on how to do it. It is to the credit of all those involved in closing Scarborough Grace, York Central and North York General that they accomplished the task despite having never had the experience of and knowledge from doing so before.

The Commission therefore recommends:

- The development of emergency plans for orderly hospital closure to avoid problems of the kind that arose at the Grace, York Central and North York General, to cover all eventualities and in particular:

  — Effective means for immediately notifying staff at the institution of any potential risk.

  — Effective means for immediately notifying staff not on duty at the institution of any potential risk.

  — Systems for rapidly securing the names and tracing information of everyone at the hospital at the time including visitors to patients.

  — Amendment of the *Health Protection and Promotion Act* to ensure duty to identify for purpose of public health tracing.[31]

31. The second interim report said:

> A submission to the Commission from a group of experts, who were all closely involved in the SARS response, recommended that the reporting sections of the *Health Protection and Promotion Act* be amended to support the work of health units in tracing the contacts of patients with infectious diseases:
>
> > The current HPPA does not give specific reference to contacts of infectious cases. Release of information on the cases as well as contacts is essential for infectious disease control. This was a major obstacle during the management of the SARS outbreak. We believe that

— Prearranged, rehearsed protocols for police assistance.

— Immediate medical backup for those dependent on the hospital, such as obstetrics, dialysis and oncology.

— Effective means for immediately informing the public, families of patients and the wider hospital community.

- That hospital emergency closing plans be rehearsed and reviewed on a periodic basis to reflect lessons learned in training exercises and emergency management best practices.

Effective Distribution of Outbreak Alerts

When Mr. T presented to the Grace on March 7, 2003, health workers did not know to be on the lookout for unusual respiratory illnesses. Unlike their counterparts in B.C., they had not been alerted to the emergence of a mysterious new disease in China and Hong Kong. Three years after SARS, public health officials told the Commission there is still no means to communicate quickly and effectively with Ontario's physicians. SARS demonstrated that alerts and other communications need to quickly reach all workplace parties, including employers, health workers, unions and Joint Health and Safety Committees.

The Commission therefore recommends:

- That the Ministry of Health develop and implement an effective means to alert all workplace parties, including health workers,

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the requirement to report contacts referred to specifically in the legislation will allow practitioners to provide this information to their medical officer of health.

The amendments to Regulation 569, effected in Regulation 01/05, address this issue.

Contacts initially identified or later traced are included in most of the lists specifying additional information that must be reported to the medical officer of health. In particular, it is included in the case of SARS, TB, influenza and febrile respiratory illness. This means that those who have reporting obligations under the Act are now required to provide contact information.

Source: SARS Commission, second interim report, p. 199.

employers, unions and Joint Health and Safety Committees, in a timely manner about infectious disease threats.

- That in preparation for the possibility of a public health crisis like SARS or a pandemic, health institutions develop and implement effective means to communicate to their workers information regarding the outbreak, the health risk, the containment strategy, and measures to protect workers, patients and visitors.

Directives

Directives on N95 respirators and other worker safety issues were prepared without appropriate oversight by the Ministry of Labour, adequate input from worker safety experts, and sufficient participation by workplace parties including unions, employers and Joint Health and Safety Committees. The inadequacies of directives do not reflect on those who prepared them, and who deserve praise for their remarkable effort under difficult circumstances with insufficient resources, infrastructure or planning. Regardless of the reasons for the directives' failings, the reality is that for most of the outbreak they failed to provide the detailed advice that health workers, their supervisors and their employers needed. Workplace parties also reported their continuing difficulties in providing feedback to the Provincial Operations Centre on issues that arose when implementing directives.

The Commission therefore recommends:

- That in any future infectious disease crisis, the preparation of directives involving worker safety be supervised, reviewed and approved by the Ministry of Labour in a process that is transparent and easily understood by all workplace parties.

- That in any future infectious disease crisis, directives involving worker safety be jointly prepared by infection control and worker safety experts to reflect their overlapping responsibilities and thereby ensure that patients, workers and visitors are kept safe.

- That in any future infectious disease crisis, directives involving worker safety be prepared with input from the workplace parties who have to implement them, including employers, health worker representatives and Joint Health and Safety Committees.

- That in any future infectious disease crisis, directives and other communications involving worker safety reference the specific applicable sections of the *Occupational Health and Safety Act*, and its regulations, so that employers and workers are fully informed of worker safety legal requirements.

- That the Ministry of Labour and the Ministry of Health cooperate in developing and implementing an effective communication system for receiving timely feedback from workplace parties, including employers, unions and Joint Health and Safety Committees, regarding any problems encountered when implementing worker safety directives, policies, procedures and systems.

- That when issuing any communication affecting worker safety, the Ministry of Health consult with the Ministry of Labour, and ensure that there are clear, specific references to relevant worker safety laws, regulations, guidelines and best practices, and that employers are fully informed of their legal obligations to protect workers.

Effective Crisis Communication

There were many systemic problems with crisis communications during SARS. Workplace parties, including unions and the Ministry of Labour, told the Commission of their difficulties in receiving directives in a timely manner and in gaining access to Ministry of Health websites. Employers and workers' representatives often had great difficulty in receiving timely responses to questions to the Provincial Operations Centre, Ministry of Health and the Ministry of Labour, on important issues, including work refusals, safety of pregnant workers, and safety of immunocompromised workers. Workers' representatives also said they were not aware of such internal Ministry of Labour documents as the 1984 agreement with the Ministry of Health and the protocol dated April 2, 2003. In some cases, media reports were more informative on SARS than communications by health institutions to their workers.

The Commission therefore recommends:

- That the Ministry of Labour and the Ministry of Health cooperate in developing and implementing an effective communication system to ensure that in the event of an infectious disease outbreak all workplace parties, including front-line health workers, employers, unions

and Joint Health and Safety Committees, receive relevant communications, including directives, in a timely manner.

- That in the event of any future infectious disease crisis, the Ministry of Labour provide in a timely manner clear direction and information regarding guidelines for work refusals, pregnant workers and immunocompromised workers.

- That in the event of an infectious disease outbreak, any protocol regarding the Ministry of Labour's response, such as the Ministry's April 2, 2003, protocol, be communicated in a timely manner to employers, unions, Joint Health and Safety Committees and other workplace parties.

Risk Communication

The story of the psychiatric patients and the clusters of family illness in May at North York General demonstrates the importance of clear communication and a clear understanding of the respective roles and responsibilities in an outbreak investigation. Front-line nurses and physicians believed these patients had SARS. Public Health believed these patients, while not classified as having SARS, were being treated as persons under investigation and were being investigated and monitored. The hospital, in good faith, sincerely believed that SARS had been ruled out. In good faith, it also repeated this message to staff and tried to convince staff they were safe. This led to an important disconnect at North York General between what front-line nurses and physicians saw and what the hospital told its employees. The Commission accepts that everyone involved was doing what they thought was right. The problem was that staff in good faith were given assurances with a confidence that was not warranted in the circumstances.

The Commission therefore recommends:

- That the Ministry of Health ensure that the respective roles and responsibilities of public health and hospitals during an infectious disease outbreak are clarified and clearly understood by all parties.

- That public health and hospitals jointly develop processes to ensure that public health advice to hospitals regarding patient diagnosis in a disease outbreak, especially with an infectious disease like SARS that is difficult to identify, clearly reflect all the attendant health risks.

- That risk communication to staff reflect a precautionary approach, that it is better to err on the side of caution, especially when dealing with a little-understood new disease like SARS.

Listening to Front-Line Health Workers

During SARS, front-line doctors, nurses and other health workers had the greatest clinical experience in diagnosing and treating SARS patients. Yet there was no process in place to ensure that their voices and experience were heard.

At North York General, for example, before the events of May 23, 2003, some nurses, doctors and other health workers worried that, despite what they were being told, SARS had not gone away. The hospital felt, based on consultations with outside experts, including Public Health, that the psychiatry patients and the family cluster of illness in May were not SARS. Hospital officials believed in good faith that staff concerns were unfounded and that they needed to convince staff that it was safe. What angered health workers was that their concerns, which turned out to be well founded, were dismissed, and the well-intentioned messages of the hospital were disconnected from front-line staff concerns.

The Commission therefore recommends:

- That effective processes and systems be established to provide a path for communication and consultation with front-line staff.

- That the health concerns of health workers be taken seriously, and that in the spirit of the precautionary principle health workers be made to feel safe, even if this means continuing with levels of heightened precautions that experts believe are no longer necessary.

Listening to Unions

Just as hospitals should listen more carefully to the concerns of nurses and other front-line health workers, the Ministry of Health would be well advised to listen more carefully to the reasonable concerns of health worker unions which have enormous front-line experience in the actual problems of worker safety on the ground. Their expertise is reflected in the thoughtful and detailed presentations by unions that represent Ontario's health workers, and in particular the joint work of the Ontario

Nurses' Association and the Ontario Public Service Employees Union. The problems of worker safety have been explicitly recognized by Minister of Health George Smitherman speaking to an audience of nurses in May 2005:

> One of the things I was struck by … [was] the number of nurses that work in environments, hospital environments perhaps more particularly, that actually are unsafe … We have a lot of work to do on that.

It is important for Ministry officials to take this ministerial direction seriously. It is important for Ministry officials to avoid any impression that the Ministry has adopted an adversarial or dismissive attitude towards those who voice the legitimate concerns of those at risk on the front lines.[32]

Surveillance

One of the most important systemic failures of SARS was the failure to quickly identify clusters of illness among staff and to convey that information to infection control practitioners at affected hospitals and to those leading the fight against SARS. These systemic failures prevented the timely identification of SARS cases at the Grace and at North York General, the sites of the two largest nosocomial outbreaks.

Before May 23, 2003, when it appeared that SARS had been contained, there was no system-wide surveillance in place to ensure that undetected cases were caught. Responsibility for surveillance for undetected cases of SARS was left to individual institutions and to front-line practitioners. Any system that might have identified clusters of illness or death could have been helpful. However, surveillance standards at individual hospitals in Ontario were insufficient and not mandated. Witnesses told the Commission that such surveillance is possible only with a sufficiently resourced infection control function.

The Commission therefore recommends:

32. One example of this impression arose after a Ministry of Health official, responding to union concerns that safety issues had been ignored in pandemic planning, did not address the issue on the merits but dismissed the well-expressed union concerns by saying, "I am not sure we will ever meet the expectations of organized labour regarding health and safety…" This comment led the union to believe "that key bureaucrats in MOHLTC view occupational health and safety as a partisan issue, with occupational health and safety proponents as their adversaries."

- That appropriate surveillance standards be established, mandated and funded in Ontario hospitals.

- That special care be paid to identifying clusters of illness among staff and to initiating immediate investigation.

- That where suspicious clusters of illness are identified, this be communicated to health workers, especially to those who might have been in contact with sick staff, or have worked in the same areas of the hospital.

- When an outbreak appears to be waning of a difficult-to-diagnose infectious disease like SARS, system-wide surveillance be implemented to ensure that undetected cases are identified.

- Infection control functions in Ontario hospitals and in public health be sufficiently resourced so that they could contribute to, and participate in, system-wide surveillance when an outbreak appears to be waning of a difficult-to-diagnose infectious disease like SARS.

Infection Control

Many witnesses have told the Commission that, since SARS, infection control standards and practices have improved at hospitals affected by SARS. It will be important to ensure that improvements occur across the health system. Witnesses voiced a concern that as memories of the SARS outbreak fade, so will attention to infection control. Part of that concern is over the lack of consistent system-wide policies on visitor access at hospitals. They also told the Commission that many Ontario hospitals are in older buildings whose structure does not lend itself to modern infection control practices.

The Commission therefore recommends:

- That the Ministry of Health ensure that all Ontario hospitals have infection control personnel, resources and program components, including surveillance, control and education, consistent with Canadian

recommendations and best practices.[33]

- That consistent and clear visitor policies be developed across the health system to ensure that visitor access, while important in caring for the ill, does not overcome infection control standards.

- That the Ministry of Health and every health institution develop consistent, safe and humane policies to lessen the impact of infectious outbreaks on the vital priority for the sick to receive visitors, unless medically dangerous.

- That visitors be educated to their important role in keeping hospitals safe, and to the need to respect limits on the number of visitors, particularly where the illness is not serious or life-threatening.

- That the Ministry of Health help hospitals to incorporate leading practices in infection control standards into facility design and renovation.

Safety Culture in Health Workplaces

The heavy burden of disease that fell on nurses, doctors and other health workers demonstrated the lack of a safety culture[34] in the Ontario health system. A single

33. "It's critical that all hospitals have specific human resources, in the form of ICPs (Infection Control Professionals) and support staff, for an effective infection prevention program," says Dr. [Richard] Zoutman. Such programmes must include surveillance (counting infections), control (interventions to prevent them from occurring), and education components.

    Source: Queen's News Centre, "Canadian hospitals below standards for preventing infection," Tuesday, August 05, 2003, http://qnc.queensu.ca/story_loader.php?id=3f2fb55a816fc.

34. A definition of safety culture suggested by the Health and Safety Commission in the U.K. is as follows:

    The safety culture of an organisation is the product of the individual and group values, attitudes, competencies and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organisation's health and safety programmes. Organisations with a positive safety culture are characterised by communications founded on mutual trust, by shared perceptions of the importance of safety, and by confidence in the efficacy of preventative measures.

event like the spread of SARS at the Grace was warning enough that a safety culture was lacking. The fact that health workers continued to get sick in April and May after the events at the Grace demonstrated the extent to which a safety culture was lacking. Nothing better demonstrates the absence of a safety culture than the inability to fix worker safety problems in a timely manner once they have been identified by a tragedy like the Grace.

The Vancouver experience demonstrated the value of a safety culture in health workplaces. Expressions of this safety culture included the close cooperation and mutual respect between infection control and worker safety, the emphasis on listening to health workers, and the deployment of joint teams of infection control and worker safety experts to Royal Columbian Hospital after a nurse contracted SARS.

In Ontario, infection control and worker safety disciplines generally operated as separate silos during SARS. Until this divide is bridged and infection control and worker safety disciplines begin to actively and effectively cooperate, it will be difficult to establish a strong safety culture in Ontario.

As a landmark study on worker safety in health care said:

> … if the safety climate within healthcare was better and workers had more confidence in their employers' commitment to worker health and

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A positive safety culture implies that the whole is more than the sum of the parts. The different aspects interact together to give added effect in a collective commitment. In a negative safety culture the opposite is the case, with the commitment of some individuals strangled by the cynicism of others. From various studies it is clear that certain factors appear to characterise organisations with a positive safety culture.

These factors include:

- The importance of leadership and the commitment of the chief executive
- The executive safety role of line management
- The involvement of all employees
- Effective communications and commonly understood and agreed goals
- Good organisational learning and responsiveness to change
- Manifest attention to workplace safety and health
- A questioning attitude and a rigorous and prudent approach by all individuals

Source: The Institution of Engineering and Technology, "IEE – Health and Safety Briefing 07 – Safety Culture," http://www.iee.org/Policy/Areas/Health/hsb07.cfm.

> safety, employees would have more confidence in the messages and directives they received during a crisis situation such as SARS. The relatively low profile of occupational health and safety within healthcare is perhaps best reflected in the observation that very few focus groups, aside from those containing health and safety professionals, seemed to be aware of occupational health and safety professionals at all. Tasks such as fit-testing of respirators often fell to infection control practitioners, not to occupational health and safety professionals (although this appears to vary from facility to facility) as it would have in other industries.[35]

The study identified the following organizational factors that promote a safety culture:

- There is general agreement that the safety-related attitudes and actions of management play an important role in creating a good or bad safety climate.

- Studies of safety program effectiveness in non-healthcare settings have repeatedly shown that a positive or supportive safety climate is an important contributing factor to good safety performance. Specifically, it is known that as safe behaviours are adopted throughout an organization, increasing pressure is put on non-compliers to "come in line."

- It has been shown that the safety climate has an important influence on the transfer of training knowledge.[36]

While important research has been conducted on infection control standards,[37]

35. Dr. Annalee Yassi and Dr. Elizabeth Bryce, "Protecting the faces of healthcare workers: knowledge gaps and research priorities for effective protection against occupationally-acquired respiratory infectious diseases" (Occupational Health and Safety Agency for Healthcare in B.C., April 30, 2004), p. 67.
36. Dr. Annalee Yassi and Dr. Elizabeth Bryce, "Protecting the faces of healthcare workers: knowledge gaps and research priorities for effective protection against occupationally-acquired respiratory infectious diseases" (Occupational Health and Safety Agency for Healthcare in B.C., April 30, 2004), pp. 32-3.
37. See Zoutman et al., "The state of infection surveillance and control."

worker safety experts have noted that similar research has not been undertaken in occupational health and safety.[38]

The Commission therefore recommends:

- That the Ministry of Labour use its enforcement and standard-setting activities, and the Ministry of Health its funding and oversight activities, to promote organizational factors that give rise to a safety culture in health workplaces.

- That the Ministry of Labour and the Ministry of Health jointly promote a safety culture in health workplaces that emphasizes close cooperation and collaboration between infection control and worker safety experts, and reflects the principles and practices of their respective disciplines.

- That in preparation for the possibility of a future infectious disease outbreak, the Ministry of Labour and the Ministry of Health jointly establish teams of trained and equipped infection control experts, occupational physicians, occupational hygienists and Labour inspectors who could be rapidly deployed to sites of workplace outbreaks.

- That occupational health and safety standards, including optimal staffing levels for worker safety practitioners, be established, similar to the SENIC standards for infection control.[39]

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38. "Certainly more research on what levels or standards are needed to promote effectiveness in occupational health, similar to the SENIC studies for infection control, is needed." Source: Dr. Annalee Yassi and Dr. Elizabeth Bryce, "Protecting the faces of healthcare workers: knowledge gaps and research priorities for effective protection against occupationally-acquired respiratory infectious diseases" (Occupational Health and Safety Agency for Healthcare in B.C., April 30, 2004), p. 67.

39. The most important determinants of successful general nosocomial infection control programs in hospitals have been understood since the mid-1980s when the Study on the Efficacy of Nosocomial Infection Control (SENIC) was published. The following organizational factors were found to be important in determining effective infection control and lower rates of nosocomial-transmitted disease: having one infection control practitioner per 250 acute care beds, having at least one full-time physician interested in infection control, having an intensive surveillance program for nosocomial diseases and having intensive control policies and procedures. However, in a recent survey of 172 hospitals in Canada, only about 60 per cent of hospitals had evidence of compliance for each of the SENIC factors. The number of institutions who had all four factors was likely much less.

- That once occupational health and safety standards are established, the Ministry of Health provide consistent and sustained funding and strategic planning to ensure that these requirements are achieved, and the Ministry of Labour ensure they are maintained through its enforcement and monitoring functions.

- That the best practices of worker safety disciplines and infection control be reflected in hospital accreditation standards.

- That additional resources be dedicated by the Ministry of Health for the training and certification of worker safety experts, including occupational physicians and occupational hygienists.

- That worker safety programs at health care institutions include training for workers, management, officers and directors on their roles and responsibilities with regard to worker safety laws and regulations.

- That the Ministry of Training, Colleges and Universities, in collaboration with the Ministry of Health, the Ministry of Labour and Ontario institutions that train health care professionals, establish baseline standards on occupational health and safety and infection prevention and control measures and procedures, to be incorporated into the curricula of medical and nursing schools and schools for the allied health professions in Ontario colleges and universities.

Regional Infection Control Networks

The Ministry of Health has helped to improve infection control standards in health care by establishing Regional Infection Control Networks. To promote a safety culture in health care, it will be important that these networks foster close cooperation and collaboration between infection control and worker safety.

The Commission therefore recommends:

Source: Dr. Annalee Yassi and Dr. Elizabeth Bryce, "Protecting the faces of healthcare workers: knowledge gaps and research priorities for effective protection against occupationally-acquired respiratory infectious diseases" (Occupational Health and Safety Agency for Healthcare in B.C., April 30, 2004), p. 67.

- That Regional Infection Control Networks have, as integral members, experts in occupational medicine and occupational hygiene, and representatives of the Ministry of Labour.

- That members of Regional Infection Control Networks be fully educated in the requirements of the *Occupational Health and Safety Act*, and its regulations.

- That regional Infection Control Networks, in dealing with worker safety issues, consult on an ongoing basis with the Ministry of Labour, workplace parties and worker safety experts.

Role of the Ministry of Labour

Despite its legal mandate to protect workers, the Ministry of Labour was largely sidelined during SARS. It was not given a role in the SARS response commensurate with its statutory duties. It was also not consulted before West Park Healthcare Centre's old tuberculosis unit was opened to accept sick health workers from the Grace, even though its perspective would have been very germane to the decision. The outbreak at the Seven Oaks Home for the Aged demonstrated that issues still remain unresolved about the role of the Ministry of Labour during an infectious disease outbreak.

The Commission therefore recommends:

- That the Ministry of Labour have the lead responsibility for setting and enforcing work safety policies, procedures and standards in the health care sector, as it does in all workplaces.

- That the Ministry of Health, as the Ministry that funds and oversees the health care delivery system, not be placed in the position of acting as an independent worker safety watchdog over its own system.

- That the Ministry of Health have the lead responsibility for developing and implementing infection control measures in the health care sector to protect patients, residents and/or clients.

- That the Ministry of Labour and Ministry of Health develop protocols, processes and procedures to ensure effective and active cooperation and coordination where their respective worker safety and infection control responsibilities overlap.

- That in any future infectious disease crisis, the Ministry of Labour have a clearly defined decision-making role on worker safety issues in a future Provincial Operations Centre, and that this role be clearly communicated to all workplace parties.

- That the role and authority of the Ministry of Labour be clearly defined during a declared emergency. Under the *Emergency Management and Civil Protection Act*, the *Occupational Health and Safety Act* prevails, and, as such, the Ministry of Labour's mandate to communicate and enforce occupational health and safety standards for workplaces under provincial jurisdiction will remain during an emergency. How the designated lead ministry in any emergency will interact with the Ministry of Labour, so that the Ministry of Labour can continue to fulfill its mandate, should be established prior to an emergency.

- That in any future infectious disease crisis, the Ministry of Labour be consulted when health facilities that had previously been decommissioned, such as West Park's old tuberculosis unit, are reopened in response to exigent circumstances.

- That the Ministry of Health and the Ministry of Labour work together to establish an agreement and mechanism, including information technology systems, to share information related to outbreaks of infectious diseases. Such information sharing should include information about Ontario's health care facilities. The objective is to ensure compliance with the reporting of occupational illnesses to the Ministry of Labour under the *Occupational Health and Safety Act*, and to ensure that the Ministry of Labour has at its disposal all relevant information to appropriately address outbreaks of infectious diseases in health care and other workplaces.

- That the Ministry of Health and the Ministry of Labour work together to establish integrated enforcement strategies to improve compliance with occupational health and safety legislation and with legislation administered by the Ministry of Health.

- That the Ministry of Health establish a process, similar to the one available under the *Occupational Health and Safety Act*, to hold directors and officers of health care organizations accountable for compliance

with provincial legislation. This may be accomplished by performance specifications in contracts or service agreements that the Local Health Integration Networks will establish with health care organizations.

The Ministry of Labour and the 1984 Agreement

During SARS, the Ministry of Labour deferred its worker safety responsibilities to the health sector, believing the health sector had the expertise and capabilities to protect workers in a manner that was consistent with provincial laws and regulations. It did this, in part, because of a 1984 Memorandum of Understanding with the Ministry of Health that was unauthorized by statute, unclear, not disseminated to interested parties like the unions, and of questionable legal authority to the extent that it might require ministry personnel to fetter their discretion and so fail to fulfill their duties in workplaces affected by infectious diseases.

The Commission therefore recommends:

- That the 1984 agreement between the Ministry of Health and the Ministry of Labour be replaced by an agreement that ensures that the Ministry of Labour, in consultation and cooperation with the Ministry of Health, take the lead in investigating infectious disease outbreaks that affect workers in a workplace.

- That the existence of any agreement setting out the respective roles and responsibilities of the Ministry of Labour and the Ministry of Health in a public health emergency be fully communicated to unions, employers, Joint Health and Safety Committees and other workplace parties.

Ministry of Labour Investigations and Prosecutions

When the Ministry of Labour decided not to lay any charges in connection with the deaths of Tecla Lin, Nelia Laroza and Dr. Nestor Yanga it did not disclose the reasons for doing so.

After SARS, critical injury and occupational illness investigations were begun very late in the one-year window for instituting prosecutions, and investigators had a very limited period to complete their work.

The Commission therefore recommends:

- Legislative amendments and policies in relation to the waiver of potential Crown privilege claims, such that in such cases where charges do not result from Ministry of Labour and other investigations of deaths and critical injuries in health workplaces, the results of the investigation and the reasons for the decision not to prosecute be made public.

- That Ministry of Labour investigations into critical injuries and occupational illnesses arising from a disaster of the magnitude of SARS be commenced and completed expeditiously.

- That a review be undertaken of section 69 of the *Occupational Health and Safety Act*, as to whether the limit on the institution of a prosecution to no more than one year after the last act or default occurred be amended.

Ministry of Labour Proactive Inspections

For reasons set out in this report, the Ministry of Labour did not conduct any proactive inspections of SARS hospitals during virtually all the outbreak. Labour's approach was vastly different from what occurred in British Columbia, where the workplace regulator began proactive inspections in early April 2003 and paid special regulatory attention to a hospital where a nurse contracted SARS. This was a missed opportunity in Ontario, although we will never know what impact that might have had on the SARS response.

The Commission therefore recommends:

- That in any future infectious disease outbreak, the Ministry of Labour take a proactive approach throughout the outbreak to ensure that health workers are protected in a manner that is consistent with worker safety laws, regulations, guidelines and best practices.

- That in any future infectious disease outbreak, the Ministry of Labour's proactive approach be clearly communicated to all workplace parties, including the Ministry of Health, public health units, employers, workers' representatives and Joint Health and Safety Committees.

- That in preparation for the possibility of a future infectious disease outbreak, the Ministry of Labour prepare effective operational plans for playing a proactive role, including establishing and training teams of occupational physicians, hygienists and inspectors to spearhead any proactive effort.

Investigations Led by the Ministry of Health

During SARS, a team from the U.S. Centers for Disease Control (CDC) was invited by the province to investigate the incident at Sunnybrook on April 13, 2003, when nine health workers were infected. Because of systemic failings, no one thought to invite the Ministry of Labour to participate, or to advise it that such an investigation was taking place. Similarly, after the Seven Oaks outbreak of legionellosis in the fall of 2005, the Ministry of Labour was not invited to participate in a Ministry of Health investigation into the response to the outbreak. In addition, the Seven Oaks investigation also would have benefited from the inclusion of worker safety experts.

The Commission therefore recommends:

- That the Ministry of Labour play an integral role in any future Ministry of Health investigation into an infectious outbreak where workers were infected, such as occurred at Sunnybrook and Seven Oaks.

- That the Ministry of Labour be given the responsibility for ensuring that any worker safety–related findings in any future Ministry of Health investigation be consistent with worker safety laws and principles.

- That any investigation into an infectious outbreak where workers were infected, such as the investigations at Sunnybrook and Seven Oaks, include experts in occupational hygiene and other worker safety disciplines.

Ministry of Labour Physician Resources

Prior to SARS, the Ministry of Labour's complement of inspectors and physicians had been sharply reduced. SARS also revealed that many Ministry of Labour inspectors lacked sufficient health care–related training. Since SARS, the Ministry of Labour has hired additional inspectors, including some dedicated to the health care sector, and increased its health care–related staff training. But it has not increased its occupational physician cadre, which had once had province-wide coverage but is now concentrated in Toronto.

The Commission therefore recommends:

- That the Ministry of Labour expand its internal resources of occupational physicians and ensure that their capabilities are available province-wide.

Worker Safety Laws and Regulations

The evidence reveals widespread, persistent and ingrained failures by the health system to understand and comply with Ontario's safety laws including the *Occupational Health and Safety Act* and related regulations. Ontario's worker safety laws are based on the Internal Responsibility System.[40] SARS revealed an important structural problem when implementing the Internal Responsibility System in the health care sector: the fact that physicians often make worker safety decisions even though they may not be hospital employees.

The Commission therefore recommends:

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40. The Ministry of Labour described the Internal Responsibility System as follows:

> Employers, workers and others in the workplace share the responsibility for occupational health and safety. Each party is responsible to act to the extent of the authority that they have in the workplace. This concept of the internal responsibility system is based on the principle that the workplace parties themselves are in the best position to identify health and safety problems and to develop solutions. This concept emerged from the Royal Commission into health and safety in mines in Ontario in 1976 and was soon adopted as the basis of the new *Occupational Health and Safety Act* in 1978.

Source: Ministry of Labour, presentation to the SARS Commission, November 17, 2003, p. 6.

- Worker safety in hospitals and other health care institutions requires reasonable legislative measures to include all physicians within the worker safety regime without interfering with the essential independence of physicians and without making them hospital employees. Such legislative measures may need to include not only the *Occupational Health and Safety Act* but also those statutes that govern the administration of health care institutions and the medical profession. It would be presumptuous for the Commission to recommend a prescriptive solution at this time. That task will require a good measure of consultation and a thorough analysis of the complex professional and statutory framework within which doctors work in health care institutions. The Commission recommends the amendment of worker safety, health care, and professional legislation to ensure that physicians who affect health worker safety are not excluded from the legislative regime that protects health workers. Because the prescriptive solution will require consultation and analysis and time and patience, it is essential to start now.

- That the Ministry of Labour conduct a meaningful review of the *Occupational Health and Safety Act* and related regulations in consultation with workplace parties and worker safety experts to examine how the Internal Responsibility System can better be implemented in the unique conditions of the health care system.

- That the Ministry of Labour and the Ministry of Health work together to harmonize requirements addressing health and safety in legislation and/or regulations administered by both ministries, which may overlap or conflict.

- That the Ministry of Labour and the Ministry of Health work together to review possible statutory or regulatory amendments to enhance the process for reporting, tracking and sharing of information, and removal of any barriers to information sharing related to outbreaks of infectious disease.

Joint Health and Safety Committees

The evidence reveals that Joint Health and Safety Committees, a fundamental component of Ontario's worker safety regime, were often sidelined during SARS.

The Commission therefore recommends:.

- That in any future infectious disease outbreak, the emergency response ensure the involvement of Joint Health and Safety Committees in a manner consistent with their statutory role in keeping workplaces safe.

- That worker safety programs at health care institutions include training for senior management on their roles and responsibilities with regard to Joint Health and Safety Committees.

- That management and worker representatives on Joint Health and Safety Committees be provided with appropriate training and sufficient time from their other duties to fulfill their JHSC obligations in a meaningful way, especially during public health crises.

Ontario Agency for Health Protection and Promotion, and Worker Safety

On June 22, 2004, Health Minister George Smitherman released a three-year public health action plan called Operation Health Protection. It indicated that the Ontario Health Protection and Promotion Agency and its new laboratory would begin operations in the 2006/7 fiscal year.[41] It will be important for the Agency to play an active role in worker safety issues.

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41. The action plan said:

> An Agency Implementation Task Force is being struck to provide technical advice on the development and implementation of the Agency. Together with the advice of international and national experts, the Ministry will establish the Agency by 2006/07.

Source: Ministry of Health and Long-Term Care, *Operation Health Protection: An Action Plan to Prevent Threats to our Health and to Promote a Healthy Ontario* (June 22, 2004), p. 23.

The Commission therefore recommends:

- That just as NIOSH, the main U.S. federal agency responsible for worker safety research and investigation,[42] is part of the Centers for Disease Control (CDC), so the Ontario Agency for Health Protection and Promotion should have a well-resourced, integrated section that is focused on worker safety research and investigation, and on integrating worker safety and infection control.

- That any section of the Ontario Agency for Health Protection and Promotion involved in worker safety have, as integral members, experts in occupational medicine and occupational hygiene, and representatives of the Ministry of Labour, and consult on an ongoing basis with workplace parties.

- That the Ontario Agency for Health Protection and Promotion serve as a model for bridging the two solitudes of infection control and worker safety.

- That the Ontario Agency for Health Protection and Promotion ensure that it become a centre of excellence for both infection control and occupational health and safety.

- That the mandate of the Ontario Agency for Health Protection and Promotion include research related to evaluating the modes of transmission of febrile respiratory illnesses and the risk to health workers.

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42. The duties of NIOSH (the National Institute for Occupational Safety and Health) include:

    - Investigating potentially hazardous working conditions as requested by employers or employees.
    - Evaluating hazards in the workplace, ranging from chemicals to machinery.
    - Creating and disseminating methods for preventing disease, injury, and disability.
    - Conducting research and providing scientifically valid recommendations for protecting workers.
    - Providing education and training to individuals preparing for or actively working in the field of occupational safety and health.

    See: http://www.er.doe.gov/ober/humsubj/appendix_b.pdf7. Naylor Report, pp. 52-5.

This research should also identify the hierarchy of control measures required to protect the health and safety of workers caring for patients with the respiratory illnesses.

Pandemic Planning

As occurred during SARS, there is now a debate over how influenza is spread and how health workers should be protected during a pandemic. Some experts believe influenza is mostly droplet-spread and surgical masks would be sufficient protection for health workers. Others believe that airborne transmission is a possible means of spreading influenza, and health workers should, as a result, wear fit-tested N95 respirators when caring for people suffering from a pandemic flu virus. The Commission is not in a position to wade into this evolving scientific debate. However, it is worth noting how the CDC has used the precautionary principle in addressing this issue. The CDC is saying, in effect, we don't know enough about how a pandemic influenza might be spread, so it's better to be safe than sorry. It is the kind of precautionary approach all pandemic planners should carefully consider.

The Commission therefore recommends:

- That the precautionary principle guide the development of pandemic-related worker safety policies, practices, procedures and guidelines.

- That in the development and implementation of the Ontario pandemic plan, the Ministry of Labour have responsibility for, and oversight over, all worker safety policies, practices, procedures and guidelines.

- That the Ministry of Labour ensure that the Internal Responsibility System and Joint Health and Safety Committees play a meaningful role in a pandemic response.

Pre-Planned Emergency Response Regarding Funerals

The families of SARS victims often were unable to have a traditional funeral. In some cases, funeral visitations were forbidden, or restricted. Mourners had to stand off at a distance at one burial. For some, there was no closure. Learning from this will be important in the event of another public health crisis like SARS, or if there is a flu pandemic.

The Commission therefore recommends:

- A pre-planned response involving the funeral industry, the Ministry of Health, public health, the hospital community, Emergency Measures Ontario and the office of the Chief Coroner, supported by agreed policies, procedures, protocols, memoranda of understanding and tabletop drill exercises to prevent the problems that arose during SARS.

Emergency Legislation

Ontario has passed into law the *Emergency Management and Civil Protection Act*, to fill the emergency power vacuum that existed at the time of SARS. It is understandable that the government, in its determination to have some kind of law in place before the next emergency struck, did not stop to address all the specific emergency legislation problems noted in detail in the hundred pages of Chapter 11 of the Commission's second interim report of April 5, 2005. These problems are serious but easily remedied now. They include:

- The overreaching power to suspend the *Habeas Corpus Act*, the *Elections Act*, the *Legislative Assembly Act*, and other constitutional foundations of ordered liberty under law.

- The power to lock up journalists without trial for violating gag orders.

- The failure to blueprint compensation for those who really need it, such as those quarantined, medical workers deprived of their livelihood and those whose jobs are disrupted.

- The failure to protect medical decisions of the Chief Medical Officer of Health from Emergency Commissioner encroachment.

- The failure to carry out clause-by-clause legal and constitutional scrutiny and obtain a detailed bill of health from the Attorney General.

- The confusion between the emergency powers and the regular *Health Protection and Promotion Act* powers.

It is understandable that the government in its desire to get the emergency legislation into place before the next disaster did not pause to address and to answer in detail the flaws referred to in the Commission's April 2005 report, flaws which are serious but easily remedied. The government has taken no public position in respect of the detailed flaws noted by the Commission. It is not as if the unimplemented recommendations have been considered and rejected for publicly stated reasons. The unimplemented recommendations have simply not been addressed publicly. The problems that have not been addressed and answered are noted in the chart at the end of this section.

The problem is not with the good intentions of those who will administer and exercise the emergency powers. The problem is that these awesome powers represent a profound change in our legal structure and raise issues that need to be addressed further in this statute that so fundamentally alters our system of government by law. Extraordinary powers like those in the *Emergency Management and Civil Protection Act* are inherently dangerous and require now the sober second thought and detailed legal clause-by-clause review and publicly stated justification which they did not explicitly receive before.

Ontario's emergency legislation brings to mind what President Lyndon Johnson said about the potential danger of all laws:

> You do not examine legislation in the light of the benefits it will convey if properly administered, but in the light of the wrongs it would do and the harms it would cause if improperly administered.

The Commission recommends the review and amendment of the emergency legislation in accordance with the unimplemented recommendations in Chapter 11 of the Commission's April 2005 second interim report.

Emergency Recommendations

Topic	Recommendation	Status
Encourage Compliance	• Include basic blueprint for compensation for loss caused by emergency powers, for example, quarantine wage loss.	Not yet implemented
Prevent Prepare Cooperate	• Provide for integration of emergency plans, and include explicit requirement that emergency plans establish clear allocations of powers and lines of authority.	Not yet implemented
Clarify Overlap with Existing Public Health Powers	• Clarify the relationship between the emergency powers conferred by this Bill and the powers conferred by the HPPA.	Not yet implemented
Primacy of CMOH	• Recognize explicitly the primary authority of CMOH in respect of the public health aspects of emergencies.	Not yet implemented
Emergency Commissioner Must Consult CMOH	• Require consultative exercise of powers as between the CMO and the CEM.	Not yet implemented
Emergency Powers	• Attorney General to conduct detailed clause-by-clause review of each proposed power for viability against legal and constitutional challenges.	Not yet implemented
	• Clarify whether the Bill incorporates the specific public health emergency powers listed in Commission's second interim report.	Not yet implemented

	• No power of compulsory immunization before evidence as to its efficacy is available.	Accepted
	• Review compulsory immunization legal issues to develop procedures that encourage immunization of health workers and public, akin to school-child immunization system	Not yet implemented
Property Seizure	• Clarify whether the Bill mandates the seizure or expropriation of property.	Accepted
	• Subject each proposed power to a thorough practical, legal, and policy analysis prior to adoption.	Not yet implemented
	• Where such analysis is not possible before enactment, impose a sunset period of no more than 2 years on the proposed power.	Not yet implemented
Power to Override All Other Laws	• Clarify whether the Bill's purported override of other laws and legal rights affects collective agreements.	Not yet implemented
	• Insulate fundamental statutes from the Override	Not yet implemented
	• Reposition the Override to highlight its importance.	Not yet implemented
	• Review constitutional legitimacy of the Override.	Not yet implemented
The Information Override	• Clarify the scope of the government's power to compel the disclosure of information.	Not yet implemented
Declaration Standard	• Amend the standard applicable to the declaration of emergencies so as to rely on the reasonable perception of the decision-maker.	Accepted

Emergency Orders	• Amend the standard applicable to the making of emergency orders so as to rely on the reasonable perception of the decision-maker.	Accepted
Power to Implement Emergency Plans	• Ensure there is no unintended conferral of powers.	Not yet implemented
Access to Courts	• Provide for access to legal process during emergencies.	Not yet implemented
Basket Power	• Incorporate an objective reasonableness standard into the language governing the use of this power.	Not yet implemented
Occupational Health and Safety	• Require emergency plans to provide for advance consideration of potential OHS issues.	Not yet implemented
Concurrent Powers	• Provide that conferral of new emergency powers does not derogate from existing powers.	Accepted
Liability Shield	• Provide protection from liability for acts which are necessitated by an emergency and which are authorized by other statutes but not the EMA – and vice versa.	Not yet implemented