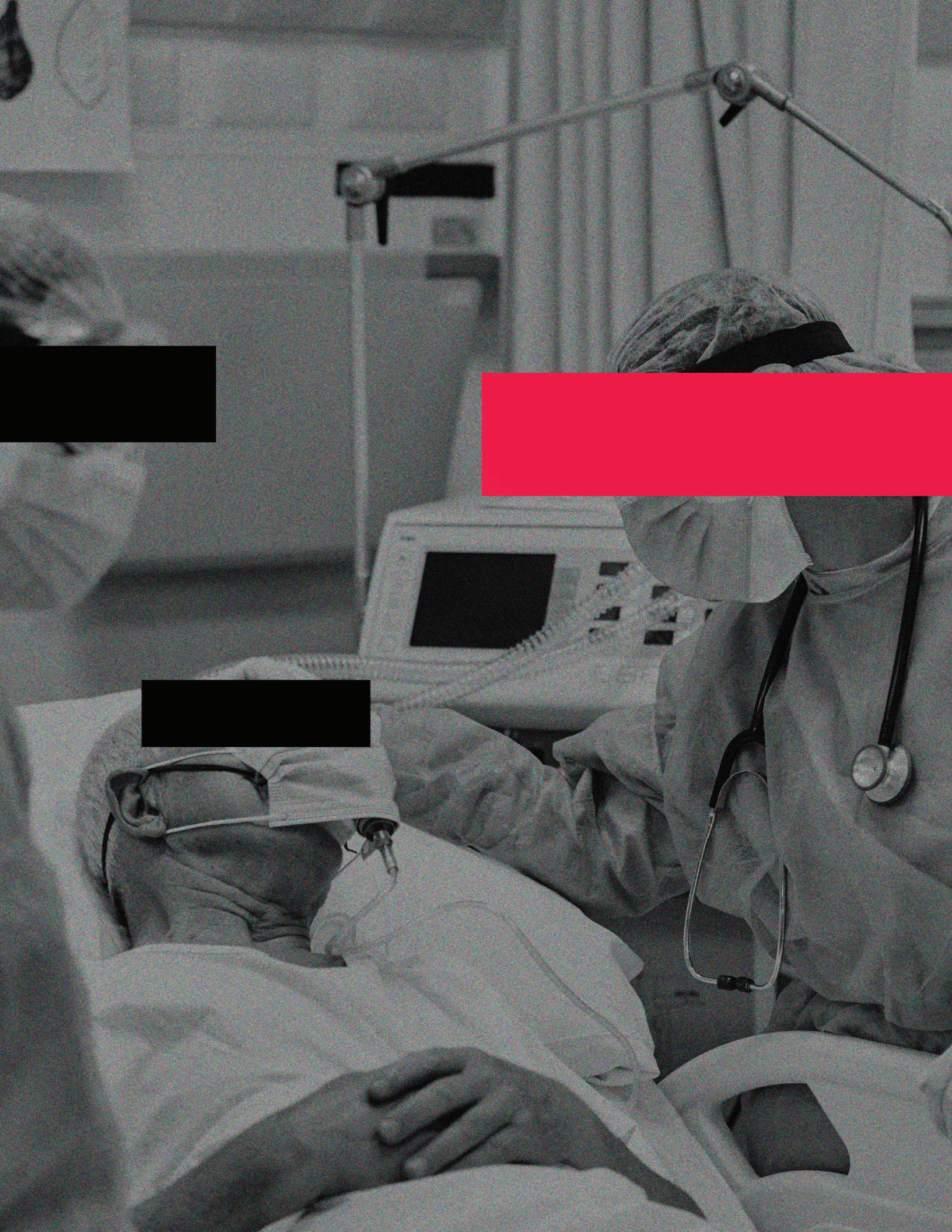
# A Time of Fear

## How Canada failed our health care workers and mismanaged COVID-19

Mario Possamai



*“Those who cannot remember the past are condemned to repeat it.”*

– George Santayana
*The Life of Reason*, 1905

# Dedication and Acknowledgments

This report is dedicated to the victims of COVID-19, their families, friends, colleagues and communities. May their suffering and anguish lead to a Canada that is far better prepared to face future public health crises.

This report is also dedicated to the memory of Mr. Justice Archie Campbell, whose SARS Commission provided a road map that could have averted many of the issues revealed by COVID-19. Fourteen years ago, he wrote presciently:

> *"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 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."*

Assisting Justice Campbell as senior advisor was an honour and the highlight of my career.

The response to the pandemic has been characterized by the dedication, hard work and courage of health care workers and of workers in other essential sectors — and by the commitment of Canadians who have overwhelmingly done their best to follow public health directives. We owe them all huge debt of gratitude.

I would like to thank Linda Silas, president of the Canadian Federation of Nurses Unions, for her commitment and unflagging support of this independent project.

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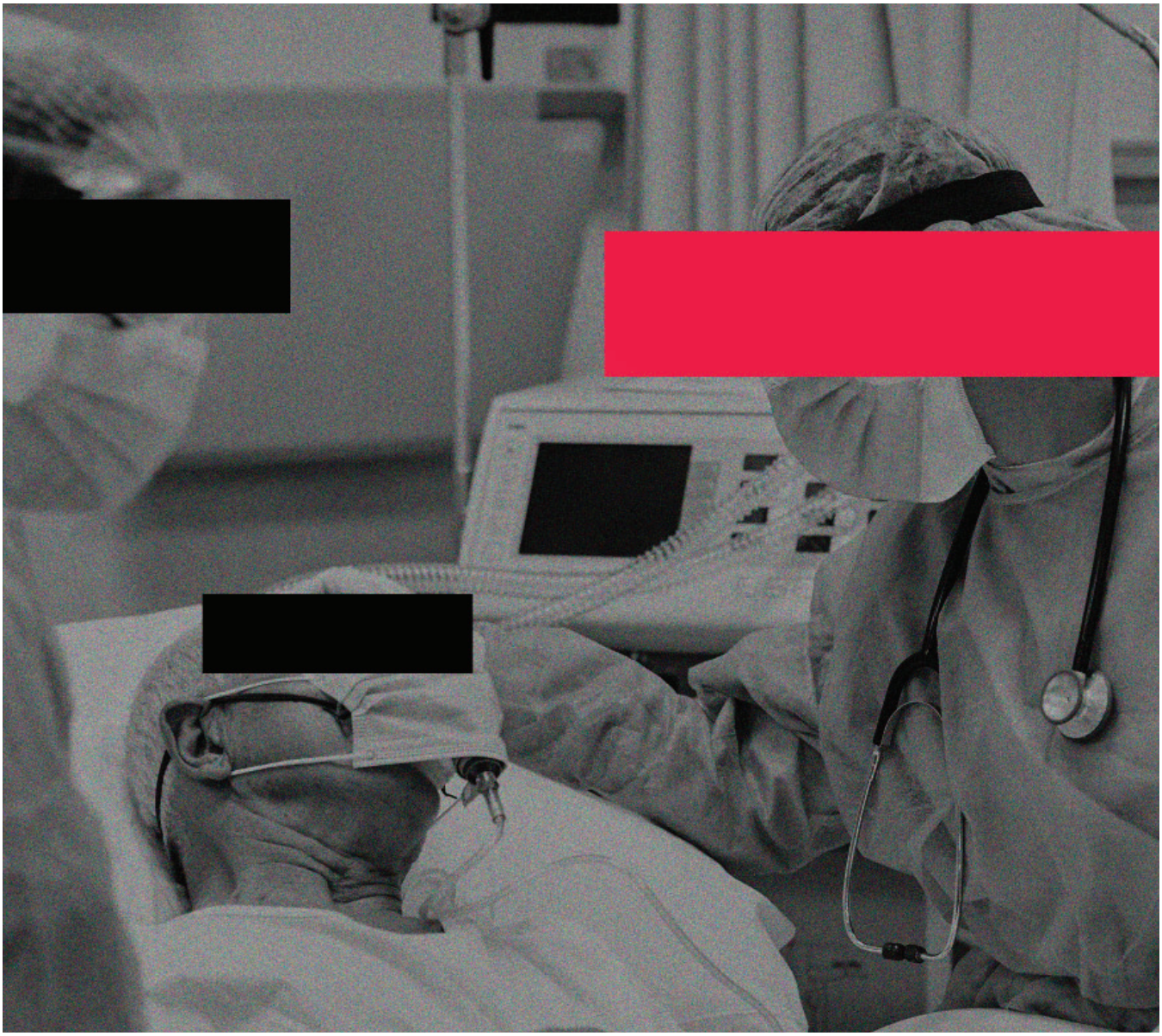


# Executive Summary

## How health care workers paid the price for Canada's failure to learn from SARS

The story of COVID-19 in Canada is a story of courage, dedication and professionalism by health care workers, whose voices went largely unheard. Under-protected, under-resourced and under-appreciated, they continued to provide care, despite grave fears for their own safety and the safety of colleagues, loved ones and other patients.

Workers are worried about the risks they face each working day. Comprising about 20 per cent of COVID-19 cases in Canada, health care workers are more likely to get infected than the general population. They are worried about their families, their patients and their co-workers, and about unknowingly infecting them. They are worried about their colleagues and about what will happen if too many health care workers get infected and the health care system gets swamped. They are worried about a lack of appropriate personal protective equipment, and their employers' seeming disregard for their health and safety concerns. And they worry about the unknown.

The stories of our dedicated health care workers provide a compelling window into the emotional and physical toll of COVID-19.

## Fearing for at-risk family members

Angela (a pseudonym to preserve this health worker's identity) is a clerk in an emergency room. She's often the first face a patient sees and the first person to screen them. Her husband is immunocompromised. She wears a surgical mask, not an N95 respirator, because that is all her employer is giving her.[1]

> *"I have great concerns that I am bringing [COVID-19] home to someone who is on chemotherapy."*

Michelle (another pseudonym) is a health care worker in a group home. Her grandson has an inherited disorder for which there is no cure. She also has a baby granddaughter. When she asked for a surgical mask, her supervisor asked: "Is your client sick?" Michelle answered "no." The supervisor asked: "Are you sick?" Michelle again answered "no." The

supervisor responded: “If you are not sick, we are not allowed to give you masks.”[2]

# Preparing for the worst

Across Canada, health care workers and their families made the kind of preparations normally made by those going off to war.

An Edmonton nurse reported that she and her husband prepared their wills just before she began treating possible COVID-19 patients.

The nurse, a mother of two, said: “A lot of my colleagues and I have described it as standing on the edge of a cliff and looking down, but not knowing how far it is to the bottom or when you’re going to fall.”[3]

She is worried about shortages of personal protective equipment and about what would happen if she or her firefighter husband were to get sick.

“I have anxiety, but I’m not necessarily afraid.”[4]

# Daily risks and heightened anxiety

Health care workers face significant risks each and every working day.

Consider a respiratory therapist in Toronto. He faces life-and-death situations every day, especially when helping to prone a patient: turning them onto their stomach so they can draw more air.

“When we’re doing the proning, [the patient is] connected to life support. If that circuit disconnects, it’s just going to shower [us] with all that spray, which puts us at [a] high, high risk of getting COVID.”[5]

His anxiety is a constant. At one point, he took himself to the emergency room, worried about his chest pains, which he later found out were anxiety-related.

“There’s the fear because I don’t want to take this back to my family; I don’t want to hurt anyone else.”[6]

# Dealing with “a sneaky virus”

An experienced nurse in Ontario has experienced SARS, H1N1 and Ebola. But this pandemic, she says, is different.

“COVID-19 is a sneaky virus. This outbreak is scarier because patients can spread the virus while symptom-free. With SARS, it was clearer who was infected. With COVID-19, we have fewer clues that someone might be a carrier.”[7]

COVID-19 raises the stakes – and the pressures – normally found in any emergency room.

“In the ER, we’re still treating car accident injuries, heart attacks, strokes – anything you can think of and a dozen things you can’t. And it’s all complicated by this virus. Say, my team is running a Code Blue to resuscitate a patient. This happens often. But now we have to think about the fact that, if a patient is unresponsive, we can’t ask for their medical or travel history. We can’t know if they’re infected. Right now, we don’t have the luxury of getting it wrong. We have to assume they could have the virus.”[8]

# Introduction

The system for protecting Canadian health care workers is broken. It must be fixed before the second wave of COVID-19.

If the reader notices a parallel between this language and the language used by the late Justice Archie Campbell to describe the systemic failures of severe acute respiratory syndrome (SARS) in 2003,[9] it is no coincidence. Similar language is being used to describe health care worker safety problems exposed by COVID-19 that are similar in cause and manifestation to those revealed by SARS.

In COVID-19, Canada is witnessing a systemic preventable failure to learn from the 2003 SARS outbreak. It is a failure to both adequately prepare and to urgently respond in a manner that is commensurate with the gravest public health emergency in a century.

The biggest SARS lesson – flowing from the heavy burden of the disease on health care workers, who comprised 44 per cent of cases in Ontario[10], the largest outbreak outside Asia[11] – was the precautionary principle.

When facing a new pathogen, there is a call for safety: protect health care workers at the highest level using airborne precautions, including N95 respirators or higher, until we better understand the new virus; scale the protection down only if it is safe to do so.

The precautionary principle also extends to other pandemic containment measures, like border closings and public masking: when the evidence is not conclusive, it's best to err on the side of caution and safety.

Since the start of COVID-19, the lessons of the precautionary principle have largely been ignored, despite repeated warnings from health care workers, unions and worker safety experts.

According to a snapshot of data analyzed by the Canadian Institute for Health Information, as of July 23, 2020, more than 21,000 health care workers in Canada had been infected with COVID-19. The highest infection rates, as a proportion of total provincial cases, are in Quebec, New Brunswick, Nova Scotia and Ontario.[12]

Nationally, health care workers comprise almost 20 per cent of all COVID-19 infections in Canada,[13] a rate that is double the global health care worker infection rate (10 per cent) reported by the WHO and the International Council of Nurses.[14] [15]

Canada's national health worker infection rate is also more than four times the rate in China, where airborne precautions are used.[16]

Health care workers comprised 24.1 per cent of cases in Quebec and 16.7 per cent of cases in Ontario. In the Atlantic provinces, health care workers represented 18.8 per cent of total cases in New Brunswick and 17.2 per cent of cases in Nova Scotia. In contrast, in Prince Edward Island and Newfoundland and Labrador, health care worker infections stood at 5.6 per cent and 6.1 per cent respectively. The Canadian Institute for Health Information's data snapshot highlights lower figures in the western provinces than the national average: 10.1 per cent in Manitoba, 5.4 per cent in Saskatchewan, 8.8 per cent in Alberta and 7.6 per cent in British Columbia.[17]

About 13,000 Canadian health care workers have filed workplace injury claims arising from COVID-19, representing 75 per cent of all claims in Canada. Most were filed in Quebec and Ontario.[18]

Tragically, while official reports put the number of health care worker deaths from COVID-19 at 12,[19] at least 16 health care workers have died of COVID-19 in Canada according to union sources.[20] They include:

> Flozier Tabangin, 47, a residential worker in Richmond, British Columbia, who assisted people with intellectual and physical disabilities and worked multiple jobs to support his wife and young daughter. A former colleague said he was "like a father, a brother to everyone. If you need something, you [could] count on him any time."[21]
>
> Brian Beattie, 57, a nurse at a seniors' home in London, Ontario. The Ontario Nurses' Association said: "Brian was a well-liked and respected registered nurse. He was the definition of dedication, and he considered his colleagues and residents to be his other family."[22]
>
> Victoria Salvan, 64, a health care worker at an under-staffed long-term care home in Montreal, caught the virus just weeks away from retirement. A colleague said Victoria always elicited a smile from her patients "because they knew they would be treated with love and kindness."[23]

Despite the mounting toll on health care workers, Canadian public health agencies and their advisers, acting with the best of intentions, have repeatedly ignored the warnings of unions, health care workers and worker safety experts, and have continued to:

> Dismiss the need for the precautionary principle and for the higher protections for airborne disease, which typically involve N95 respirators;
>
> Rule out the need for airborne precautions by summarily dismissing the possibility that SARS-CoV-2, the virus that causes the new disease, was spread by small particles, known as aerosols, that float in the air; and
>
> Assert with high levels of certainty that enough was known about SARS-CoV-2 – the virus that causes COVID-19 and a cousin of SARS – that contact and droplet precautions, including surgical masks, are sufficient, except for high-risk procedures.

There are many instances of a disconnect between infectious experts' guidance and the on-the-ground reality faced by health care workers.

None is more striking than the following example from Quebec.

> *"We have been abandoned. The term is strong, but it represents the reality.*

On the same day that a top Montreal infectious disease specialist declared that COVID-19 has demonstrated "how rarely an N95 mask is truly needed" and that surgical masks are sufficient protection,[24] Quebec unions published an article citing the fact that more than 13,600 health care workers in the province relying on that advice had been infected.[25]

The president of the Confédération des syndicats nationaux, Jeff Begley, reproached the government for sending his members to the front lines so poorly equipped.

> *"We have been abandoned. The term is strong, but it represents the reality. Public health recommendations, blindly followed*

*by health institutions, have failed to protect staff. And health care workers continue to be put at risk.*

*From the start of the pandemic, when there was uncertainty about how the virus was transmitted, we asked for protection against possible airborne transmission, which we were denied. Transmission of the virus by aerosols appears more and more likely. The World Health Organization has recognized this recently, and much research is now pointing in this direction. How can we explain that our public health authority continues to recommend the wearing of masks, equipment as well as preventive procedures that do not protect against this mode of transmission?"*[26]

This example is not isolated. Public health agencies and their advisers have steadfastly maintained their aversion to the precautionary principle since the start of COVID-19.

In March 2020, a Public Health Ontario document confidently stated: "Healthcare workers caring for COVID-19 patients in other jurisdictions [...] have not acquired COVID-19 while using droplet and contact precautions recommended in the province."[27]

In May 2020, an infectious disease specialist in Toronto said: "The reason we know [COVID-19 is not airborne] is because we have hundreds of health care workers who are taking care of patients wearing regular masks. If this [were] airborne, [...] all those health care workers would be getting sick."[28]

In a May 2020 letter to a major Canadian newspaper, a group of infection control experts wrote: "If COVID-19 were an airborne infection [...], we would see large and widespread outbreaks in places adhering to droplet prevention [...]. We have not."[29]

In July 2020, another infectious disease expert said that if surgical masks and other contact and droplet precautions "didn't work, we would see vastly higher numbers in our health care workers."[30]

Tragically, the number of infected and dead Canadian health care workers has proven far worse than public health agencies had anticipated and has confirmed the worst fears of health care workers, unions and occupational safety experts.

It has also demonstrated the strong link between health care worker safety and pandemic containment. Consider that, as of August 31, 2020:

Canada had more COVID-19 cases (129,888) than China (85,048), Hong Kong (4,801) and Taiwan (488) combined; and

Canada had more COVID-19-related deaths (9,164) than China (4,634), Hong Kong (88) and Taiwan (7) combined.

Chinese health care workers comprise 4.4 per cent of COVID-19 cases. Most were infected before airborne precautions were implemented.[31] As of late July 2020, in Hong Kong, five health care workers had been infected.[32] Similarly, in Taiwan, just three health care workers had been infected as of late July 2020.[33]

# A litany of systemic problems

COVID-19 exposed the systemic failure to keep an open mind to the possibility that SARS-CoV-2, the virus that causes COVID-19, was profoundly different from all other

pathogens experienced by humankind and thus warranted a precautionary approach.

COVID-19 has consistently surprised the medical community with a host of other symptoms and complications:

> *"[T]he virus has been implicated in skin lesions, the loss of taste and smell, heart problems, strokes, brain damage, and other side effects, some of which can be traced back to the virus's ability to infect the endothelial cells that line blood-vessel walls. The virus also appears to trigger an out-of-control immune reaction, known as a cytokine storm, in some patients."*[34]

Perhaps the most surprising characteristic of COVID-19 is the large number of what are generally called asymptomatic cases – people who get infected but do not show symptoms or feel sufficiently unwell to see a doctor. These cases fall into two categories. There are people who are subclinical[35] or pre-symptomatic,[36] with the latter not appearing to be ill but eventually becoming visibly ill. And there are those who are truly asymptomatic and appear healthy throughout the course of their infection.[37]

Until COVID-19, the evidence suggested that asymptomatic transmission was generally a "rare event," and that epidemics historically were not driven by that kind of transmission.[38]

With the benefit of hindsight, we can see that Western experts were not taking a precautionary approach, and did not seem open to the possibility that a completely new virus might behave in a completely new and unexpected manner.

There were early warning signs from China, however, about these so-called "silent carriers." In a letter published in *The Lancet* on February 13, 2020, Chinese experts warned that, based on their frontline experience, asymptomatic COVID-19 patients were a serious issue and could spread the disease. In their view, this was an important reason for protecting health care workers at a precautionary level with airborne protections:

"These findings warrant aggressive measures (such as N95 masks, goggles and protective gowns) to ensure the safety of health care workers," they concluded.[39]

Moreover, citing classified Chinese government data, the South China Morning Post reported in March 2020:

> *"The number of 'silent carriers' – people who are infected by the new coronavirus but show delayed or no symptoms – could be as high as one-third of those who test positive."*[40]

A study published in August 2020 in *JAMA Internal Medicine* confirmed that estimate, suggesting that 30 per cent of COVID-19 cases may be asymptomatic. Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases in the United States, puts the estimate as high as 40 per cent.[41]

Unlike Canada, China and South Korea felt the evidence of asymptomatic transmission was sufficient to take a precautionary approach early in the pandemic. They decided to test anyone who had had close contact with a COVID-19 patient, regardless of whether the person presented symptoms. Some experts suggested this may explain why the two Asian countries seem to have stemmed the spread of the virus.[42]

Canada's failure to take a precautionary approach to the possibility of asymptomatic

transmission – as China and South Korea did – has had profound consequences for health care workers and for border control measures.

If a "silent carrier" can transmit the disease, then emphasizing such symptoms as fever, cough and gastrointestinal issues as indicators of COVID-19 (as Canada did for far too long) is an inadequate means of triaging passengers arriving at Canadian airports.

In hindsight, Canada's approach for detecting COVID-19 cases at the border or in the health care system left a huge blind spot.

# Inadequate supplies of PPE

There have been persistent and widespread systemic supply management problems during COVID-19, leading to debilitating shortages of personal protective equipment, despite the lessons from SARS on stockpiling supplies.

These problems had been years in the making because Canada had allowed itself to be dependent on foreign manufacturers. Successive federal and provincial governments had sat on their hands on this issue, even after it had been exposed by SARS.

This was compounded by the destruction of significant stockpiles in the years leading up to COVID-19.

The federal government destroyed and did not replace its stockpile of up to two million N95 respirator masks in May 2019, leaving only 100,000 in federal warehouses at the start of the pandemic.[43]

In 2017, Ontario began destroying as many as of 55 million N95 respirators that had been stockpiled on the recommendation of the SARS Commission in preparation for a public health emergency. These respirators had been allowed to expire and were not replaced.[44]

Because of N95 shortages during COVID-19, health care workers across Canada have been pressured to use surgical masks, even though worker safety experts overwhelmingly believe fit-tested N95 respirators, or better, along with other personal protective equipment, should be considered the minimum requirement to protect workers against a new pathogen like COVID-19.

*"We're so low on N95 masks that we're expected to enter COVID-19 rooms with surgical masks."*

One nurse reported a negative experience with management after refusing to conduct COVID-19 tests without an N95:

> *"This didn't go over well. I was made to feel belittled, and my concerns were dismissed."*[45]

Another nurse expressed similar anxieties about having to engage with COVID-19 patients without the appropriate personal protective equipment:

> *"We're so low on N95 masks that we're expected to enter COVID-19 rooms with surgical masks, which are not effective against the virus. Not only are we risking our own health, but the health of our children and spouses."*[46]

Even surgical masks were often rationed during the pandemic. Some hospitals limited frontline staff to one or two disposable masks a day.

> *"They're treating us like we're disposable," said one nurse, whose identity was kept confidential by CBC.*[47]

Another anonymous nurse expressed similar feelings to the *Toronto Star*.

> *"When you walk [into the hospital] and see your entire worth as a human being is two masks in a brown paper bag – like, that's all you're worth to the hospital, that's all your health is worth, two masks for a whole shift – you're like, what am I doing here?"*[48]

> *"I didn't sign up to die on my job."*[49]

Going to work meant that health care workers risked not only their own health but also that of their families.

The case of Felicidad Maloles, a highly regarded 65-year-old personal support worker in Toronto, underscores the risks to health care workers' families. She survived a bout of COVID-19, but lost her 69-year-old husband, her partner for 40 years, to the disease.

> *"I'm so stressed, and blaming myself because I got the virus," said Maloles. If I didn't get the virus, maybe he would not die."*[50]

These heartbreaking stories of disease and death, of mental anxiety and anguish – combined with troublingly high rates of infection and death among health care workers – underline the breadth of systemic worker safety failings during the first phase of COVID-19, and of the extent to which the lessons from SARS were not heeded.

To be sure, other countries, like the United States, have fared much worse than Canada in containing the pandemic. That is little comfort to the thousands of infected Canadian health care workers and their families. Countries like the United States escaped SARS and did not have the opportunity to learn from it. Canada experienced SARS but tragically did not apply the lessons learned.

# Failure to heed warnings from health care workers and unions

A significant systemic problem during COVID-19 – as it was during SARS – is that health care workers and unions were not seen by governments and public health agencies as collaborative partners in setting safety guidelines and procedures. This is, unfortunately, still the case, despite the fact that the Internal Responsibility System, the principle underlying all Canadian worker safety laws and regulations, mandates the equal participation of unions and workers in keeping workplaces safe.

Consider the following timeline on how hard it was for unions to be included in the Public Health Agency of Canada's discussions on worker safety:

> **January 24, 2020:** The Canadian Federation of Nurses Unions (CFNU) wrote to the Public Health Agency of Canada (PHAC), asking for unions to be directly involved in developing COVID-19 health care infection prevention and workplace safety guidance, as they had with the H1N1 outbreak in 2008 and Ebola in 2013-2014.[51]

> **January 28, 2020:** PHAC refuses to allow nurses' unions to participate.

**January 29, 2020:** Nurses unions made a second plea to Dr. Theresa Tam regarding PHAC's refusal to include them in the development of guidance that had a direct impact on workers' safety.[52]

**January 29, 2020:** Nurses unions pled with federal Health Minister the Honourable Patty Hajdu regarding PHAC's refusal to include them in health care worker safety discussions.[53]

**February 1, 2020:** Nurses unions are provided with an embargoed copy of the first edition of the PHAC worker safety guidance for acute care (*Infection Prevention and Control for Novel Coronavirus (2019-nCoV): Interim Guidance for Acute Healthcare Settings*).

**February 3, 2020:** the PHAC released the guidance online prior to CFNU's response.

More will be said later in this report about how the subsequent consultations between public health agencies, unions and workers generally have not been conducted in a spirit of collaboration and cooperation, and in a manner reflecting the principles of the Internal Responsibility System.

# The lens of hindsight

Canada should have done better to protect our health care workers.

We are able to say this with the benefit of hindsight. This tool was not available to Canadian public health agencies, their experts and their advisers. It goes without saying that no one wished for the unacceptably high levels of disease and death among Canadian health care workers. We are using the benefit of hindsight not to demonize or scapegoat, but to identify where things went wrong and to draw lessons from mistakes.

We will never know for certain to what extent those unbearably high numbers of health care worker infections and deaths could have been reduced, had the warnings of unions, health care workers and safety experts been heeded.

What we do know – and will demonstrate in this report – is that other nations that experienced SARS, like China, Hong Kong and Taiwan, were able to draw from that experience and apply its vital health care worker safety lessons. And their health care workers fared better than ours.

# Who is to blame?

While it would be tempting to point fingers at particular individuals, or groups of individuals, for worker safety failures, those failures are, in fact, systemic.

In the SARS Commission's final report, Justice Campbell noted findings that are as relevant today as they were in 2006:

> *"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."*[54]

The leaders of the COVID-19 response in Canada – like their predecessors during SARS – are dedicated, competent, well intentioned, highly trained and hard-working. Leaders in 2002 and in 2020 acted in good faith and with the best of intentions.

The failures to heed the warnings of SARS and fully protect health care workers during the current pandemic are systemic ones[55] – grounded in organizational shortcomings, deficiencies and imperfections – and not directly attributable to any individual or group.

Writing of SARS in sentiments equally applicable to COVID-19, Justice Campbell wrote:

> *"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 care 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."*[56]

Because of systemic failures, Canada has experienced a tragic replay of many of the worker safety issues identified by Justice Campbell and the SARS Commission. Sadly, it was these very systemic failures that the SARS Commission's findings and recommendations had been designed to address.

During the SARS epidemic outbreak, as now during the COVID-19 pandemic, there was a passionate debate over whether droplet and contact precautions (including surgical masks) or airborne precautions (including fit-tested N95 respirators or higher) sufficiently protected health care workers against a novel pathogen.

The fact that this debate still rages during COVID-19 demonstrates the wide continuing gap between widely accepted worker safety principles in health care and the ethos of public health agencies and their advisers. The former are rooted in the precautionary principle of erring on the side of caution in the face of scientific uncertainty; the latter – on levels of scientific certainty more appropriate for the safe introduction of new medicines and vaccines.

The best evidence of SARS's ability to spread through the air under certain conditions did not emerge until about a year after the outbreak.

Justice Campbell noted that this validated the precautionary approach:

> *"Knowledge about how SARS is transmitted has evolved significantly since the outbreak. Some recent studies suggesting a spread by airborne transmission lend weight to a precautionary approach to protect health care workers against a new disease that is not well understood."*[57]

Compared to the absence of evidence during the SARS outbreak itself, there is now growing evidence of possible airborne transmission of SARS-CoV-2.

Over and over during COVID-19, health care workers, unions, and health and safety experts have presented mounting research on airborne and aerosol transmission, not as definitive proof but as sufficiently compelling for the precautionary principle to be invoked.

Over and over, public health agencies and their advisers have misinterpreted the submissions on airborne transmission by unions and safety experts as failed attempts at definitively proving that SARS-CoV-2 spreads through breathing, talking, singing and coughing.

Definitive proof was never their intention. Instead, unions and safety experts were simply demonstrating the need for adopting a precautionary approach until the science is settled.

A prime example is the response by the Canadian public health community to a July 2020 letter to the WHO. The letter, which was signed by 239 experts from 32 countries, called on the WHO to revisit its deep-seated resistance to growing evidence of airborne transmission. Suggesting that it is precisely during a time of scientific uncertainty that the precautionary principle should be invoked, the authors noted:

> *"It is understood that there is not as yet universal acceptance of airborne transmission of SARS-CoV-2; but in our collective assessment there is more than enough supporting evidence so that the precautionary principle should apply. In order to control the pandemic, pending the availability of a vaccine, all routes of transmission must be interrupted."*[58]

The letter has been widely dismissed by the Canadian public health and infection control experts, who judged it not on its precautionary message but on whether it proved airborne transmission.

One public health leader called it "a tempest in a teapot."[59]

An infectious disease expert said:

> *"We're just rehashing the same arguments that we've heard throughout February, March, April up until now. I'm not quite sure what the fuss is all about."*[60]

The debate over the WHO letter was reminiscent of Justice Archie Campbell's warning in the SARS Commission's final report regarding the importance of the precautionary principle:

> *"The point is not who is right and who is wrong about airborne transmission. The point is not science, but safety. Scientific knowledge changes constantly. Yesterday's scientific dogma is today's discarded fable. [...] We should not be driven by the scientific dogma of yesterday or even the scientific dogma of today. We should be driven by the precautionary principle that reasonable steps to reduce risk should not await scientific certainty."*[61]

# Blame and accountability

The strength of inquiries like the SARS Commission is that they can identify systemic root causes and systemic solutions.

Their weakness is that, because they are precluded from assigning civil or criminal liability, no one and no group is held accountable. No one was fired after SARS. No one was scrutinized over their actions or omissions.

There were many remarkable leaders during SARS – like the late Dr. Sheila Basrur, then head of Toronto Public Health. She was integral to the response's success, especially in light of the absence of effective leadership.

But there were also those whose actions fell well below the standards set by the commendable actions and leadership of Dr. Basrur.

Which brings us to the question of how best to fix the systemic problems that COVID-19 has revealed.

We must recognize that our public health leaders have acted in good faith and with the best of intentions to address systemic failings that have been years in the making.

However, just because problems are systemic and require systemic solutions does not mean that the actions of decision-makers should not be reviewed on a go-forward basis.

This should be done not to find scapegoats but to determine who is most qualified to fix the systemic problems revealed by COVID-19.

# Protect health care workers, protect the community

In the wake of the first phase of COVID-19, Canada has little to celebrate. It has paid a heavy price in disease, death, anguish and anxiety for failing to have learned from SARS and taken a precautionary approach.

Canada's pandemic scoreboard is a depressing read.

More than 21,000 Canadian health care workers have contracted COVID-19. They make up about one in five cases. On pandemic containment, we have more cases and deaths than China, Hong Kong and Taiwan, our SARS peers,[62] combined.

COVID-19 has reaffirmed an important lesson from SARS: health care worker safety and outbreak containment go hand in hand.

Protecting health care workers breaks the chain of transmission. If they are protected, they cannot be infected by their patients, residents or their colleagues. Conversely, if they are protected, they cannot infect their patients, their residents, their colleagues and their families.

> *One of the strongest lessons from SARS is that the health and safety of health care workers and other first responders is vital in a public health emergency.*

As Justice Campbell noted, protecting health care workers during a pandemic has a positive knock-on effect by helping to mitigate pandemic's human, societal and economic negative consequences.

> *"One of the strongest lessons from SARS is that the health and safety of health care workers and other first responders is vital in a public health emergency. SARS demonstrated that an emergency response can be seriously hampered by high levels of illness or quarantine among health care workers."*[63]

We owe a great debt of gratitude to the tens of thousands of Canadian health care workers who bravely cared for COVID-19 patients, often in environments like long-term care facilities with exceptionally high levels of risk and disease, and troubling working conditions.

For decades, health care workers have witnessed first-hand the understaffing, overcrowding and persistent lack of funding that have chronically impoverished long-term care facilities, and now revealed by COVID-19. And for decades, governments, long-term care owners and operators have turned a blind eye, relying on the dedication and courage of health care workers to act as the fragile glue to mend

the unmendable – the many, deep, persistent and long-standing cracks in this sector.

At the beginning of September 2020, about eighty per cent of Canadian deaths from COVID-19 had been in the long-term care sector, exceeding by far deaths from COVID-19 in hospitals or within the community. During the same period, approximately one in five seniors' homes in Canada had experienced outbreaks.[64]

As COVID-19 has exposed this sector's fissures and shortcomings, health care workers have paid a heavy price. Since the start of the pandemic, over 10,000 health care workers have contracted COVID-19 in long-term care, representing about a third of all cases in nursing homes.[65]

These issues need to be addressed on an urgent basis.

We also owe a great debt of gratitude to other essential front-line workers in a myriad of sectors and to the millions of Canadians who have followed public health advice and have persevered in the face of one of Canada's greatest challenges. That we flattened the curve during the first phase of COVID-19 is a testament to them, and to their profound commitment to Canada's foundational social values.

We cannot waste the breathing room they have bought us. As we brace for a potential second wave of COVID-19, public health agencies and governments must act urgently to fix the worker safety systemic failings exposed by the current pandemic, and learn from other jurisdictions, like China, Hong Kong and Taiwan, that used the precautionary principle to protect their workers and to more effectively contain the pandemic.

Justice Campbell presciently warned in his final report in December 2006:

> *"SARS taught us to be ready for the unseen. This 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 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 care workers not to have available the maximum level of protection through appropriate equipment and training."*[66]

There is no longer any excuse to not fully protect our health care workers from COVID-19.

The systemic failures revealed by COVID-19 must be fixed, and quickly.

# Recommendations

## Precautionary Principle

- That the precautionary principle, which states that action to reduce risk need not await scientific certainty, be expressly adopted as a guiding principle throughout Canada's public health, employer infection policies, measures, procedures and worker safety systems by way of immediate action in: policy statements; all relevant operational standards and directions; and by inclusion, through preamble, statement of principle, or otherwise, in all relevant legislation.

- That in any infectious disease public health emergency, the precautionary principle guide the development, implementation and monitoring of measures, procedures, guidelines, processes and systems for the early and ongoing detection and treatment of possible cases.

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

- That federal and provincial/territorial governments must collaboratively act on an urgent basis to ensure that there are sufficient supplies of N95 respirators, or better, or equivalent, to ensure that all health care workers can be protected at a precautionary level. This must include maintaining and regularly refreshing strategic stockpiles and developing a made-in-Canada supply chain.

- The precautionary principle should be the primary driver in setting and properly maintaining levels of personal protective equipment in national and provincial stockpiles. Stockpiles should be set and maintained at levels that ensure that all health care workers are protected at an airborne level. Building on its contracts with 3M and Medicom to produce N95 in Canada, the federal government should ensure that Canada has sufficient domestic production capability to protect health care workers at a precautionary level.

- When a new pathogen emerges – and experts believe COVID-19 is not the last time we will face this threat – health care workers should be protected at a level consistent with the precautionary principle. This precautionary requirement should be enshrined in all occupational health and safety legislation.

- Chief medical officers of health (CMOHs) should be statutorily required to consider and apply the precautionary principle in assessing their jurisdiction's public health emergency preparedness, thus ensuring that their health care workers are protected at a precautionary level.

- Decisions to forego the precautionary principle should not be taken arbitrarily, with a lack of transparency, or without the concurrence of health care worker unions and workplace safety experts. Decisions to

forego the precautionary principle should be reviewed by relevant legislative committees and auditors general.

- That the health and safety concerns of health care workers be taken seriously, and that in the spirit of the precautionary principle, health care workers should also feel safe.

- Canada should critically assess WHO guidance on worker safety and pandemic containment through the lens of the precautionary principle, and determine whether it is in Canada's best interests and reflects the best evidence from other countries' natural experiments, and emerging scientific evidence.

# Occupational Health and Safety

- Canada should immediately add occupational hygienists, worker safety experts and aerosol experts to PHAC and jointly develop guidance that exercise the precautionary principle and accepts and consider diverse sources of evidence, not just randomized control trials.

- On worker safety and pandemic containment measures, Canada should have the resources and capabilities, including sufficient worker safety and aerosol expertise, to independently assess guidance from the WHO and to formulate our own.


*Example of PPE worn in South Korea during the COVID-19 pandemic (source: Korean Health & Medical Workers' Union)*

- A formal national health care table should be established involving health care unions, employers and the PHAC, with a legal requirement for the PHAC to consult that committee in a transparent and meaningful manner before finalizing guidance on infectious disease response.

- Guidance on the safety of health care workers be made on a precautionary basis by workplace regulators, health care worker unions and worker safety experts working collaboratively, and that those decisions form the basis of health worker safety guidance issued by public health agencies.

- Ensure that provincial labour ministries have the resources and ability to act independently from provincial health ministries and fully enforce occupational health and safety laws.

- That provincial ministries of labour use their enforcement and standard-setting activities, and ministries of health use their funding and oversight, to promote organizational factors that give rise to a safety culture in health workplaces.

- That in any future infectious disease crisis, ministries of labour have clearly defined decision-making role on worker safety issues, and that this role be clearly communicated to all workplace parties.

- That provincial ministries of labour have the capabilities and resources to safely, effectively and comprehensively conduct in-person, on-site inspections during public health emergencies.

- Establish a worker safety research agency as an integral part of the Public Health Agency of Canada with legislated authority for decision-making on matters pertaining to worker safety, including the preparation of guidelines, directives, policies, and strategies. It would be modeled on NIOSH, an essential part of the U.S. CDC, and would be focused on worker safety and health research, and on empowering employers and workers to create safe and healthy workplaces. Like NIOSH, its staff would represent all fields relevant to worker safety, including epidemiology, nursing, medicine, occupational hygiene, safety, psychology, chemistry, statistics, economics, and various branches of engineering.

- In the interim and on an urgent basis, any section of the PHAC involved in worker safety have, as integral members, experts in occupational medicine and occupational hygiene, and representatives of workplace regulators, and consult on an ongoing basis with workplace parties.

# Accountability, Transparency and Independence

- It is important that Canadian ministers and senior public health officials continue to participate in relevant WHO decision-making bodies. However, to preserve Canada's independence, Canadian participants in policy and Canadian guidance-making bodies should not wear two hats. They should either participate in policy and guidance making at the WHO or at Canadian public health agencies, but not at both.

- Federal and provincial chief medical officers of health (CMOHs) be statutorily required, on an annual basis, to report to their respective legislatures, and to the

public that they're mandated to protect, on the state of their jurisdiction's public health emergency preparedness, and make recommendations on addressing any shortcomings. The preparation of this report should reflect the concerns and perspectives of health worker unions and safety experts.

- The reports of the CMOHs be required to go to a standing committee of their respective legislatures, which will hold annual hearings into the report and related issues.

- Chief medical officers of health be given the statutory independence – in jurisdictions where they do not have this right – to speak publicly on vital issues like pandemic preparedness without fear of political interference or retribution.

- Qualified outside auditors with sufficient expertise and resources independently audit, on a biannual basis, CMOHs' preparedness resources and their statutory declarations on pandemic preparedness, and publicly report their findings.

- That all jurisdictions be required to publicly report to their stakeholders – and to the federal government – in a consistent, detailed and timely manner the number of health care worker infections in their area.

- Governments and public health agencies be open and transparent on levels of PPE stockpiles.

- With regards to efficiently and cost-effectively maintaining stockpiles of PPE, governments may want to consider Taiwan's three-tier stockpiling framework. It has proven its ability during COVID-19 to optimize the PPE stockpiling efficiency, including through regular cycles of refreshing, ensure a minimum stockpile, use the government's limited funds more effectively, and achieve the goal of sustainable management.

- That significant good faith effort be made to iron out federal-provincial jurisdictional conflicts hindering timely data sharing on health care worker infections.

- That Statistics Canada be given the authority and resources to implement and operate a transparent national system on health care worker data. The resulting data sets must have consistent terminology and criteria. They must have significant granularity to allow monitoring and trend analysis by occupation and sector at a detail level (e.g., PSW, nurse, physician; or LTC, nursing homes, hospitals, pandemic wards within hospitals, direct patient care and other key roles such as triaging). The data has to be shared in real time, not delayed by weeks or even months. And the performance of the system must be monitored and tested regularly.

# Long-term care

- Fixing an historical anomaly, the Canada Health Act should be amended to include long-term care, making it available to Canadians on a universal basis. Government programs aimed at assisting Canadians with long-term care needs vary by jurisdiction and typically are income-based. This is not consistent with the principle of universality at the heart of Canada's publicly funded health care.

- Convene a national commission to develop short-, medium- and long-term strategies for the structure of the long-term care

sector in light of the shortcomings revealed by COVID19.

- Develop and implement a long-term care labour force strategy to address the multiple labour force problems revealed by COVID-19, including the problems of inadequate compensation, staff shortages, overreliance on part-time staffing, and training failures.

- Improve wages, benefits (including paid sick leave) and conditions of employment for health care workers in the long-term care sector to levels that commensurate with the social importance of their work, the complexity of their duties and the daily hazards they face, even in non-pandemic times.

- Offer all part-time workers in this long-term care sector full-time employment (with full-time wages and benefits) and limit their work to one single facility.

- Examine best practices of jurisdictions like South Korea, Hong Kong and Singapore that have a strong track record of limiting COVID-19 in their long-term sectors. In South Korea, for example, anyone with suspected COVID-19 is immediately isolated and moved out to a separate emergency quarantine centre or hospital. In Hong Kong, all long-term care facilities have, as a minimum, a three-month supply of N95 respirators and other PPE. Also in Hong Kong, all long-term care facilities conduct emergency exercises every year to coincide with the advent of flu season to ensure infection control measures and resources are in an acceptable operational state.

- Because systemic infrastructure shortcomings limit the ability of many long-term care facilities to isolate COVID-19 cases, it is vital that on an urgent basis separate emergency isolation facilities be created, resourced and staffed. This would permit COVID-19 cases to be transferred out of long-term care facilities that are unable to isolate them.

- Ensure that any surge in COVID-19 hospitalizations does not result in shifting patients to already overburdened, under-resourced, and understaffed long-term care facilities, who may be unable to isolate new admissions.

- Reflecting a best practice developed in the U.S., consider establishing, where space and resources permit, a cohort unit for exposed and new admissions as an effective way to separate and screen higher risk individuals for the 14-day incubation period. Keeping these patients on isolation and with dedicated staff would make contact tracing for exposure identification easier.

- Ensure that all long-term care facilities are staffed by a dedicated infection control professional with occupational health and safety training. Require that professional to provide quarterly, publicly accessible assessments of the state of infection control and occupational health and safety at their facility.

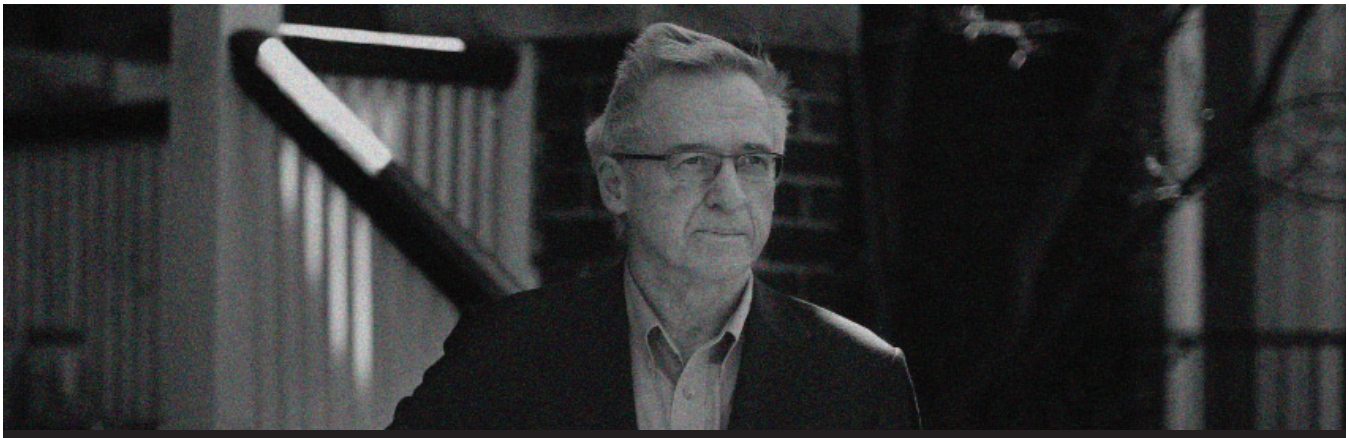
- Ensure that relevant workplace regulators conduct in-person, proactive inspections of all long-term facilities to ensure compliance with occupational health and safety laws, regulations and best practices.

- On an urgent basis, ensure that all health care workers in the long-term sector are properly trained and fit-tested on the use of N95 respirators and other protective equipment.

# All sectors (community, acute and long-term care)

- Respect and enforce the health and safety rights of workers.
- Ensure workers have the right to participate in decisions that could affect their health and safety.
- Ensure workers have the right to know about the hazards in their workplace and receive the training they need to be able to do their jobs safely.
- Ensure workers have the right to refuse work that could endanger their health and safety or that of others.
- That the right of health care workers to speak out about unsafe working conditions be protected from retaliation by their employers.
- Ensure adequate supplies of personal protective equipment (PPE), including N95 respirators or better (e.g., elastomeric respirators), and that workers and essential family visitors have access to appropriate PPE.
- Recognizing that while sufficiently protective, N95s have their drawbacks, including comfort, the federal and provincial governments should collaborate on standards and sufficient supplies of alternative respiratory protective equipment, like elastomerics, that protects at the same level or better than N95s, and that, evidence suggests, may have comfort and cost advantages.
- Provide hands-on training on infection prevention and control, including training testing and drilling workers on donning, doffing, safe use and limitations of PPE – for all workers and essential family visitors working in and entering long-term care homes.

# About the author



Richard Lautens/Toronto Star via Getty Images

From 2003 to 2007, Mario Possamai served as Senior Advisor to Justice Archie Campbell, who headed the SARS Commission into the 2003 Ontario outbreak. During this time, he led the Commission's investigations into health care worker safety issues and pandemic planning.

Possamai has often remarked that he considers this work, assisting Justice Campbell, to be the highlight of his career.

For the past three decades, Possamai has led investigations into complex money laundering, corruption and fraud in North America, Europe, Africa, Asia and Australia. His work has assisted in the civil recovery of millions of dollars in stolen assets.

Possamai was retained as an expert witness by the Attorney General of Canada in *Canada (Attorney General) v. Federation of Law Societies of Canada*, a landmark Supreme Court of Canada case involving Canada's anti-money laundering regime.

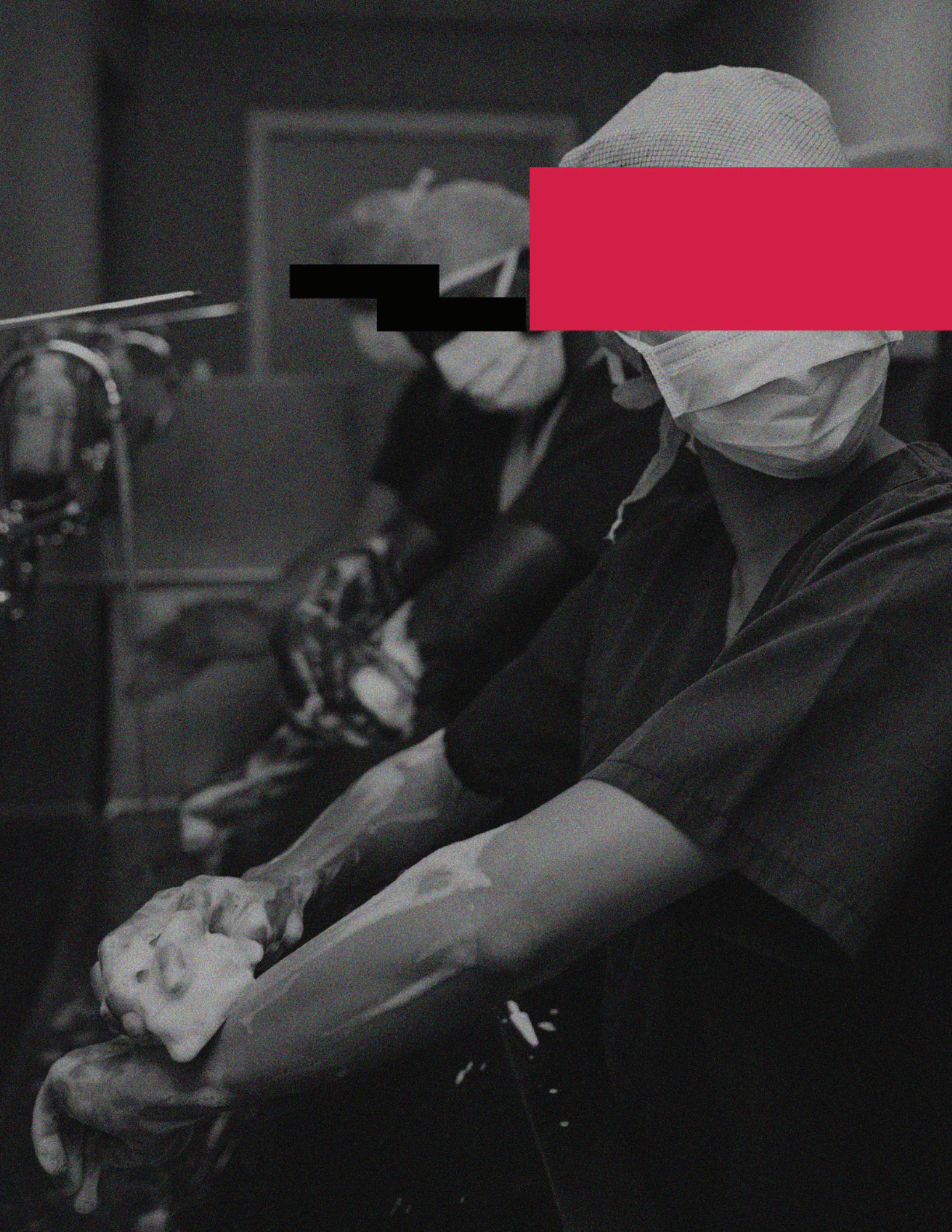
From 2011 to 2018, Mario was director of enterprise intelligence for a major Canadian bank, spearheading its efforts to develop actionable strategic and tactical intelligence regarding emerging fraud, money laundering, and cyber threats.

In 2006-07, he managed a court-mandated review of the internal affairs function at Rikers Island, New York City's largest jail complex.

In 2001, Posamai was a lecturer in the RCMP's money laundering expert witness program.

From 1995 to 1997, he was retained by the Government of Malawi to assist in the investigation and prosecution of large-scale corruption and money laundering committed by the regime of the late dictator Hastings Banda. More recently, Mario Possamai has testified as an expert witness before the House of Commons standing committee on health about the implications of COVID-19.

After his retirement in 2018, Mario Possamai has continued to consult on issues related to occupational health and safety, money laundering and organized crime. He currently lives in Toronto.



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