

# Sacrificed: Ontario Healthcare Workers in the Time of COVID-19

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## Abstract

Healthcare workers (HCWs) in Ontario, Canada have faced unprecedented risks during the COVID-19 pandemic. They have been infected at an elevated rate compared to the general public. HCWs have argued for better protections with minimal success. A worldwide shortage of N95s and comparable respirators appears to have influenced guidelines for protection, which stand at odds with increasing scientific evidence. In-depth interviews were conducted with ten frontline HCWs about their concerns. They reported that the risk of contracting COVID-19 and infecting family members has created intense anxiety. This, in conjunction with understaffing and an increased workload, has resulted in exhaustion and burnout. HCWs feel abandoned by their governments, which failed to prepare for an inevitable epidemic, despite recommendations. The knowledge that they are at increased risk of infection due to lack of protection has resulted in anger, frustration, fear, and a sense of violation that may have long-lasting implications.

## Keywords

healthcare workers, personal protective equipment, precautionary principle, mental health, COVID-19, feminist political economy

## Introduction

There's a lot of anxiety. When COVID-19 is over, the employer won't have enough counselors on hand to handle what I think is going to hit. Because people are anxious; people are fearful; they come to work; they don't know if they have the illness or not, because sometimes you're asymptomatic. They're afraid to go home; their families are scared of them. It is just horrendous. And the morale is as low as it can be. (Nurse)

The COVID-19 pandemic has been described as a “cataclysmic” event.<sup>1</sup> Many of us are experiencing a more than usual degree of anxiety or depression during this confusing and frightening time.<sup>2</sup> Healthcare workers (HCWs) share society's background mental distress in addition to that which is caused by the added stressors related to their work, often without adequate personal protection, in a high-risk work environment.<sup>3</sup> A *New England Journal of Medicine* article outlining mental health challenges experienced by clinicians sees HCWs as “heroes,” much like those who stepped in to help after the World Trade Center collapse: “These courageous people are risking their lives, threatened not only by

exposure to the virus, but also by pervasive and deleterious effects on their mental health.”<sup>1</sup> Neil Greenberg, an academic psychiatrist, warns of increased “post-traumatic stress disorder (PTSD) or depression, other anxiety disorders, substance misuse and suicide.”<sup>4</sup>

The study reported here was conducted to explore the conditions faced by Ontario HCWs during the first months of the COVID-19 pandemic and the impact it has had on their safety and sense of well-being. The research was done in collaboration with the Ontario Council of Hospital Unions-Canadian Union of Public Employees (OCHU-CUPE) and was preceded by a poll conducted by OCHU-CUPE involving three thousand of its members about their concerns regarding personal protection. An overwhelming majority indicated

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that they do not believe they are being adequately protected: 87 percent said there is not enough personal protective equipment (PPE) on hand to keep them safe; 91 percent responded that they feel abandoned by the provincial government.<sup>5</sup> The qualitative study reported here was then undertaken to more fully explore, document, and understand the HCWs' lived experience.<sup>6</sup>

## Background

The COVID-19 pandemic has changed the landscape of the publicly funded healthcare system in the Province of Ontario, which was unprepared to address the related challenges. Ontario had failed to apply crucial lessons from the Severe Acute Respiratory Syndrome (SARS) outbreak in 2003 that provided a road map for handling future pandemics. SARS killed forty-four people in Ontario; more than 330 suffered serious lung disease. HCWs represented 74 percent of the cases.<sup>7</sup> A Royal Commission identified many areas in which the healthcare system and regulatory bodies could have done better.<sup>8</sup> One of the most important findings was that the response to the SARS outbreak would have been better handled had governments, public health agencies, businesses, and institutions been abiding by the precautionary principle.<sup>9</sup> Unfortunately, the SARS Commission's admonishments were largely ignored.

Ontario's healthcare system has been increasingly eroded by economic strains, understaffing, and diminished capacity. According to a report prepared by the Ontario Health Coalition, Ontario has the fewest hospital beds and lowest hospital nursing hours per patient of any province in Canada, ranking third from the bottom of all Organization for Economic Co-operation and Development nations in terms of hospital beds per person.<sup>10</sup>

The province's Financial Accountability Officer reported that, in the 2019–2020 budget, there was a serious underexpenditure by the cost-cutting conservative government for social services, including a \$466 million shortfall for the healthcare system, affecting its ability to handle its COVID-19 response.<sup>11</sup> COVID-19 is further straining an already overburdened healthcare system. Hospitals have cancelled many medical procedures, surgeries, and day clinics to increase capacity for treating COVID-19 patients.<sup>12</sup> Long-term care (LTC) facilities have been especially impacted, particularly those under private ownership, which now account for more than half of the province's LTC homes.<sup>13</sup> A disproportionate number of residents have been infected; many have died; LTC staff have also been inordinately infected.<sup>14</sup> The situation became so dire that military personnel were sent in to replace infected staff in seven facilities in the province.<sup>15</sup>

HCWs—nurses, screeners, doctors, personal support workers (PSWs), cleaners, and others on the front

lines—are at particular risk of exposure, yet many are left without adequate protections, including PPE, administrative and engineering controls. In Ontario, HCWs have been disproportionately infected, making up nearly 20 percent of cases by late July 2020<sup>16</sup> which is a significantly higher rate than the estimated global rate for HCW infection at 14 percent.<sup>17</sup>

It has been well established that the virus can be carried in droplets—large or small.<sup>18</sup> Aerosolizing procedures, such as intubation, can release infected droplets into the air. In March 2020, guidelines were established in Ontario, requiring that N95 respirators, face shields, gowns, and gloves be used by HCWs during such aerosolizing procedures.<sup>19</sup>

An ongoing debate that has a direct impact on HCWs' safety is whether or not the virus can be transmitted through airborne particles; the evidence has grown that SARS-CoV-2 can indeed become aerosolized through coughing, sneezing or even just breathing.<sup>20–22</sup> Researchers have recommended that HCWs be provided with respirators such as N95s or powered air-purifying respirators whenever they come into contact with potential or confirmed cases.<sup>23–25</sup> This was the position of the U.S. Centers for Disease Control and Prevention until early March 2020.<sup>26</sup> The Centers for Disease Control and Prevention then downgraded its guidelines recommending only surgical masks for nonaerosolizing care. It has been suggested that this was a supply-based rather than a science-based decision.<sup>27,28</sup> David Michaels, former head of the U.S. Occupational Safety and Health Administration, told *The New York Times*: “It's been disappointing that both the W.H.O. (World Health Organization) and the C.D.C. have suggested that surgical masks are adequate. . . . Reliance on surgical masks has no doubt led to many workers being infected . . . ”<sup>29</sup>

A study of HCWs in China found that when higher levels of protection were provided, infection rates declined substantially. This considerable difference was attributed in part to high-level PPE, such as “fluid-resistant protective clothing” with long sleeves and an attached head covering, and respirators such as N95s or FFP2s (the European equivalent of N95s) instead of medical surgical masks.<sup>30</sup>

A complicating factor in the protection of HCWs is the global shortage of PPE, especially medical N95s. The shortage could have been avoided in Canada had it followed the recommendations of the SARS Commission, which advised that N95s be available at all times in sufficient quantities. Ontario originally followed the recommendation to purchase and store N95s and other medical supplies. However, after the respirators' expiry dates were reached, the government disposed of most of them and failed to replace them.<sup>31</sup>

HCWs have been reassured that maintaining a distance of two meters (approximately six feet) is protection

enough.<sup>32</sup> Yet research has determined that coughing and sneezing can transmit droplets of various sizes up to a distance of several meters.<sup>33,34</sup> Another significant concern is that numerous studies have concluded that COVID-19 can be spread by asymptomatic or presymptomatic individuals.<sup>35</sup>

Ontario HCWs' sense of security and well-being are affected by the risks they face resulting in mental health consequences that could be prevented by implementing better protections.<sup>36</sup> The study reported here explores how HCWs are navigating through Ontario's compromised healthcare system while facing the increased pressures and risks posed by COVID-19.

## Methods

In April and May, we conducted interviews by telephone conference call to gather qualitative data<sup>37</sup> in order to explore several questions of particular importance to members of OCHU-CUPE: How do frontline staff perceive the risks they face for contracting COVID-19 in the course of their work? How do they understand the risks? How are they affected as members of the community and as family members knowing they may potentially be virus transmitters? How do they perceive and exercise agency in the context of those risks? What recommendations do they have, from their own experience and perspectives, for limiting the risks they and their colleagues face? What barriers (if any) do they perceive to achieving adequate protections?

The study received clearance from the University of Windsor Research Ethics Board. Participants were recruited with the assistance of the OCHU-CUPE provincial office. Some were specifically invited because they had reported concerns, but an open invitation was made to anyone who wished to be interviewed. Participants provided informed consent before the interviews were arranged. Because of the fear of reprisal, recruitment proved to be somewhat onerous; five cancelled after agreeing to participate, two of whom specifically told the recruiter they were afraid they would be identified and then disciplined or fired. We were not given the names of the participants nor any other identifiers. Ten frontline HCWs from across Ontario participated. One LTC-based and four hospital-based registered practical nurses (RPNs), one hospital cleaner, two hospital clerical staff, and two LTC PSWs shared their stories about the reality of working during the viral pandemic. Nine of the ten participants, whose voices are shared herein, are women; their ages range from thirties to sixties. The facilities they work in range from small northern-rural to large urban. At the time of the interviews, some of the centers had not yet been particularly affected by COVID-19; others were in the midst of outbreaks.

We asked the interviewees to talk about their experiences, thoughts, fears, frustrations, and ideas related to the protections provided to them in relation to the pandemic. The interviews, each averaging about an hour in length, were audio-recorded and then transcribed.

## Analysis

We used thematic analysis to explore the responses provided by participants to the semistructured interview questions, providing insight into individual experiences and the contextual environment.<sup>38</sup> Because frontline healthcare occupations are predominantly held by women, we applied a feminist political economy approach to our analysis as it recognizes "gendered divisions of labour" and "the many ways that multiple axes of oppression can come together to differentially frame women's experiences, opportunities and choices"<sup>39</sup> After familiarizing ourselves with the transcribed interviews and notes, we produced a preliminary set of codes. We then thoroughly reread the transcripts and coded passages as we proceeded, adding further codes as needed. Several broad themes were identified.<sup>40</sup>

## Results

All of the HCWs we interviewed expressed feelings of anxiety, stress, anger, and fear. There was an overarching sense of being disrespected, neglected, and exploited. One of the central findings is the participants' frustration regarding the lack of pandemic preparedness on the part of government. Several expressed gratitude for their union's efforts to overcome barriers to improvements.

Numerous brief excerpts reflecting key themes have been integrated into the results allowing the participants' own words to convey their personal experiences and feelings rather than solely relying on the authors' interpretations.<sup>41</sup> The results are organized under the thematic headings of psychological distress, inadequacy of protection, inconsistencies in policy, government failings, barriers to achieving needed changes, and exercising agency. Some passages have been marginally edited for clarity or to protect the identity of the participants. The passion and vehemence that we heard from some of the HCWs are not necessarily conveyed in the transcribed narratives; some were clearly crying; others were audibly angry. Some interviews had to be temporarily paused while the interviewees collected themselves emotionally.

### *Psychological Distress*

While statistics regarding the rates at which HCWs contract COVID-19 compared to the general public provide evidence of their vulnerability to infection,<sup>42</sup> the numbers do not reveal the emotional toll or personal hardships that result from working in a high-risk setting.

COVID-19 has added another significant layer of stress to an already challenging working environment. One interviewee told the story of a coworker—a nurse—who was sent in without proper protection to care for a patient suspected to be infected. Though the patient was confirmed positive, the nurse was not considered to have been sufficiently exposed to be allowed to self-isolate for the fourteen days required under government guidelines after possible exposure; she was told she must continue to come to work. After several days, she developed symptoms and became very ill. She subsequently tested positive and required hospitalization. The entire experience—lack of PPE, her employer not allowing her to self-isolate immediately, and then becoming seriously ill—has deeply affected her emotional well-being.

I've spoken to her every other day. I don't even know what to say to her, other than see your counsellor, talk to your psychologist. She's physically okay now, but mentally, I don't think she'll ever be the same. And she's a young nurse starting out. I hope she will be able to one day tell her story, but she's not there yet.

The daily threat of contracting the virus weighs heavily on the HCWs' minds. A PSW working in LTC described a typical day, starting with her own screening for symptoms as her shift began:

It's very stressful coming into the facility, always worried about your temperature being taken and then questioning yourself; maybe you had a slight cough that morning or a headache. There is the constant fear of bringing it into the facility – to your co-workers or residents or patients. Once you get past that screening, you're wearing the surgical mask all day and then you're going into your unit and what's hitting you is the question of what today is going to bring. I hope everybody is negative for COVID; I hope nobody has passed away. It's stressful . . . the angst that you feel before you even get onto the unit . . . . Then we're waiting for that test result to come back, hoping that it's negative . . . . When you're leaving the building, you are thinking 'I've been here an 8- or a 12-hour shift; how fast do symptoms occur? . . . . So, there's a lot of anxiety coming in and leaving. The same thing happens again the next day; it doesn't get easier and the next week doesn't get easier.

A nurse working in a large urban hospital talked about how the stress of working during the pandemic is affecting her overall well-being and even family relationships:

I've come home and cried many times. I'm stressed out. I can't sleep at night. There's a lot of us having trouble sleeping. I try to talk about it to my husband and he

says, "You need to decompress, and you need to stop talking about work." But I say, "Work is such a big thing for me right now; I need people to know."

An LTC PSW is cognizant of the increased sense of grief and foreboding she and her coworkers are experiencing, especially when the protocols have not been reliably protective:

It's not the same – just trying to be lighthearted – when residents or patients are passing away from COVID . . . . It's very traumatic. When we had our first patient who was COVID positive, unfortunately the test was done later than it should have been done and the staff that were providing care had been exposed. We had quite a few of them that had to go off work. About ten of them. Some are still dealing with ongoing medical conditions related to COVID.

HCWs are largely barred from speaking publicly about their fears regarding the situation in their facilities or the level of protection provided to them. A hospital clerical worker expressed frustration that they cannot air their concerns or views:

All the frontline workers fear reprisal. We are told, "You can't talk to the media. You have to send your manager to talk to them. We have corporate relations. You can't be outside holding signs." It's just such a travesty and these issues need to be said and people need to know what's really going on.

A PSW in an LTC facility revealed that she is having a similarly difficult time coping with the added stress and increased workload. She and many of her coworkers are making sacrifices, working longer hours, to keep up with resident care:

There's definitely extra stress and some days, you just break down and start crying, because it can be a tough day, or you are afraid that the virus is going to infect you or your co-workers or the residents. Our workload is crazy, and the girls are just running on the floor to keep up . . . . Before the pandemic, we had a shortage of PSWs and now we have more and more people going off work because they're afraid. A lot of the staff are working double shifts just to try to get through because you have to look after the residents.

An LTC nurse talked about the additional workload that she has had to contend with because of increased staff shortages:

We have lost about 100 staff who have either taken a leave of absence because of fear or have taken a leave to

go work at other jobs. We have had a few who have taken early retirement. . . . When I leave this interview, I'm heading into work and I'm going to work forty-four out of the next sixty hours. I've prepared enough food for six meals and they're in two shopping bags right now, ready to take to work. So that's what it's doing to me.

She is feeling the effects of the added stress and misses the activities she would normally take part in:

All my venues that I need to deal with stress are gone. Now when I'm not at work, I have to be alone all the time. I can't visit with friends or with my children. If I were to socialize, I would risk bringing the virus into work, to the vulnerable people that I look after.

A clerical worker in a hospital emergency department described how the prohibiting of family members has been an added stressor not only for the patients but for the staff as well:

Having visitors with you when you're in emergency or you're having health issues is so important. And, not having visitors has been a huge, huge stressor on not only our patients, but on us as well. Last week, one of the nurses was trying to contact (unsuccessfully) a dying woman's son who was left to wait out in the parking lot – because we had to send every visitor out. His mother just wanted to see his face one more time.

Residents in LTC are having to adjust to new routines and the loss of visitors, which places further demands on staff time and attention. A PSW told us: "There are extra behaviors with them not being able to understand what's going on, feeling lonely, not having visitors coming in. Some days I have them coming crying to me because they don't understand what's happening."

Violence against HCWs, already a serious problem in hospitals and LTC homes across the province,<sup>43-45</sup> has been exacerbated by the lockdowns, cancelled programs, and restrictions on visitors. One of the residents whose routine was changed because of the pandemic lashed out at his PSW caregiver:

He punched me. There has always been a lot of violence with residents, especially when they have dementia; they can get very agitated or aggressive. His anger kept building up and after a few weeks he was at his max. We had been saying that he's really getting frustrated; he's really getting angry and someone needs to come in and figure out something for him. It didn't happen until I got punched in the face.

Adding insult to injury is the stigma that has developed around those working in healthcare during the

pandemic. As was experienced by nurses caring for AIDS patients,<sup>46</sup> HCWs may be viewed as a danger to others, intensifying an already stressful experience:

My husband doesn't want to tell his co-workers what his wife is going through because then they think my husband has the virus and treat him like he's a threat to them. It has gotten to the point that I don't want to tell anybody I'm a nurse. And I don't really blame them because, if I were in their shoes, I'd be thinking, "Oh my god, she's a nurse. Where does she work?" I was very proud of my profession. I'm very proud that I'm a CUPE member. Right now, I don't want to tell anybody what I do.

A nurse working in an urban hospital described the impact fear and stress are having on the rate of absenteeism among her coworkers: "People are very, very scared. A lot of people have had themselves signed off work by a doctor because they have underlying health issues that could make them very sick."

Even those working in facilities that have not yet had to contend with cases are feeling anxious. They are aware of the shortage of PPE and worry that they will not be adequately protected when they have to care for COVID-19 patients, which they believe is just a matter of time: "I am fearful of what is going to happen when the day comes that we have COVID in our facilities. I saw only a limited supply of N95s in our locker."

An LTC nurse articulated her concern that there is a growing sense of futility among her overextended and frightened colleagues:

A lot of people say when we do get an outbreak in the building, they're going to quit. . . . We don't have confidence that anyone really knows what they're doing. We feel very hopeless. Everybody has kind of thrown their hands up and feel like they can't go anywhere for help.

The newness of the threat and the corresponding uncertainty about the accuracy of the information they are being given add to staff's concerns that appropriate protocols are not being put into place to protect them and their patients:

It is a very emotional time; a real roller-coaster. And there's a lot of concern about whether they are being upfront; are they giving us all the information. For instance, the stock on PPE, especially N95 masks. We start to think, "Okay, you're monitoring it, you're conserving it. Should we be worried? And are the true numbers really being given?" I feel within our facility our joint health and safety committee [members are] not as involved and are not as informed as they should be about the solutions and the directions.

Cleaning is a much more painstaking, stressful, and time-consuming process now. The responsibility of ensuring that the virus is fully eliminated from potentially contaminated areas adds a layer of anxiety. A hospital cleaner told us:

Our hospital wasn't sure even our cleaning chemical that we've been using for years would be even strong enough for this virus. Our chemical solution says it's good for HIV, streptococcus. Eventually the administration got in contact with whoever decides on what chemical to use and they said that what we were using wasn't strong enough, that we should be switching to this new chemical. Well, NOW you tell me? We've been in the pandemic for over a month. So, it's a good thing that I was cleaning everything with bleach then. I have been taking the extra step and other people are too, not only to clean with the cleaner but then to go over it again with bleach.... You are nervous when you're cleaning. You're more meticulous. You rethink, "Did I get everything?" You know, you're thinking "I have to clean every little part." I clean the walls. I clean the ceiling.

Of foremost concern to the HCWs we spoke with was the possibility that they might inadvertently transmit the virus to their family members, either by being infected themselves and passing it along or via contaminated clothing or other personal items. A hospital nurse explained:

My family is always scared about me going to work and catching something.... Everybody's on edge. I'm kind of scared. I don't want to give anything to anybody. I don't know for sure that I haven't picked something up at work. So, everything's totally different. My parents are older. I have a dad that has respiratory issues. I don't feel right about going to visit him at all now.

An LTC PSW described how she is maintaining distance from her husband in order to protect him. She broke down crying recounting how she has completely avoided seeing her young grandchildren because she cannot be certain she isn't carrying the virus:

My husband and I are in separate bedrooms. We even have separate bathrooms because I don't want to take the chance of bringing something home to him.... I haven't seen my grandchildren.... I haven't held them or been with them out of fear that even after testing negative, the next day I might test positive.

An emergency department clerical worker described her concerns that the virus might be

transmitted to others simply through contact with her work clothes:

I live in an apartment building. I don't want to bring anything home to any of these people. Some of them have kids; some have immune-compromised children. It's a scary thing. Our co-workers have to make change-rooms in their garage. They're scared. They have to run inside with their housecoat on and shower right away because they're worried the virus might be in their hair. They are buying their own scrub caps online because they're so scared of bringing it to their families.

### *Inadequacy of Protection*

As many of the HCWs we spoke with said, the protection they are being provided with is inadequate, adding anxiety to an already difficult situation. A nurse talked to us about the concerns she and her coworkers have about using the same mask for an entire shift and possibly having to reuse it the next day because of the supply shortages:

I'm worried about the fact that your mask is only meant for a four to eight-hour window of use. And it's supposed to be a one-time thing. So, having to put them in a bag at the end of shift for possible repurposing causes me some anxiety. Is there going to be that level of protection still after the twelve-hour shift, let alone if it were to get re-sanitized or whatever the case is?

The fact that the HCWs are not being given the protection they believe they need has created conflict and frustration. Many told us they had requested N95s when coming into contact with a suspected or confirmed case. Most were denied. A hospital cleaner described an incident in which she was told she was only entitled to a surgical mask, leaving her feeling vulnerable and frustrated:

They say that a cough doesn't cause it to be aerosolized. I know the large droplets drop down but how do you know there's not microorganisms when I'm cleaning the bedside, the railing, the table, under the bed, mopping it, I'm working a foot away from the patient, and they're saying, "No, you're not allowed to wear an N95".... I asked for one with a suspected case.... I didn't get it. Plus, they're hidden; they're locked up with narcotics.

A hospital nurse described the desperation and powerlessness her coworker felt being sent in to look after a COVID-19 patient without an N95:

The young nurse was supposed to go in to look after a COVID positive patient and she threw a fit. She was

crying, yelling at the top of her lungs, saying, “You’re putting my life in jeopardy. You’re trying to kill us because you’re not giving us proper masks. He’s coughing. There are aerosols. There are droplets in the air.”

A nurse told us that some of her coworkers had taken the initiative of protecting themselves with N95s, only to be warned this could result in being disciplined:

We had managers and infection control personnel that were coming up to the floors and if they saw a nurse with one on, they would say to them, “You are not to wear an N95 mask, you do not need it, you are fine to be wearing the mask with a shield and if I catch you with one on again, you can be fined because it’s not airborne and those N95 masks have to be kept in case of an intubation and for any codes.”

Another nurse has resorted to surreptitiously wearing her own N95 in order to feel properly protected without fear of discipline:

I had an infected patient on one of my shifts. I had my own N95 mask and I had my own goggles and I had my own hair cover and I made sure I double gloved. I put the cheap level two mask over top of my N95.

Besides N95s, other types of PPE are in short supply in some facilities. A PSW working in an LTC facility is disturbed by the limited number of surgical masks available to them as well as the face shields:

As it is right now, we’re allotted two masks a day, as we come in the door, and those two masks are to be worn your entire shift. The only time they are to be taken off is when you have your lunch hour or your break . . . . We just had face shields delivered last week and there’s only so many of them. They’re shared between the PSWs and frontline workers and we’re to wash them between each resident, going into each room. We don’t like having to share them, because you don’t know if they’re properly cleaned between each staff member.

Several of the HCWs fear the virus might settle onto their heads and want the added protection of hair covering but have been told it is not needed and/or is not available to them. A hospital clerical worker is concerned that shortages of basic PPE supplies are compromising worker safety: “Our nurses are covered from their eyes down, but they have nothing on their heads . . . because our employer said scrub caps are scarce. And they don’t have anything on their shoes.”

Some HCWs have received a pay increase, essentially danger pay, for working during the pandemic. One of

the nurses who spoke with us said she would rather have proper PPE.

And the biggest thing is you can give us four dollars an hour? A few of us have said, “Take our money and please get us some N95 masks and some hair-nets and some booties and some proper gowns to protect ourselves. Make us better protected so that we’re not getting sick and dying.”

### *Inconsistencies in Policy*

Adding to HCWs distress are the ever-changing policies and contradictory messaging they are getting from the government and their employers. While it is understandable that knowledge about SARS-CoV-2 is still evolving, much of the messaging and policy changes are perceived by HCWs as erratic. A hospital cleaner said that sanitizing protocols were changed from one day to the next.

We were told, “It’s five-minute wait time to go in and clean a negative pressure room.” Our hospital policy says thirty minutes and the operating room policy is an hour. If, all of a sudden, we had many COVID patients come in, no one would know what they’re doing . . . no one can decide on the wait time. We’re in the middle of a pandemic here. Can someone get their story straight? Because somebody is going to come up here and clean this at three in the morning and not know what to do.

A hospital clerical worker talked about how the changing protocols were creating confusion for the screeners and the public:

They make the rules and then they change the rules . . . . Some days there’s so much information and so many changes that it’s really stressful. Policies change all the time . . . . About a month after the pandemic started, we came in and our manager was waiting for us at seven o’clock in the morning and said, “Okay, well we’ve changed our policies again. We’ve changed from everyone getting one swab and now they’re getting two. So now everyone that we swabbed yesterday has to come back.” So, we had to call all those patients to come back to get swabs. It was a nightmare.

A hospital RPN said that shifting directives contribute to confusion for staff and their patients and increase their sense of distrust:

The communication is poor. You are told one day that this is the way it is and then the next day things have

changed and then the next day it's different again. The public health unit tells us to tell patients something one day and then the next day they change their mind. Or they direct us in what to tell our patients but yet the patients are being told something else when they call into the health unit themselves.

The protection provided to HCWs varies from facility to facility and from one occupational group to another. A PSW working in LTC said she was upset that she was not provided with an N95 when in close range of residents who were being suctioned or fitted with a continuous positive airway pressure (CPAP) machine—both considered to be aerosolizing procedures. The registered nurses (RNs), on the other hand, were given respirators:

The directives that came out said it was okay for the N95s to be used by the RNs. We were really upset. Who made that decision? You're prioritizing somebody else's life before another who works alongside them – we're talking about RPNs, PSWs, the housekeepers, dietary. Don't they deserve to have an N95 if the RNs do?... The PSWs may be in the room supporting a nurse with a suction or with oxygen. We can be within two meters. In fact, the PSWs do the CPAPs but we weren't given N95s.... After the government granted the N95s to the RNs, it was revised two days later that all workers going into these rooms should have these N95 protective masks. But our employer still has an algorithm of when they think you need one, regardless if you're an RN or even a doctor, or an RPN.... So, if you're going in to bathe a patient, or you go in to take them to the bathroom, sitting them up at the bedside, pulling them up in bed, you don't need an N95 mask, according to the employer. But we are saying as long as you're entering that room, you should have your fit-tested N95 mask.

### **Government Failings**

The HCWs we spoke with mainly impugned the government for the inadequate PPE, confusing messaging, changing protocols, and inconsistent policies, although some were critical of their own employers or supervisors. They were especially critical of the lack of preparedness. One of the nurses we spoke with said her hospital is still trying to get a dedicated COVID-19 area and proper rooms set up:

It seems like both the government and the hospitals haven't really been prepared. I know at my facility they're trying to make an area the designated COVID area but the size of it and the rooms that we use have

changed probably three or four times already. And all I can think is that this shouldn't be such [a] huge challenge. They should have an idea of how it was to be set up for H1N1. What were they going to do then? So why does this seem so tough to organize at this point?

There is very little trust in the government's decisions and policies regarding the level of protection the HCWs are being granted. An LTC PSW explained:

It makes it difficult when we feel that the best decisions for our safety – especially in regard to PPE – are not truly the best practice. It's basically the bare minimum. That's a big concern for us on the frontline.... The directives that came out from the Ministry of Health said the N95 masks would only be used in an aerosol application for medical purposes. So, we're looking at other countries and we're thinking, "They're treating this as airborne; they're wearing N95 masks with suspect or presumed or positive COVID patients and we're wearing surgical masks; that's unacceptable. Who's to say this isn't airborne?"

Most of the HCWs we spoke with were aware that the shortage of PPE, especially N95s, was the result of the government's failure to maintain an adequate stockpile. A nurse working in a hospital that was ill-prepared to handle the pandemic sees the importance of planning well in advance in order to have facilities, protocols, equipment, and proper PPE in place:

I think post-pandemic we need to really advocate for being prepared should something else come up, whether that's ensuring that we have adequate stockpiles of PPE within our facility or ensuring that there's some regulatory body that's managing and keeping an eye on things – like the expiration date of N95s and other PPE. I think that we should always have some kind of a plan in place and we need to arrange things and have the kind of PPE that we're going to need on-hand right at the beginning of it.

There has been considerable confusion and delays in terms of swabbing and analysis. Lack of preparedness and cutbacks to laboratories are both implicated. A hospital clerical worker explained:

There's so much more work to be done. I think that the government totally blew it in terms of the labs. Instead of saying, "let's hire a bunch more people, let's ramp up our labs, let's get more testers," they defunded them. They say we are going to swab everyone for COVID when they go to long-term care from the hospital. However, they're getting swabbed and then going before results come back. They're

compromising the PSWs that are going into these rooms.

Inadequate staffing levels—a direct consequence of government funding decisions—were seen as contributors, not only to HCW burnout, but also to patient and resident safety:

Eleven years ago, I didn't expect that I would ever have to put myself at risk like this, but here we are, and if we don't do it, who's going to do it? I've heard horror stories of long-term care homes that everybody has walked away from and the conditions that they found people in.... We're so short-staffed in long-term care, we already know that our residents are not looked after the way they need to be looked after, that residents are left in wet briefs and our residents fall down. When you have two PSWs and one nurse looking after twenty-five people, you don't have eyes in the back of your head. They're going into buildings now that there's COVID and they're seeing this. Maybe they think that this is all because of COVID, but these are pre-existing problems of understaffing and under-funding. It's the way it is in long-term care.

### *Barriers to Achieving Needed Changes*

HCWs describe the powerlessness they feel as individuals when they are at odds with their employers or the government. Achieving the changes that they believe are needed, which range from broad systemic reform to such practical solutions as higher levels of PPE, is hindered by patriarchal structures. In Canada, the majority of HCWs are women, and many are recent immigrants or racialized.<sup>47</sup> Women are “traditionally asked to care for others without thinking of themselves.”<sup>48</sup> An LTC PSW agrees that the gender makeup of the HCW population leaves them more vulnerable to exploitation:

Healthcare has always been predominantly female and we've been taken advantage of. We know how to do the job, we have a lot of tolerance, endurance and stamina. We're very loyal, very nurturing. And I believe that if staffing was more male, there would be more staffing, better pay grids, everything.

A hospital nurse provided a similar insight:

Our healthcare worker population – be it in the hospital or in the long-term care setting – the majority are female, and many are single parents; they're looking after their elderly parents; they have other responsibilities, and they

are being put at risk. And I honestly think that if these were male-dominated jobs, they would be looked after differently.

They also described regulatory barriers to achieving needed protections. We heard that government inspections are either nonexistent or ineffectual. A hospital clerical worker told us:

I'm pretty disheartened by the Ministry of Labour during this pandemic, to be totally honest with you. They've totally taken the employers' side and not the workers. There is no consultation with any frontline worker. No consultation with the nurses, the nurses' unions, or the lab techs. The Ministry is not showing up to calls. They're doing a lot of phone calls, but it's not how they should be working. They still need to be out there on the frontlines. They should use PPE and come out to the hospital if we're saying it's not safe.

### *Exercising Agency*

Although there are many barriers to addressing the needs of HCWs, many of them are engaged in individual and collective actions. For example, the HCWs we interviewed do not fully trust that the information being provided to them is accurate. A hospital clerical worker said:

We've been trying to keep up with information from the CDC and WHO and other reputable healthcare sources to try to figure out what's going to be most protective for us.... It's a lot of just trying to sort through and to figure it out on our own. We try to connect with all the other workers and the other unions to try to find out what information is correct and who's doing what.

They provide each other with support. A hospital clerical worker explained:

We, as workers, we've been trying to look after each other, stick up for each other. In the last few months we see that the hospital doesn't seem to fight for us. There's no indication of people fighting for us, so we just need to fight for each other.

Two of the tools HCWs traditionally use to fight for occupational health improvements are the joint health and safety committees and union activism. Unfortunately, as a hospital clerical worker explained, both have been somewhat curtailed by the pandemic.

Our joint health and safety committee meetings have actually been cancelled the last few months due to

COVID, which is outrageous to me. Our union has been involved as much as they can but it's hard for them, not being able to have face-to-face meetings . . . . The government should be stepping up. But it's always a fight for our union and for the frontline workers to get the protection that they deserve and that they should have. How can we keep the community safe and the hospitals and the patients and the residents safe if we're not safe? That is a huge issue for us and it's very disappointing when we have to fight for safety for ourselves and for our families.

While many of the traditional venues for enacting agency in order to challenge power relationships are currently limited, various union campaigns have been launched to communicate the HCWs' dissatisfaction with the protections they are receiving. OCHU-CUPE designed and distributed stickers for the HCWs to wear that read, "Safety for Patients and Staff"<sup>49</sup> and posters for them to hold up citing the number of healthcare staff that had been infected to date and the words, "Help Us!" over a picture of an N95.<sup>50</sup>

We have had push back. We had the sticker day; we had the poster day. A lot of us emailed and called the Minister of Labour. A lot of us filed grievances. Because of those actions, it showed them that we demand the N95s. We're not going to rely on Public Health Ontario.

Much of the challenges, suffering, heartbreak, illness, and loss experienced by HCWs could have been prevented. In terms of the future, the HCWs we interviewed are hopeful that some good will come of it. An LTC PSW told us: "I really hope from out of this awful situation there comes a positive outcome – that the government and the employers start to really truly appreciate and respect us."

As a hospital nurse indicated, the inadequacies of the healthcare system, perhaps most poignantly within the LTC system, have been exposed like never before:

And at the end of the day, the silver lining of this pandemic is that it has brought to light the dismal condition that healthcare is actually in. It has shone a light on it, not only for the government, but also the public to actually see what is happening in hospitals and long-term care. Hopefully after this pandemic is over, the government, along with the employers, will fix what is broken, and move forward and build on that so the next time – because there will be a next time – we're ready for it, and we won't be in an unsafe situation like this ever again.

The demands of the HCWs have been very clear. If they are going to be heralded as heroes, they believe they should be better treated:

All we are asking is, please protect us! Give us what we need! We need to be coming to work safe and healthy; we need to go back home to our families safe and healthy. That's not too much to ask. There's no way you would send a firefighter into a burning building without protection; without their proper PPE. So why are you sending your healthcare workers into these unsafe sites? Be proactive and protect your workers. And make sure that the mental health of all these workers, healthcare workers, grocery store workers, and other essential workers, be prioritized. Everyone is still in shock. They're just going on adrenalin. But when this is over, they're really going to need help.

## Discussion

The interviews conducted for this study clearly bring out the failings of Ontario's healthcare system, which has been brought to a near breaking point following decades of neoliberalism. The politics and power relations in the workplace have emerged as key issues for HCWs. Each of the problems described by the participants—psychological distress, inadequacy of protection, inconsistencies in policy, government failings, barriers to achieving needed changes, and the need to exercise their own agency—can be better understood when viewed through the lens of feminist political economy. Health is "fundamentally related to the distribution of resources and power, which in turn are linked to gender and race—in short, to the political economy."<sup>51</sup> The current social, political, and economic climate propagates inequalities related to gender, racialization and social class.

Women, who make up the majority of HCWs in Canada, and many of whom are immigrant or racialized, represent a substantial proportion of COVID-19 HCW cases.<sup>52</sup> The feminist political economy approach recognizes that HCWs are an oppressed workforce.<sup>53</sup> Women HCWs are suffering from inordinate pandemic-related mental distress that is exacerbated by "organizational factors such as access to personal protective equipment or high workload; and systems-level factors such as prevalence of COVID-19, rapidly changing public health guidelines, and a lack of recognition at work."<sup>54</sup>

There are commonalities in the findings of previous studies conducted with OCHU-CUPE about the issue of violence against HCWs<sup>43–45</sup> and the current study exploring their experience of working during the pandemic. Both sets of studies demonstrate systemic shortcomings: HCWs do not receive the support they call for; joint occupational health and safety committees and the Ministry of Labour are not functioning as mandated; HCWs fear reprisal if they speak up about their concerns; they feel anxious, sad, abandoned, and vulnerable;

emotional injuries, such as posttraumatic stress disorder, are compounded by the lack of institutional acknowledgment; women and racialized persons feel undervalued; and the limited health and safety legal and bargaining rights of HCWs inhibit them from exercising agency over their working conditions.

In the interviews conducted for this study, the belief that HCWs—and by extension, their families—were inadequately protected stood out as a primary concern. HCWs were aware of the controversy among public health agencies regarding the various modes of disease transmission and most felt the pathogen could become airborne even without aerosolizing procedures. They were critical of governments for failing to provide needed protections for staff and adequate funding for the healthcare system. Canadian federal and provincial ministries of health did not heed many of the recommendations of the SARS Commission and several published reports in 2006, 2010, 2018, and 2019 on the inadequacies of outbreak preparedness.<sup>55</sup> In April 2020, Sandy Buchman, President of the Canadian Medical Association, commented that governments were caught “... flat-footed. ... All we have seen are cutbacks. We haven’t seen adequate resources allocated to health-care.”<sup>56</sup> HCWs’ stories in this study corroborate this claim.

The failure to meet the challenges presented by the pandemic underscores the chronic under-resourcing and the increasing privatization and technology-dependence of hospitals and LTC facilities, where bed shortages, wait times, and understaffing plague the system.<sup>57,58</sup> The HCWs pointed to the connection between government’s refusal to provide them with the protections they believe they need and the curtailment of healthcare spending. Ontario’s healthcare system and public health approaches under neoliberal capitalist austerity-driven cuts have dismantled the social safety net, and COVID-19 has exposed the consequences.

The HCWs also indicated that not knowing from one day to the next what the protocols are going to be led to confusion, anxiety, and stress. Overall, they felt that decisions were being made inequitably and that their protection was not a priority. The lack of clear guidance once the pandemic had been declared, inadequate protective guidelines, and absence of preparedness have contributed to HCWs’ frustrations and feelings of abandonment. They indicated that they have been left to defend themselves—to exercise their own agency on individual and union levels—not only from COVID-19 infection but from such peripheral harm as mental distress and burnout.

The HCWs we interviewed are offended when lauded as “heroes,” while at the same time, their safety and mental well-being are being sacrificed.<sup>59</sup> As Linda

Silas, president of the Canadian Federation of Nurses Unions said:

As a society, we must respect the safety of all workers, just as we respect the safety of patients and the public. This pandemic is having life-and-death impacts on front-line workers, and we must learn from our mistakes and do better.<sup>60</sup>

The Ontario government, along with those in many other countries, was unprepared to deal with the pandemic,<sup>61</sup> and they were slow to recognize and act on COVID-19. When the evidence first emerged that the virus was becoming a serious public health threat, actions could have been taken to mitigate risks to those on the front lines. The date of symptom onset for the first case in Canada was 15 January 2020, in Toronto, Ontario. Control measures were not implemented until weeks later. Canadian National Emergency Strategic Stockpile personnel issued a warning in February that supplies of PPE, including N95s, were too low to “weather a pandemic,” but the federal government failed to order needed PPE until mid-March.<sup>62</sup> Guidelines for use of PPE for HCW protection were not issued in Ontario until 25 March 2020.<sup>19</sup> Numerous revisions were issued but, until the healthcare unions collectively exercised agency and launched a legal action, the Ontario government continued to limit the use of N95s primarily to those conducting aerosolizing procedures on COVID-19 patients. After months of frustration, three labor unions that represent public-sector workers, OCHU-CUPE, Service Employees International Union, and Unifor jointly launched a judicial review of the Ontario government’s refusal to provide N95 respirators to their members. After negotiations with the government, which were joined by two additional unions, Ontario Nurses Association and the Ontario Public Service Employees Union, an agreement was reached. In October 2020, the legal action was withdrawn in exchange for an amendment to the Directive regarding HCW protection. It now

provides clear guidance that N95 or superior protection masks, face shields and other equipment are to be provided to health care staff working on the front line in long-term care facilities or hospitals dealing with COVID-19 outbreaks, among other improvements.<sup>63</sup>

While certainly a welcome development, the negotiated agreement with the province to make N95s mandatory when requested has not reduced other stressors, such as heavy workloads, understaffing, or other organizational factors, which were already problematic before the additional challenges of the pandemic exacerbated them.

In order to ensure an adequate supply of N95s, another labor coalition initiative was launched. OCHU-CUPE, Canadian Federation of Nurses Unions, and Green Jobs Oshawa petitioned the federal and provincial governments to order production of medical supplies in the mothballed GM auto plant in Oshawa, Ontario.<sup>64</sup> To date, the unions' petition remains unaddressed.

An important strength of this qualitative study is that it captures details and complexities of the practical realities of HCWs' day-to-day lived experiences, revealing insights that case statistics cannot. The findings may be an important source of information for those who are producing guidelines for protection, determining budgets, or establishing mental health supports for HCWs. It reveals deficiencies in the healthcare system that need to be addressed, such as underfunding, understaffing, lack of legal protections for HCWs, and the exploitation of a vulnerable workforce. It provides an inside look at how regulatory and administrative decisions personally impact those on the front lines. Similarly, it provides healthcare unions with insights into the needs of their members.

Limitations of the study are noted. The experiences, hardships, fears, and views of its participants do not necessarily reflect those of the thousands of HCWs in Ontario or in other jurisdictions or those in other occupational groups, such as physicians, RNs, technicians, and other allied workers. The findings are, however, consistent with those published in other studies, reports, and gray literature, some of which do include additional HCW categories. A Canadian study of nurses who regularly cross the border into the United States to treat COVID-19 patients found they were experiencing "increased mental health concerns."<sup>65</sup> An editorial published in a Canadian newspaper highlighted the emotional toll COVID-19 is taking on physicians.<sup>66</sup> A report sponsored by Canadian Federation of Nurses Unions found that nurses are concerned about not only their own safety but also that of their families, coworkers, and patients; they are dismayed by "their employers' seeming disregard for their health and safety concerns. And they worry about the unknown."<sup>67</sup>

## Conclusions and Recommendations

There will be enduring repercussions related to the failings and floundering of governments and public health agencies to protect HCWs during the pandemic. The healing process is likely to continue after COVID-19 has been contained. Successful remediation will necessitate that appropriate preparations be put into place for future viral outbreaks—following the prescribed course of action laid out by the SARS Commission and other reports and, "As governments and public health officials

prepare to move forward, the precautionary principle should be front and center."<sup>68</sup>

The study's findings engender a number of recommendations. Staffing levels and capacities in Ontario's hospitals and LTC must be increased, at least to the level of the rest of Canada. This would not only improve healthcare for the public, but would, in turn, reduce HCWs' stress related to staggeringly demanding workloads. There also needs to be a change in workplace culture, in which HCWs' concerns are heard, respected, and addressed. Studies of HCWs' psychological well-being during a viral outbreak have found that strong management support can help to mitigate mental distress.<sup>69</sup> While caring supervisors and such outpourings of community support as pot banging, social media messages, posters, and billboards might help to bolster morale, what HCWs need is improved working conditions, protection, and more power to shape their work environment. Adequate PPE and protective administrative and engineering controls would reduce fear and anxiety related to the risk of becoming infected.<sup>36,70</sup> The immediate requirements of HCWs for mental health supports must be addressed to mitigate the psychological effects of working during the pandemic.<sup>71</sup> Specialized counseling and accommodations must be readily available for those who need it. We need to substantially reinvest in the weakened public healthcare system and halt the current trend toward increased privatization. A revamping of priorities—away from the profit motive and toward the health and well-being of persons—mandates investment in preparations that would mitigate risks and improve the lives of everyone.

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that they sought to accurately reflect the lived experiences and concerns as recounted to them without misrepresentation, omission, or elaboration of essential ideas.

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### References

- Dzau VJ, Kirch D and Nasca T. Preventing a parallel pandemic – a national strategy to protect clinicians' well-being. *N Engl J Med* 2020; 383: 513–515.
- Senior J. We've hit a pandemic wall. *The New York Times*, 5 August 2020, <http://iht.newspaperdirect.com/epaper/viewer.aspx> (accessed 1 November 2020).
- Smith P. Health care workers lacking PPE suffer from more anxiety and depression. *The Conversation*, 28 September 2020, <https://theconversation.com/> (accessed 1 November 2020).
- Greenberg N. Mental health of health-care workers in the COVID-19 era. *Nat Rev Nephrol* 2020; 16: 425–426.
- Canadian Union of Public Employees (CUPE). Ontario Health Minister misinformed: 87 per cent of province's health care staff polled say not enough PPE on hand to keep them safe, 30 March 2020, <https://cupe.ca/> (accessed 1 November 2020).
- Sandelowski M. Focus on research methods. Whatever happened to qualitative description? *RINAH* 2000; 23: 334–340.
- Public Health Agency of Canada. SARS (Severe Acute Respiratory Syndrome), <https://ipac-canada.org/sars.php> (2020, accessed 5 August 2020).
- SARS Commission. Spring of Fear Executive Summary, Vol 1, [http://www.archives.gov.on.ca/en/e\\_records/sars/report/v1.html](http://www.archives.gov.on.ca/en/e_records/sars/report/v1.html) (2006, accessed 1 October 2020).
- Hayes AW. The precautionary principle. *Arh Hig Rada Toksikol* 2005; 56: 161–166.
- Ontario Health Coalition. Hospital overload: Ford government begins its assault on Ontario hospitals. *The Bulletin*, 5 February 2019, <https://socialistproject.ca/> (accessed 1 November 2020).
- D'Mello C. Ontario spent \$466M less on healthcare than planned ahead of COVID-19 pandemic. *CTV News*, 28 July 2020, <https://toronto.ctvnews.ca/> (accessed 1 November 2020).
- Pelley L. Ontario hospitals strive to clear surgery backlog as patients remain in limbo due to COVID-19. *CBC News*, 23 July 2020, <https://www.cbc.ca/news/> (accessed 1 November 2020).
- Stall NM, Jones A, Brown KA, et al. For-profit long-term care homes and the risk of COVID-19 outbreaks and resident deaths. *CMAJ* 2020; 192: E946–E955.
- Canadian Institute for Health Information. *Pandemic experience in the long-term care sector: how does Canada compare with other countries?* Ottawa, ON: CIHI, 2020, <https://www.cihi.ca/> (accessed 1 November 2020).
- DeClerq K. Canadian armed forces leaves final Ontario long-term care home. *CTV News*, 3 July 2020, <https://toronto.ctvnews.ca/> (accessed 1 November 2020).
- Alam H. Nearly 20 per cent of COVID-19 infections in Canada among health-care workers by late July. *Toronto Star*, 19 September 2020, <https://www.thestar.com/news/> (accessed 1 November 2020).
- World Health Organization. *Keep health workers safe to keep patients safe: WHO*. Geneva, Switzerland: World Health Organization, 2020, <https://www.who.int/news-room/> (accessed 1 November 2020).
- Morawska L and Milton DK. It is time to address airborne transmission of COVID-19. *Clin Infect Dis*. Epub ahead of print 6 July 2020. DOI: 10.1093/cid/ciaa939.
- Ontario Health. Personal protective equipment (PPE) use during the COVID-19 pandemic, <https://www.ontariohealth.ca> (2020, accessed 1 November 2020).
- Santarpia JL, Rivera DN, Herrera VL, et al. Aerosol and surface contamination of SARS-CoV-2 observed in quarantine and isolation care. *Sci Rep* 2020; 10: 12732.
- Ong SWX, Tan YK, Chia PY, et al. Air, surface environmental, and personal protective equipment contamination by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) from a symptomatic patient (letter). *JAMA* 2020; 323: 1610–1612.
- Lednicky JA, Lauzardo M, Fan H, et al. Viable SARS-CoV-2 in the air of a hospital room with COVID-19 patients. *medRxiv preprint*, 4 August 2020.
- MacIntyre CR and Wang Q. Physical distancing, face masks, and eye protection for prevention of COVID-19. (Comment). *Lancet* 2020; 33: 1950–1.
- Petsonk EL and Harber P. Respiratory protection for health care workers: a 2020 COVID-19 perspective. *Am J Ind Med* 2020; 63: 655–658.
- De Chang D, Huiwen X, Rebaza A, et al. Protecting health-care workers from subclinical coronavirus infection. *Lancet Respir Med* 2020; 8: e13. [https://www.thelancet.com/journals/lanres/article/PIIS2213-2600\(20\)30066-7/fulltext](https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(20)30066-7/fulltext)
- Gollan J and Shogren E. 31,000 and counting. *Reveal*, 11 May 2020, <https://www.revealnews.org/article/31000-and-counting/> (accessed 1 November 2020).
- Soucheray S. Unmasked: experts explain necessary respiratory protection for COVID-19. *CIDRAP News*, 3 February 2020, <http://www.cidrap.umn.edu/> (accessed 1 November 2020).
- Brosseau L. COVID-19 transmission messages should hinge on science. *CIDRAP News*, 16 March 2020, <http://www.cidrap.umn.edu/> (accessed 1 November 2020).
- Mandavilli A. Medical workers should use respirator masks, not surgical masks. *The New York Times*, 1 June 2020, <https://www.nytimes.com> (accessed 1 November 2020).

30. Zhu S and Zong Z. Why did so few healthcare workers in China get COVID-19 infection. *QJM*, <https://doi.org/10.1093/qjmed/hcaa254> (2020, accessed 1 November 2020).
31. Leo G. Health minister reviewing management of Canada's emergency stockpile. *CBC News*, 15 April 2020, <https://www.cbc.ca/news/> (2020, accessed 1 November 2020).
32. Public Health Ontario. *IPAC recommendations for use of personal protective equipment for care of individuals with suspect or confirmed COVID-19*, 27 July 2020, <https://www.publichealthontario.ca/> (accessed 1 November 2020).
33. Bourouiba L. Turbulent gas clouds and respiratory pathogen emissions: potential implications for reducing transmission of COVID-19. *JAMA* 2020; 323: 1837–1838.
34. Mandavilli A. 'A smoking gun': infectious coronavirus retrieved from hospital air. *The New York Times*, 11 August 2020, <https://www.nytimes.com> (accessed 1 November 2020).
35. Prather KA, Wang CC and Schooley RT. Reducing transmission of SARS-CoV-2. *Science* 2020; 368: 1422–1424.
36. Smith PM, Oudyk J, Potter G, et al. The association between the perceived adequacy of workplace infection control procedures and personal protective equipment with mental health symptoms: a cross-sectional survey of Canadian health-care workers during the COVID-19 Pandemic. *Can J Psychiatry* 2020; 21: 706743720961729.
37. Cresswell JW. *Qualitative inquiry and research design: choosing among five traditions*. Thousand Oaks, CA: Sage, 1998.
38. Braun V and Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006; 3: 77–101. ISSN 1478-0887.
39. Pritlove C, Safai P, Angus JE, et al. "It's hard work": a feminist political economy approach to reconceptualizing "work" in the cancer context. *Qual Health Res* 2019; 29: 758–773.
40. Saldana J. *The coding manual for qualitative researchers*. Thousand Oaks, CA: Sage, 2015.
41. Patton M. *Qualitative research and evaluation methods*. Thousand Oaks, CA: Sage, 2001.
42. Van Beusekom M. Report spotlights heavy pandemic toll on health workers. Report spotlights heavy pandemic toll on health workers. *CIDRAP News*, 14 July 2020, <https://www.cidrap.umn.edu/> (accessed 1 November 2020).
43. Ontario Council of Hospital Unions-Canadian Union of Public Employees. Bloodied, broken and burned out: 88% of long-term care staff experience violence. *Cision*, 8 April 2019, <https://www.newswire.ca/> (accessed 1 November 2020).
44. Brophy JT, Keith MM and Hurley M. Assaulted and unheard: violence against healthcare staff. *New Solut* 2018; 27: 581–606.
45. Brophy JT, Keith MM and Hurley M. Breaking point: violence against long-term care staff. *New Solut* 2019; 29: 10–35.
46. Zelnick J and o'donnell M. The impact of the HIV/AIDS epidemic on hospital nurses in KwaZulu Natal, South Africa: nurses' perspectives and implications for health policy. *J Public Health Policy* 2005; 26: 163–185.
47. Goodyear-Grant E, Harell A and Stephenson L. Concern about pandemic differs across gender and race lines. *Policy Options*, 21 May 2020, <https://policyoptions.irpp.org/> (accessed 1 November 2020).
48. Messing K. If it's a war against COVID-19, who are the soldiers on the front lines? In: BTL Editorial Committee (eds) *Sick of the system – why the COVID-19 recovery must be revolutionary*. Toronto: Between the Lines, 2020, pp. 20–38.
49. Ontario Council of Hospital Unions-Canadian Union of Public Employees. *Sticker day – April 2, 2020*, <https://ochu.on.ca/> (2020, accessed 11 August 2020).
50. Ontario Council of Hospital Unions-Canadian Union of Public Employees. *Day of Action – May 6, 2020*, <https://ochu.on.ca/> (accessed 11 August 2020).
51. Armstrong P. *Armstrong H and Fuller C. Health care, limited*. Ottawa, Canada: Canadian Centre for Policy Alternatives, 2000, p.39.
52. Zafar A. COVID-19 has taken 'heavy toll' on female immigrants working in health care, report says. *CBC News*, 13 September 2020, <https://www.cbc.ca/news/> (accessed 1 November 2020).
53. Dong D and Temple B. Oppression: a concept analysis and implications for nurses and nursing. *Nurs Forum* 2011; 46: 169–176.
54. Sriharan A, Ratnapalan S, Tricco AC, et al. Stress, burn-out and depression in women in healthcare during COVID-19 pandemic: rapid scoping review. *BMJ Yale*, medrxiv ahead of print, 14 July 2020.
55. Tomlinson K and Robertson G. Ottawa had a playbook for a coronavirus-like pandemic 14 years ago. What went wrong? *Globe and Mail*, 9 April 2020, <https://www.theglobeandmail.com> (accessed 1 November 2020).
56. Tomlinson K, Robertson G, Keller J, et al. Head of Canadian Medical Association pushes Ottawa to explain lack of preparation ahead of pandemic's arrival. *Globe and Mail*, 9 April 2020, <https://www.theglobeandmail.com/> (accessed 1 November 2020).
57. McArthur JE, Keith MM, Brophy JT, et al. Novel virus, old story: governments failings put health care workers at risk. In: BTL Editorial Committee (eds) *Sick of the system – why the COVID-19 recovery must be revolutionary*. Toronto: Between the Lines, 2020, pp. 39–58.
58. Armstrong P and Armstrong H. Contradictions at work: struggles for control in Canadian health care. *Socialist Register* 2010; 46: 145–167.
59. Slatin C. Under the knee of Jim Crow and neoliberalism. *New Solut* 2020; 30: 80–82.
60. Canadian Federation of Nurses Unions (CFNU). Nurses launch investigation into Canada's failure to protect health care workers from COVID-19, 22 June 2020, <https://nursesunions.ca/> (accessed 1 November 2020).
61. Watterson A. COVID-19 in the UK and occupational health and safety: predictable not inevitable failures by government, and trade union and nongovernmental organization responses. *New Solut* 2020; 33: 86–94.
62. Tasker JP. Ottawa slow to respond to PPE shortages flagged in February: documents. *CBC News*, 14 August 2020, <https://www.cbc.ca> (accessed 1 November 2020).
63. Ontario Council of Hospital Unions-Canadian Union of Public Employees. Health care unions welcome

- significantly improved COVID-19 protections for 400,000 health care workers, <https://ochu.on.ca/> (accessed 7 October 2020).
64. Canadian Union of Public Employees. To save lives, federal and provincial governments must order GM to make N95 masks says coalition, 24 September 2020, <https://cupe.ca/> (accessed 1 November 2020).
  65. Ralph J, Ménard D, Soucie K, et al. Heroes, or just doing our job? The impact of COVID-19 on registered nurses in a border city. *The Conversation*, 21 August 2020.
  66. Horton J. Doctors' disorders: after COVID-19, physicians will have to face a crisis of another sort. *Globe and Mail*, 8 May 2020, <https://www.theglobeandmail.com/> (accessed 1 November 2020).
  67. Possamai M. *A time of fear: how Canada failed our health care workers and mismanaged Covid-19*. Report, Canadian Federation of Nurse Unions, Ottawa, 5 October 2020, <https://nursesunions.ca/> (accessed 1 November 2020).
  68. McArthur JE. How governments can make public health decisions when some information about coronavirus is missing. *The Conversation*, 4 May 2020, <https://theconversation.com/> (accessed 1 November 2020).
  69. Brooks SK, et al. A systematic, thematic review of social and occupational factors associated with psychological outcomes in healthcare employees during an infectious disease outbreak. *J Occ Environ Med* 2018; 60: 248–257.
  70. Braquehais MD, Vargas- Cáceres S, Gómez-Durán, E, et al. The impact of the COVID-19 pandemic on the mental health of healthcare professionals. *QJM* 2020; 113: 613–617.
  71. Wu PE, Styra R and Gold WL. Mitigating the psychological effects of COVID-19 on health care workers. *CMAJ* 2020; 192: E459–E460.

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