

COVID-19 pandemic responses of Canada and United States in first 6 months: A comparative analysis

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Abstract

Introduction: Canada and the United States have distinct health care and social policies, and it is important to see how they had been responding to the ongoing COVID-19 pandemic.

Methods: The study period was limited to the first 6 months of the pandemic and aimed to explore the responses by public health authorities, media, general population, and law makers during the initial phase of pandemic.

Results: Social disparity, underfunded pandemic preparation, and the initial failure to act appropriately have resulted in the rapid spread of infection in both countries. In the United States, prevailing social inequalities and racism, inaccessible health care, higher rates of preexisting medical conditions and disputed political leadership have further deteriorated the situation and enhanced public suffering, particularly for the black and Indigenous communities. In Canada, its poorly regulated services of long-term care facilities, initial restriction of testing and lack of access to epidemiological data have helped spread the infection and increased casualties in vulnerable populations.

Conclusion: Analysis of the pandemic responses of the United States and Canada has revealed how existing social disparity, underfunded pandemic preparation, and the initial failure to act appropriately have resulted in the rapid spread of infection.

KEYWORDS

Canada, Comparative analysis, COVID-19, pandemic, United States

1 | INTRODUCTION

COVID-19 is continuing to spread across the world. As of 5 August 2021, the cumulative number of global cases and deaths have surpassed 200 million and 4.3 million respectively.¹ The novel nature of the severe acute respiratory syndrome (SARS)-CoV-2 virus and lack of scientific evidence engendered uncertainty of various kinds in pandemic responses from the moment of first detection. In fact, emergence of scientific uncertainties alongside the spread of virus initially created a wide range of responses from health authorities, political leaders and public – complete denial to stringent nationwide lockdown. Due to lack of baseline information, COVID-19 has posed an unprecedented challenge to the international scientific community. However, while nearly all other research has ground to a halt, so many of the world's scientists focused immediately on COVID-19. Open-access online repositories and numerous communication platforms led by journals, research institutions, and health agencies eventually made the latest scientific information available to all the researchers and the policy makers.² Developing country like Bangladesh generated multidisciplinary data base on impacts of public health measures including roles of media with regard to COVID-19 on general population, public perceptions, and impacts on mental health within 1 year of the pandemic.³⁻⁶ Not surprising, by the end of 2020 the scientists were able to develop robust surveillance and pandemic monitoring system, rapid diagnostic kits, identification high risk populations, and indeed several types of effective vaccines ready to roll out for global population.

We were interested to explore the responses by public health authorities, media, general population, and law makers during the initial phase of pandemic when the scientists were yet to generate any credible evidence of mode of disease transmission, identification of high-risk population, developing rapid diagnostic tools and preventive measures. We have selected Canada and the United States, which share the world's longest international border and have the world's most comprehensive trading relationship.^{7,8} These two countries have enjoyed a long history of strong social and cultural relations and free movement of their citizens.⁹ However, these countries also have different public policies concerning health care and social protections, which has resulted in distinctive indicators. We were particularly curious to see, in the existing socio-political landscape, how these two countries had been responding to the COVID-19 pandemic and the potential roles of existing public policies.

2 | METHODS

The study was based on review of different forms of materials, such as peer-reviewed papers, and grey literature (news media, and government and international social, economic and health websites). We have limited the study period to the first 6 months of the pandemic, that is, February to July (the first cases of both countries were reported in the later part of January 2020).^{10,11} We have focused on the comparison of socioeconomic and health indicators (relevant to COVID-19) between the United States and Canada, followed by surveillance (case detection and contact tracing), prevention of transmission, and impacts on vulnerable populations (LGBTQ+, racialized, and senior populations).

3 | RESULTS

3.1 | Socioeconomic and health indicators

People dealing with certain underlying medical conditions (such as cancer, diabetes, chronic obstructive pulmonary diseases (COPDs), obesity, and chronic kidney diseases [CKD]), advanced age (>65 years), and poverty are at increased risk for COVID-19.¹² Table 1 shows a comparison between the two countries with regard to socioeconomic and population health indicators. Life expectancy and the proportion of the elderly population (>65 years) are higher in Canada. Although the poverty rates of both countries are almost the same, children and the elderly population are more disadvantaged in the United States, and overall income inequalities are also more prevalent in the United States. According to the Organisation for Economic Co-operation and Development (OECD), the United States is in the bottom third (*Gini coefficient*) of the list of all member countries (only better than Mexico and Chile).¹⁹ While the US population is disproportionately unhealthy with regard to obesity, diabetes, and CKD, Canada has higher rates of cancer and COPD. The United States is the only OECD country that does not offer universal healthcare, yet it spends more per capita on healthcare than other member

TABLE 1 Socio-economic and population health indicators of USA and Canada

Indicators	USA	Canada
Population age over 65 (%) ^{13,14}	16.3	17.5
Life expectancy (years) ¹⁵	78.5	82.2
Poverty rate (%) ^{16,17}	10.5	11
Poverty rate (by age group)		
Children (<18 years)	14.4	10.8
18–64 years	9.4	12.5
Elderly (>65 years)	8.9	5.6
Disposable income inequality (<i>Gini coefficient</i>) in 2014 ¹⁸	0.394	0.322
Income share ratio (ratio of average income of the top 20% to the average income of the bottom 20% of the income distribution) ¹⁹	8.7	5.5
Prevalence of adult obesity (%) ^{20,21}	42.4	26.8
Prevalence of diabetes (%) ^{22,23}	9.4	7.3
Prevalence of chronic kidney disease (per 1000) ^{24,25}	140	72
Cancer incidence rate (per 100,000) ^{26,27}	439	529
Prevalence of chronic obstructive pulmonary disease (per 1000) ^{28,29}	64	100
Practicing physicians (density per 1000 population) ³⁰	2.61	2.74
Health care spending (US\$) per capita ³¹	10,246	4755
Government/social health insurance (% of population covered)	34.0	100.0
Private health insurance (% of population covered)	62.8	68.0
Total health insurance (% of population covered)	90.6	100.0
Long-term care resources and utilisation: Formal sector (2018) ³⁰		
Long-term care workers (nurses and personal carers) per 100 population aged 65 and over	5.5	3.5
Nurses per 100 population aged 65 and over	1.5	1.2
Personal carers per 100 population aged 65 and over	3.9	2.3
Long-term care resources and utilisation: Home (2018) ³⁰		
Long-term care workers (nurses and personal carers) per 100 population aged 65 years old and over	2.6	0.5

countries.³⁰ Health insurance in the United States is directly linked to employment. As unemployment rates in the United States have increased to an all-time high of 13% since the onset of the pandemic, many Americans have been left without adequate health insurance, thereby further limiting access to healthcare.^{32,33} In contrast, Canada's universal health care system provides access to care for all Canadians regardless of employment, age, or ability status. Despite the higher proportion of the ageing population in Canada, there are less available resources for long-term care than in the United States.

3.2 | Surveillance of COVID-19

3.2.1 | Outdated technology

In 2019, 2.84 and 0.6 million visitors from China entered the United States and Canada, respectively.^{18,34} With this volume of travel and the climbing case counts in China in January, the risk of the global spread of SARS-CoV-2 would inevitably reach the United States and Canada.³³ Despite the availability of technologies for tracking global cases of COVID-19, reliance on outdated and under-funded global surveillance platforms hindered the pandemic responses of the United States and Canada.^{35,36}

Canada has been criticised for its lack of investment in pandemic preparedness and the poor upkeep of the Global Public Health Intelligence Network (GPHIN). The GPHIN is a secure internet-based multilingual early-warning tool developed by Health Canada in collaboration with the WHO and is a significant source of information for detecting novel infections and outbreaks.³⁴ In December 2019, as early reports of a novel coronavirus were coming out of Wuhan, China, the GPHIN system was receiving technology upgrades. Since the initial reports did not come from the trusted GPHIN system, there was speculation that early warnings were not taken seriously, thereby slowing the response.³⁴ Moreover, Canadian provinces and territories are required to provide detailed COVID-19 case report forms to the Public Health Agency of Canada (PHAC) within 24 h of identifying a positive case. Unfortunately, the transfer of these sensitive data relied on antiquated methods such as facsimile and email.³⁷ Similarly, the United States received criticism for its lack of a national reporting system. Health data collection across the country is fragmented, as its health care systems work in silos and there is a lack of communication between county and state facilities. This deficiency of collaboration hampers the ability to acquire, process, share, analyse, and communicate data to inform a timely outbreak response.³⁸

3.2.2 | Testing

Canada and the United States were not fully prepared to address COVID-19 testing, and neither country met national testing benchmarks. Based on their population sizes and the responses from proactive OECD countries (such as Germany, New Zealand, and Denmark), Canada should be testing a few hundred thousand people and the United States should be testing 2.5–30 million people per day.³⁹ Table 2 shows a timeline of the United States and Canada's COVID-19 responses.

In the United States, limited access to testing reagents, inadequate testing capacity at the national and community levels, and fragmented funding have prevented the development of accurate and reliable tests, resulting in a significant number of undiagnosed cases.^{60,61} Additionally, the initial test kits released by the Centre for Disease Control (CDC) were flawed and took weeks to correct, squandering a critical month during which aggressive and widespread testing might have reduced the speed and scale of the pandemic in the country.⁶² Similarly, in Canada, shortages of testing supplies led to backlogs and delayed diagnosis, isolation, and contact tracing.⁶³ The scarcity of supplies meant that health care professionals had to prioritise testing and, therefore, were less likely to detect community transmission.¹¹ Despite these limitations, Canadian provinces were able to ramp up testing quickly, and by the end of February, the province of British Columbia alone had tested more people than all of the United States.⁶⁴

Canada failed to heed warnings from the WHO regarding asymptomatic viral transmission. Thus, asymptomatic contacts of cases were not tested or isolated and therefore contributed to widespread community transmission.⁶³

TABLE 2 Timeline comparison of USA and Canada responses to COVID-19

Events	USA	Canada
First case of COVID-19	Jan 20	Jan 25
	Washington state (history of travel to Wuhan, China) ¹⁰	Toronto (history of travel to Wuhan, China) ¹¹
First death from COVID-19	Feb 29 ⁴⁰	Mar 8 ⁴¹
Community transmission	Feb 26 ⁴²	Mar 5 ⁴¹
Federal Government response	Jan 29	Jan 31
	The White House coronavirus task Force ⁴³	Special Advisory Committee on the novel coronavirus was formed ⁴⁴
	-	Mar 4 New COVID-19 Cabinet Committee ⁴¹
Travel restrictions	Jan 31	Jan 30
	Suspends travel from China ⁴²	Advised to avoid non-essential travel to China ⁴¹
	Mar 13	Mar 16
	Travel restricted from more than two dozen European countries ⁴²	International travel ban to all foreign countries except from United States ⁴¹
	Mar 18	Mar 16
	Canada/US Border ⁴¹	Advised against out of country travel ⁴¹
-	Mar 18	
-	Canada/US Border ⁴¹	
Declaration of National Public Health Emergency	Mar 13 ⁴¹	Mar 17 ⁴⁵
Mandatory self-isolation/quarantine	Jan 31 ⁴⁶	Mar 25 ⁴⁷
Federal financial support packages	Mar 18	Mar 25
	Families first coronavirus relief package ⁴²	Canadian Emergency response Benefit ⁴⁸
Social distancing, mass gatherings and stay at home orders	Mar 26	Mar 13
	National social distancing guidelines released '30 Days to Slow the Spread' ⁴⁹	PHAC recommends social distancing, avoiding large gatherings and staying at home orders ⁵⁰
PPE procurement	Mar 18	Mar 31
	Defense production Act ⁴²	Federal order for domestic production of PPE ⁵¹
Reopening	Apr 16	Jun 1
	Release of reopening guidelines while COVID-19 cases continue to soar ⁵²	Provinces start easing restrictions, as cases slowing across the country ⁵³
Official statement 'Masks'	Jul 14 ⁵⁴	Jun 10 ⁵⁵
Unemployment rate due to pandemic (as of May 2020)	13.3% ⁵⁶	13.7% ⁵⁷

TABLE 2 (Continued)

Events	USA	Canada
COVID-19 emergency response benefits	Apr 1 Families First Coronavirus Response Act Nutrition assistance, paid sick leave, enhanced unemployment insurance coverage, free coronavirus testing and increased federal Medicaid funding ⁵⁸	May 18 Canadian Emergency Response Benefit Taxable \$2000 every 4 weeks up to 24 weeks. \$300 per child, one-time pay ⁴⁸
COVID-19 cases (as of Aug 3)	4,668,395 ⁵⁹	118,768 ⁵⁹
Incidence rates	1410 per 100,000 people	314 per 100, 1000 people
COVID-19 deaths (as of Aug 3)	154,860 ⁵⁹	8990 ⁵⁹
Mortality rates (%)	3.3	7.6

Abbreviations: PHAC, Public Health Agency of Canada; PPE, personal protective equipment.

Testing criteria at the federal and provincial levels were also criticised for being too restrictive, leading to missed cases.⁶⁵ Later, various government sectors collaborated to enhance the surge capacity as recommended by the PHAC (2018). As a result, federal employees have been trained as contact tracers to support jurisdictions with inadequate human resources. Statistics Canada provided 1700 interviewers with the capacity to make 20,000 calls per day to help with contact tracing efforts in any province or territory requiring assistance.⁶⁶

In the United States, the testing criteria were much more liberal, with testing available to symptomatic and asymptomatic individuals with known exposure to COVID-19.⁶⁷ The United States lacks a national strategy for contact tracing, which has led to a patchwork approach with uneven implementation across the country. Many states are understaffed and ill-prepared for the task.^{68,69} To achieve appropriate staffing, 100,000 additional contact tracers are required, with an estimated cost of US\$3.7 billion to local, state, territorial, and federal public health agencies.⁶⁹ Chronic underfunding and a lack of federal financial support resulted in a loss of 25% of these agencies' employees over the last 10 years.⁶⁹

3.2.3 | Access to health care

While Canada's universal health care program provided free testing and treatment access to all citizens and residents, unprecedented levels of unemployment in the United States left many without health insurance and, therefore, made them less likely to seek testing and care due to the cost.^{61,64} In response, a new aid package, the Families First Coronavirus Response Act, which included provisions for free testing and paid sick leave for a portion of the population, was developed.⁶⁴ Unfortunately, the act was not implemented until March 18, nearly a month after the United States had documented widespread community transmission (Table 2).⁴² The response to improved access in the United States was slow, delaying diagnosis, isolation, and contact tracing and contributing to widespread community transmission.⁶¹

3.3 | Prevention of transmission

3.3.1 | Personal protective equipment

Despite recommendations for governments to stockpile Personal protective equipment (PPE) following the SARS outbreak in 2003, the PHAC failed to establish benchmarks for federal PPE supplies and did not provide guidance to provinces and territories about how much PPE should be procured.⁷⁰ Items previously stockpiled were expired

and ultimately discarded, highlighting the lack of pandemic planning.⁷¹ Additionally, Canada was dependent on international supply chains for PPE procurement, leaving the country vulnerable to inadequate supply amidst global pandemic demands.⁷² The lack of PPE supply left healthcare workers susceptible to exposure to COVID-19 and led hospitals to appeal to the public for PPE donations.⁷³ On March 31, Canada's Prime Minister, Justin Trudeau, invoked a federal order for the domestic production of PPE, supporting local industry to provide made-in-Canada protective and medical equipment for the pandemic response.⁵¹

Similarly, PPE shortages in hospitals in the United States left frontline health care workers susceptible to contracting the virus. Shortages have led to individual health care providers trying to secure adequate PPE, even taking to social media (#GetMePPE) and setting up websites to obtain PPE directly.⁷⁴ States have competed against the federal government for the same small shipments of supplies with the US Federal Emergency Management Agency, confiscating orders and redirecting them to the national stockpile at the last minute.⁷⁵ In response, on March 18th, US President Donald Trump invoked the Defense Production Act, a law from 1950 that gives the government more control during emergencies to direct industrial production.⁷⁶ In the early pandemic period, the debate on public mask use was fuelled by shortages of hospital-grade masks for healthcare workers and a lack of evidence-based research on the effectiveness of cloth masks. Not surprisingly, the United States has reported the second highest number (1077) of confirmed deaths of health workers, after Mexico (1320), while Canada reported 17 such deaths.^{77,78}

Table 3 shows a comparison between pandemic communication between the United States and Canada. On 3 April 2020, the White House Coronavirus Task Force and the CDC announced recommendations to wear a cloth face covering in public to slow the spread of COVID-19.⁸⁶ Dr Anthony Fauci (Director of National Institute of Allergy and Infectious Diseases, National Institute of Health, USA) openly discussed the change in the recommendation as the result of evolving evidence about the asymptomatic transmission of the virus. In President Trump's announcement of the new mask recommendations, he contradicted Dr Fauci, the task force, and the CDC, stating that he would not be wearing a mask. Trump's conflicting statement sent a mixed message to Americans and undermined the credibility of public health experts, creating confusion and promoting non-compliance with mask use. In contrast, Canada's recommendation to wear masks in public came over a month later than in the United States. In May, Trudeau announced that he would be wearing a mask in public, providing support and credibility for Dr Theresa Tam's (Chief Public Health Officer of Canada) recommendation and modelling behaviour change for the Canadian public. In her statement, Dr Tam was transparent, divulging that the science on mask use is not absolute, yet providing a clear explanation of how masks can help prevent droplet transmission. The consistent messaging from the Canadian government and public health officials followed the core risk communication principles of speaking from one united voice.

3.3.2 | Social distancing

Notably, the turning point for Canada's response was the united decision to physically distance and outstanding compliance with stay-at-home orders from the public.⁶³ Consistent communication between provincial and territorial government leaders and public health officials allowed provinces to gain insights from one another and employ stay-at-home orders.⁸⁷ Conversely, early communication from federal officials in the United States was noted to downplay the seriousness of the virus. Throughout February, President Trump repeated the message to various media outlets and state governors that COVID-19 would disappear on its own as the weather gets warmer.⁸⁸ The misinformation and influence of the president contributed to a false sense of security and sentiment that public health measures were unnecessary.⁴⁹ On 26 March 2020, the president released national social distancing and stay-at-home guidelines entitled '30 Days to Slow the Spread'; however, stay-at-home orders were inconsistently implemented among states, and public non-compliance levels were high.⁴⁹ Dr Fauci's statement supporting stay-at-home orders was in stark contrast to President Trump's message that *some states were too harsh with closures and stay-at-home orders*, contradicting his own guidelines. It has been noted that the US federal government's hesitation in supporting state stay-at-home orders was rooted in the desire to avoid disruptions to business and the economy.⁴⁹

TABLE 3 Comparison of Canadian and the United States pandemic communication

Public health measures	Prime Minister Justin Trudeau	Dr Teresa Tam	President Donald Trump	Dr Anthony Fauci
Masking	'I will be wearing a mask, that is my personal choice. That is aligned with what public health is recommending' – Huffington Post ⁷⁹	'A non-medical mask can reduce the chance of your respiratory droplets coming into contact with others or landing on surfaces. The science is not certain, but we need to do everything we can, and it seems a sensible thing to do.' ⁸⁰	'I don't think I'm going to be doing it. Wearing a face mask as I greet presidents, prime ministers, dictators, kings, queens – I just don't see it' – CNN ⁸¹	'Given the fact that we know that asymptomatic people are clearly transmitting infection, it just makes common sense that it's not a bad idea to do that'. (referring to wearing a mask in public) – CNN ⁸¹
Stay at home orders and physical distancing	'I am going to make sure that we continue to follow all recommendations of public health officers, particularly around staying at home wherever possible and self-isolation and social distancing.' 'Enough is enough, go home and stay home.' ⁸⁴	'Our window to flatten the growth curve of the epidemic is narrow.' 'This is our chance right here, right now. We need to act now and act together.' ⁸⁵	'I think elements of what they've done are just too tough', (referring to state at home orders in some states) ⁸²	'I don't understand why' every state hasn't issued stay-at-home orders.' ⁸³

3.4 | Vulnerable populations

Communities experiencing pre-existing social vulnerabilities are at an increased risk of exposure to infection and psychological distress in the context of a pandemic. Such groups include LGBTQ+ persons, racialized populations, long-term care residents and staff, and people living in poverty.⁸⁹

3.4.1 | LGBTQ+

Public health measures such as physical distancing and shelter-in-place orders pose unique challenges for LGBTQ+ communities in both countries, negatively impacting their health and safety, and they have received minimal attention during the COVID-19 response.⁹⁰ COVID-19 disproportionately impacted the income and financial security of LGBTQ+ populations in the United States and Canada. Stay-at-home orders and business closures have resulted in significant service industry job losses in both countries. Forty percentage of all LGBTQ+ persons in the United States work in service industry jobs compared to 22% of the general population.⁹⁰ In Canada, 53% of LGBTQ+ households have been impacted by reduced hours and layoffs as a result of the pandemic, compared to 39% of overall Canadian households.⁹¹ Currently,

LGBTQ+ people in the United States lack federal employment protections from being fired because of their sexual orientation, making them more susceptible to employment loss during the pandemic.⁹² In the United States, 17% of the LGBTQ+ population lacks access to health insurance versus 12% of the general population.⁹⁰ With the loss of service industry jobs and subsequent employer insurance, the health insurance gap is increasing for LGBTQ+ populations in the United States, thereby limiting their access to healthcare.⁹² Both Canada and the United States have developed online mental health resources to support the general public with the psychological stress associated with COVID-19. These resources, however, failed to consider that intersectionally marginalised populations such as LGBTQ+ groups with low income may lack access to digital technology, further perpetuating health inequities in these vulnerable populations.⁹⁰

3.4.2 | Race and ethnicity

A growing body of evidence suggests that racial and ethnic minorities and socioeconomically disadvantaged communities bear a disproportionate burden of illness and death due to COVID-19.⁹³ The infection rate in black counties in the United States is three times higher, and the death rate is six times higher than in predominantly white counties.⁹⁴ African American patients had 2.7 times the odds of hospitalisation, even after adjusting for age, sex, income, and comorbidities.⁹³ Moreover, several underlying medical conditions known to increase the risk of COVID-19 (such as certain types of cancer, diabetes, COPD, obesity, and CKD) are more prevalent among black, Indigenous, and ethnic minorities. For example, compared to Caucasians, end-stage kidney disease prevalence is about 3.7 times greater in African Americans, 1.4 times greater in Native Americans, and 1.5 times greater in Asian Americans.²⁶

Existing social, economic, and health policies and systems that underpin health disparities for racial and ethnic minorities and socioeconomically disadvantaged communities are magnified during times of crisis. As income is strongly correlated with health, economic status matters profoundly for reducing the risk of exposure to COVID-19. In 2018, for every dollar of household income that white workers earned, black workers earned 59 cents, and Hispanic workers earned 72 cents.⁹⁵ African American individuals also had higher rates of un-insurance and under-insurance compared to white individuals, thereby limiting their access to healthcare and contributing to delays in seeking appropriate testing and care for COVID-19 symptoms. The segregation of healthcare services further limits access to care. COVID-19 testing centres were more likely to be located in higher-income, mostly white neighbourhoods versus low-income racialized black neighbourhoods, contributing to racial disparities in health.⁹⁵

COVID-19 has exposed the deeply entrenched history of health care inequity based on underlying racism. Studies from 2015 to 2017 indicated a majority of healthcare clinicians had an implicit bias against African Americans associated with poor patient-clinician communication and quality of care. COVID-19 testing data from several states revealed African American patients reporting COVID-19 symptoms were less likely than white individuals with the same symptoms to receive testing.⁹⁵ Thus, members of racialized communities lacked access to testing, thereby delaying diagnosis and further increasing the risk of complications and deaths from COVID-19.

Although public health measures such as physical distancing and stay-at-home orders are effective strategies known to reduce COVID-19, the ability to comply with these measures is not equal among all populations. The privilege of physically distancing at work and working from home are not available in many low-income jobs.⁹⁴ Additionally, racial minorities are overrepresented among essential service workers who are required to work outside the home when stay-at-home directives are issued. Many must travel to work on buses and subways, increasing the risk of exposure and consequent infection.⁹⁴

Canada's Pandemic Plan cites the need for robust data collection to identify populations disproportionately impacted in order to address specific needs through tailored interventions.⁸⁹ The report recognises priority populations, including Indigenous people, black people, LGBTQ+ communities, and people living in poverty. For Indigenous communities, special attention was paid to appropriate communication, restrictions on entry for outsiders to reserves, and access to essential pandemic responses.⁹⁶ Incidence and mortality rates of First Nations individuals living on reserves reported one-fourth and one-fifth of the rates found in general population.⁹⁷ However, in the United States, in the first

5 months, the cumulative incidence of laboratory-confirmed COVID-19 among non-Hispanic American Indian and Alaska Native persons was 3.5 times higher than among non-Hispanic white persons.⁹⁸

A notable weakness of Canada's pandemic response is the lack of race-based and socio-demographic data collection.⁹⁹ On 5 June 2020, Canada's federal, provincial and territorial human rights commissions issued a letter calling on the Government of Canada to develop and implement a nation-wide strategy for the collection of disaggregated health data focused on race and indigeneity.¹⁰⁰ The Commission is advocating for policy and decision makers to engage racialized communities as partners and co-owners in race-based data collection to ensure appropriate use and to identify inequities.^{99,100} On June 5th, the Prime Minister of Canada pledged, 'We need to do a much better job around disaggregated data, and that's something that we're going to do.'⁹⁹

3.4.3 | Long-term care residents

COVID-19 has highlighted the longstanding fragmented care of seniors and underinvestment in long-term care systems in Canada and the United States. Despite detailed guidance documents provided by both the Government of Canada and the CDC, long-term care facilities in Canada and the United States were unprepared for a timely response to COVID-19.^{101,102} Canada's proportion of COVID-19 deaths in long-term care is double the average of other developed countries with a case fatality rate estimated at 36%, accounting for 85% of Canadian COVID-19 deaths.^{103,104} To compare, the case fatality rate in long-term care facilities in the United States is 16%, accounting for more than 41% of the country's COVID-19 deaths.¹⁰⁵ Seniors over the age of 80 living in the community have a higher COVID-19 survival rate than peers living in long-term care and retirement homes, which demonstrates the disproportionate impact of COVID-19 on those living in long-term care facilities.¹⁰³

In Canada, underlying systemic issues, including chronic underfunding, inadequate staffing levels, undervaluing the workforce, high healthcare-worker-to-resident ratios and shared bedroom and living spaces have all contributed to the rapid spread of infection through long-term care facilities.^{103,106} A lack of coordination and collaboration between the acute care and long-term care sectors contributed to the disproportionate impact of COVID-19 in long-term care settings. Inadequate pandemic planning for long-term care resulted in an insufficient supply of PPE and a lack of direction and education for staff. The design of existing long-term care facilities with shared living spaces hindered the necessary physical distancing, isolation, and care of long-term care residents, contributing to the rapid spread of infection and devastation within the homes.¹⁰⁶

Canada was slow to recognise that healthcare workers employed across multiple sites were contributing to the rapid spread of infection. As such, measures to restrict employment to one single facility were implemented too late.¹⁰³ Early data from the United States clearly showed that long-term care workers were spreading COVID-19 between facilities; this discovery led all provinces in Canada to restrict the employment of healthcare workers to one facility.¹⁰³ For most health care workers in Canada, long-term care setting employment is part time at lower wages and without benefits such as sick leave. Because of this, health care providers have to work across multiple sites to earn a living wage.^{103,106} Similarly, in the United States, workers receive low pay and do not have employer health insurance.¹⁰⁷ The low pay in both countries forces many to work shifts in several care homes to earn a living wage, contributing to the spread of COVID-19 across facilities.¹⁰⁶

4 | DISCUSSION

Analysis of the pandemic responses of the United States and Canada has revealed how existing social disparity, underfunded pandemic preparation, and the initial failure to act appropriately have resulted in the rapid spread of infection. In the United States, prevailing social inequalities and racism, inaccessible health care, higher rates of preexisting medical conditions and questionable political leadership have further deteriorated the situation and enhanced public suffering.

Not surprisingly, 6 months after first case was reported, the incidence and death rates of COVID-19 in the United States were much higher than in Canada (Table 2). However, Canada's inadequate services of long-term care facilities, initial restriction of testing and lack of access to epidemiological data have helped spread the infection and increased casualties in vulnerable populations. Study also shows that scarce scientific evidence is a challenge for initial fight against novel pandemic and therefore, preemptive additional protection for socially vulnerable population and effective coordination between the law makers and scientific experts are paramount to reduce early morbidity and mortality.

The lessons learned from this research can be used to inform future planning, management and the response to any novel pandemic. Successful pandemic management and response requires: (a) a robust public health surveillance system, (b) accessible mass testing, (c) the rapid collection, collation, analysis, and dissemination of testing data, (d) the domestic supply and production of PPE, (e) the early implementation of public health measures (social distancing and masking) and (f) clear and consistent communication from government and public health leaders.

The major limitation of the study was the non-availability of peer-reviewed research articles on this novel coronavirus within the first 6 months of the pandemic period. Although we attempted to retrieve all available research articles, our main sources were grey literature and media.

For future research, we suggest to conduct in-depth retrospective global study of managing early phase of COVID-19 pandemic. Sharing such database will help finding gaps in the health system and taking corrective measures before any novel pandemic strikes in future.

5 | CONCLUSION

Future pre-pandemic planning should focus on addressing inequalities and inequities, the mobilisation and capacity building of human resources, the preemptive assessment of the required surveillance supplies and self-reliance in their production, and strengthening the existing demographic database by adding racial profiles of the population. The political establishments and technical experts should work in tandem in planning and management of pandemic.

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CONFLICT OF INTEREST

No conflict of interest.

ETHICAL APPROVAL

Not applicable.

DATA AVAILABILITY STATEMENT

The manuscript is based on literature review (no primary data). All the sources were cited in the text and listed in the reference.

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