Universal healthcare and the pandemic mortality gap

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Canada and the United States are wealthy federal democracies that share ties of history, culture, language, and the world’s longest undefended border. However, the countries are not identical, and this truth has been underlined during the recent pandemic. As Galvani et al. (1) note in PNAS, Canada’s response to the current severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic has been far more successful at preserving life and health than the US response, with per-capita SARS-CoV-2 attributed mortality around 3 times higher in the United States than in Canada. The authors suggest that is due, in part, to an important difference between Canada and the United States: Canada has universal, single-payer health insurance; the US health insurance system is a patchwork, with millions of individuals uninsured, or underinsured.

It is hard to overstate how dramatic the differences in pandemic outcomes have been between these two countries. As we have noted previously, if deaths during the pandemic are “standardized” using the Canadian population as a referent (2) (such that any differences in population age structure are adjusted for), we can see that the Canadian response averted thousands of deaths, relative to what would have been seen with a US-equivalent response. A recent reanalysis finds that, as of the end of April 2022, Canada has experienced almost 100,000 fewer cumulative COVID-19 deaths than would have occurred with a US-equivalent response, with fully 28% of these additional deaths occurring in individuals aged less than 65 y (Fig. 1).

A reasonable first question is, Are these differences real? Is Canada simply hiding COVID-19 deaths? We know that COVID-19 mortality is markedly underreported in Canada, with excess mortality during the pandemic approximately around twice as high as reported COVID-19 mortality (with an even larger gap in the province of British Columbia) (3, 4). However, the same appears to be true in the United States, and recent work suggests that the degree of underreporting in Canada and the United States is fairly similar (5). Can this gap be attributed to universal single-payer healthcare in Canada, as Galvani et al. (1) suggest? They have previously identified lack of health insurance as a strong predictor of COVID-19 mortality, in an ecological analysis (6).

However, at an ecological level, it is difficult to tease apart the effects of lack of health insurance from those of closely correlated individual-level factors like lower income and race-ethnicity, which themselves appear to be strong predictors of SARS-CoV-2 risk (7). Indeed, these factors are also strongly predictive of COVID-19 mortality in Canada (8, 9). Galvani et al. (1) suggest that there are several potential mechanisms whereby the absence of single-payer universal health insurance in the United States may explain this gap, including a higher prevalence of unmanaged chronic illnesses that predispose to worse health outcomes, delay in presenting to hospital due to fear of financial ruin, undervaccination due to lack of access to trusted primary care providers, and lack of resources in cash-strapped hospitals that serve uninsured or underinsured populations, such as those in rural areas.

I am an enthusiastic supporter of Canada’s publicly funded healthcare system, and am concerned about recent moves toward privatization by some provincial governments, but I am unsure whether the gap in SARS-CoV-2-driven death between the two countries can be explained by the difference in access to healthcare as a result of universal health insurance. This paper provides one possible explanation of the Canada-US gap in pandemic outcomes,

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but other drivers are also possible, and certainly this is a question that deserves more research.

Many of the inequities that Galvani et al. (1) invoke as potentially explanatory of the Canada–US mortality gap are present in Canada as well. Rural healthcare facilities in Canada are sparse, understaffed, and underresourced (10); vaccine rollout in Canada largely bypassed primary care providers and occurred in large public clinics; and many Canadians lack a primary care provider (11). Canadian ICU occupancy was higher at baseline than in the United States, with less surge capacity (12). Despite universal health insurance, Canada has been unable to use monoclonal antibodies widely, due to limitations in necessary healthcare infrastructure (13). Lastly, the fairly consistent age-specific infection fatality ratio for SARS-CoV-2 in Canada, the United States, and many other countries likely indicates that a threefold difference in deaths must be explained, at least in part, by difference in rates of infection, rather than differences in infection outcome or case mix (14).

In my view, much of the gap in outcomes between Canada and the United States is a product of a stronger (albeit imperfect) public health response in Canada, and perhaps also of cultural, rather than policy, differences between these two countries. It is worth restating that healthcare and public health are distinct enterprises, with substantial overlap. The mission of healthcare is to return individuals with disease to good health; public health focuses on preventing disease in the first place. Public health interventions are implemented by government agencies, and require participation by communities, and so depend on both communication with the public (15) and trust by the public in these government agencies. Trust in government in the United States is low, and declining, while trust in government is far higher (and appears to be rising) in Canada (16). Acceptance of sacrifice of individual needs or convenience for purposes of disease control has likely been easier to achieve in Canada than in the United States, as Canadian society is more communitarian, and less individualistic, than US society (17).

Social capital (18) may be declining in the United States, even as it remains stable, or rises, in Canada (19, 20).

Neither Canada nor the United States is monolithic; both are federal entities with substantial authority for health matters downloaded to states and provinces, and one sees gaps in outcomes within the two countries like those seen between the two countries (4, 21). If the presence of universal single-payer healthcare in Canada did not cause the pandemic mortality gap between Canada and the United States, it is nonetheless plausible that the ability to introduce and sustain a single-payer universal health system reflects greater communitarianism, and less individualism, in Canada than in the United States. Of course, both these countries are dynamic, and, as noted above, there is an increasing push for privatization in Canada's health system, with limitations of our healthcare system during the pandemic often used to frame such arguments. Both Canada and the United States also have much to learn from Australia's pandemic response; Australia is also a wealthy federal democracy that far outperformed both countries in preserving population health during the pandemic. The gap in per-capita mortality between the United States and Canada is similar to that seen between Canada and Australia (22, 23). Australia worked hard to eliminate local transmission of SARS-CoV-2 for as long as that strategy could be sustained; more-stringent disease control stances, like Australia's, have been shown to reduce mortality as well as reduce the overall negative mental health impacts of the pandemic (24).

What are the policy implications of these mortality gaps? It is difficult to legislate cultural change, even if that were desired. Perhaps some of the dissatisfaction with the restrictiveness of our pandemic response currently being voiced in Canada should be tempered by the knowledge that Canada's path saved tens of thousands of lives. The United States is in a fractious moment in its own history; perhaps it is naive to hope that large numbers of Americans will reflect on how much less impactful the pandemic could have been, and how many lives might have been spared, had it emulated some of its global peers.