Brown's Economic Damages Newsletter

June 2020 Volume Seventeen Issue 3

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Preliminary economic effects of COVID-19 in Canada, and implications for quantum experts (Part 1)

By Cara L. Brown, M.A.*

Introduction

On March 11, 2020, the *World Health Organization* (WHO) declared the COVID-19 outbreak a pandemic, i.e. the worldwide spread of a new disease.[1] In this article, I review the information available to date about general economic impacts on Canadians and the import of this pandemic on mortality data, used in virtually all cases involving lost earnings from injury or death, as well as for cost of care awards and other economic heads of damage (housekeeping capacity losses, loss of "marriage" benefit,[2] and tax gross-up).

Topics to be covered in subsequent issues of **Brown's Economic Damages Newsletter**

- Disproportionate effects on industry sectors
- Evaluating efficacy of government COVID-19 subsidies
- Shut-down of economy: impact on productivity
- Measuring the "benefits" related to COVID "costs": the *Value of a Statistical Life (VSL)* methodology

* Appreciation is extended to Ha Nguyen, M.A, for research assistance.

[1] WHO's *Situation Report -71* for 31 March 2020 reported 750,890 confirmed total confirmed cases and 36,405 deaths worldwide. WHO gave a risk assessment of "very high at the global level." The figure for Canada was 7,708 confirmed and presumptive cases on the same date. See Table 1 below for updated Canadian statistics by province as at June 11, 2020.

[2] For the most recent trial decision in which Brown Economic Consulting was involved with this head of damage, see **Brown's Economic Damages Newsletter**, "*University of Regina v. Biletski* – COURT OF APPEAL FOR SASKATCHEWAN approves trial jury's award in excess of $9 million, including $879,000 for loss of marriage benefit, affirming a total award for Ms. Biletski of excess of $12.1 million" Spring 2019, Vol.16, issue 2.

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Impact on Canadian economy as of June 15, 2020

By the end of March 2020, the Canadian government rapidly and forcefully put in place a sequence of never-before-seen interventions related to COVID-19 including the closure of non-essential businesses, travel restrictions, and public health measures directing Canadians to limit public interactions. These interventions led to a sharp decline in economic activity in Canada. The most recent data from Statistics Canada[3] show that real gross domestic product (GDP) dropped by -7.2% in March (equivalent to a loss of $143.5 billion dollars from February to March, 2020).[4] Real GDP growth had never dropped more than 2% each year from 2002 until 2020, and such a large drop *from one month to another* of this magnitude has not occurred either.[5]

In an article entitled *COVID-19 slams Canada's economy,* the **Conference Board of Canada** (CBC) remarks that "the only sector of the economy that will continue to spend is the government sector". The CBC also points out that "oil prices have continued to languish due to plunging demand from every corner of the world economy": a combination of tumbling global demand and the decision by Saudi Arabia and Russia to gain market share by ramping up production has dragged oil prices down to the $20 per barrel range (down from $62 per barrel in January 2020).[6] The Canadian dollar is predicted to collapse to 72 cents of the American dollar in 2020 (down from 76 cents in January of 2020).[7]

COVID-19 in Canada: Preliminary estimates of Costs

Terence Corcoran published an article in the Financial Post entitled "The Price of Life: Lockdown costs are real. But are the benefits?" (May 15 2020). After summing the **costs** of the government subsides and its impacts from COVID-19, Corcoran reports that the "final number could easily top $700 billion in Canada – roughly a third of GDP".[8] Of this total, Corcoran's count for government assistance equals $350 billion.

We have attempted to verify the costs of the various government subsidy programs included in Corcoran's estimates – and there are many of them, some named similarly – implemented since March 2020. For this process, we rely on the Dept. of Finance of the Government of Canada as at June 10, 2020. The programs are categorized in the following way, along with the total dollars spent by government:[9]

- **Protecting Health and Safety ($5.8 billion)**
- **Direct Support Measures ($154 billion),** which include (but not limited to):
    - Canada Emergency Response Benefit (**CERB** - employees) - $60 billion[10]

[3] Statistics Canada. *Gross domestic product by industry, March 2020*. The Daily, May 29, 2020.
[4] Similarly, the *International Monetary Fund* (IMF) projected in a report dated April 2020 that Canada's GDP in 2020 would decrease by -6.2% (almost identical to their projection for the US, which was -6.1%).
[5] K. Beckman. *COVID-19 slams Canada's economy*. The Conference Board of Canada, April 22, 2020. The chart entitled "Real GDP growth" showing the percentage change from 2002 until 2020 shows that only in 2008 and 2009 did real GDP in Canada decline, but by no more than 2%.
[6] As per data provided by the World Bank website (www.worldbank.org/en/research/commodity-markets). Accessed on June 9, 2020.
[7] As per information contained on the Bank of Canada's website (www.bankofcanada.ca/rates/exchange); B. Caranci, and J. Orlando. *Dollars and Sense a Hitchhiker's Guide to the Central Bank*. TD Economics, May 21, 2020; and RBC Economics. *The world has changed*, March 2020.
[8] This sum is comprised of a "low-ball early cost estimate" for the federal government's subsidy programs at "something like $600 billion for this year [2020] alone"; costs of a -6.5% decline in GDP in 2020 equal to $160 billion (as estimated by the *International Monetary Fund* (IMF)); $300 billion in "federal and provincial government borrowing to fund massive new spending"; and $150 billion in lost future growth. Corcoran also mentions (but does not include) the value of the Bank of Canada's monetary activities, which "could show up in future inflation."
[9] Canada's COVID-19 *Emergency Response: Bi-Weekly Report on Parts 3, 8 and 18 of Bill C-13* Sixth Report, June 10, 2020.
[10] This program is the one most familiar to working age Canadians. It was originally structured to pay $2,000 per month for 4 months but the time period for payout has been extended by 3 months from June 6 to August 29, 2020. The CERB regulations also permitted people to earn as much as $1,000 per month and still collect the benefit. The government is considering extending the CERB for another 4 months to January 2021. There are now close to 8 million people collecting CERB benefits. As indicated by Dan Albas, MP, potentially 200,000 CERB applications have already been "red-flagged" as possibly fraudulent because of dubious claims of past employment income and other factors. This implies a potential of $400 million per month in fraudulent CERB payments. As of June 3, 2020, Canada Revenue Agency (CRA) has received 190,000 repayments of CERB benefits (Source: As per information provided by Dan Albas' website (www.danalbas.com/mp-report); and K. Harris. *Canadians have made 190,000 repayments on CERB claims, says CRA*. CBC News, June 10, 2020. Available at: www.cbc.ca/news/politics/cerb-repayments-claims-tips-abuse-1.5605838).

- Canada Emergency Wage Subsidy (**CEWS** - employers) - $45 billion[11]
- Support for Students and Recent Graduates (over 2 years) - $9 billion
- Support for Seniors - $3 billion[12]

♦ **Business Credit Availability Program (BCAP) (minimum $86 billion)**[13]

♦ **Tax Liquidity Support ($85 billion)**[14]

♦ **Credit and liquidity support through the Bank of Canada, CMHC and commercial lenders ($300 billion)**[15]

♦ **Capital relief (OSFI Domestic Stability Buffer) ($300 billion)**

When these figures are added together, the total sum of governmental programs and subsidies is **$931 billion as of June 10, 2020**: almost $1 trillion dollars. These figures appear to be updated bi-weekly so we anticipate changes to these numbers as uptake figures on each program change and more information becomes available.

Corcoran's proxy for payouts of government subsidies, $350 billion, is only 38% of the $931 billion tallied by the Dept. of Finance as of June 10, 2020.

A comment on the liquidity support figures (tax liquidity + Bank of Canada and commercial lender relief + Capital relief = $686 billion or 74% of total government costs)

As we can see from the list above, these programs mainly reflect measures taken by the Bank of Canada and other banks "as part of the central bank's efforts to ease strains in the financial system and keep money cheap for borrowers".[17] The Bank of Canada reduced the overnight rate to 0.25% on March 27, 2020 (after two prior rate cut announcements in March 2020).[18] The Bank of Canada explains:

> "As many economic activities are temporarily shut down, companies rely on credit to continue to pay their employees, and households need credit to continue to meet their basic needs. But they may be unable to borrow if financial turmoil curtails lending activity.
>
> The central bank must therefore intervene to prevent a sudden contraction of credit and credit is most needed."[19]

For example, these measures were designed to allow financial lenders to renew mortgages more easily; and borrowing overall is less costly (excepting credit card interest payments).[20]

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[11] On April 1, 2020, the PBO predicted that this program would cost $71 billion. However, the delayed uptake for this benefit (early May), compared to the CERB for individual workers which started April 6, 2020, reduced the total subsidies. Also, the initial cost estimate may not have accurately reflected the fact that employers who laid off *all* employees would have no impetus (or eligibility for) wage subsidies, since wages were not paid after termination dates.
[12] This category includes costs of one-time payments to OAS and GIS recipients, New Horizons for Seniors Program expansion, lower RRIF minimum withdrawal rates, and contributions of $9 million through United Way for local organizations.
[13] Captured in the main category "Other Liquidity Support and Capital Relief". The BCAP program includes these categories: small and medium-sized enterprise and loan and guarantee program ($40 billion); the Canada Emergency Business Account ($41.3 billion); financing for mid-size companies (to be determined upon uptake); credit and liquidity support for the Agriculture sector ($5.2 billion); and the Large Employer Emergency Financing Facility (to be determined upon uptake).
[14] This category pertains to income tax payment deferrals ($55 billion) and sales tax/custom duty payments deferrals ($30 billion).
[15] This estimate included the statement that the "figures represent *lower* bound estimates based upon announced credit and liquidity support to date" (emphasis added).
Of Corcoran's total of $660 billion, $350 was attributed to "federal-provincial deficits", which estimate the cost to both levels of government of affording subsidy payments. Corcoran's estimate was published in the Financial Post on May 15 2020.
[17] Bank of Canada, *COVID-19: Actions to Support the Economy and Financial System* (accessed June 10 2020).
[18] Bank of Canada. *Bank of Canada lowers overnight rate target to ¼ percent*, press releases, March 27, 2020. Available at: www.bankofcanada.ca/2020/03/press-release-2020-03-27/.
[19] Bank of Canada, *COVID-19: Actions to Support the Economy and Financial System* (accessed June 10 2020).
[20] Financial Post, "Bank of Canada starts quantitative easing with $1 billion bond purchase" April 1, 2020.

The immediate intervention by the Bank of Canada (and US Federal Reserve) is a lesson learned from the 2008-09 recession, when restricted access to credit deepened the impacts of this recession.

In terms of counting "costs", however, both the tax liquidity costs (deferral of tax payments) and liquidity measures by the central bank and other lenders do not represent dollar payments in all instances. Tax payments eventually come due; a portion of the "liquidity costs" pertain to loan guarantees which may not be used.[21] In other words, the largest share of "costs" related to government measures can be thought of as "opportunity costs". We will need more time and more data to fully realize these costs.

Recipients of government subsidies will also remit personal income tax (depending on tax bracket) associated with all subsidy payments, which are returned to government coffers.

However, there are also costs arising from the shut-down of the economy that are *in addition to* the total of $931 billion in government subsidies as of June 10, 2020. These include the loss of GDP growth in 2020. Although this is expected to be somewhat offset when the economic recovery begins, this could be slowed by the "2nd wave" expected in fall of 2020. The loss of GDP growth is difficult to forecast at this time, but we know that Canada has experienced the highest unemployment rates recorded since 1976. The table on page 11 of this article demonstrates that unemployment rates in April 2020 for various regions across Canada are unusually high (except for Ottawa). The reduction in spending from the closures also shows that deflation in April 2020 (see the *Consumer Price Index* percentages on page 11) occurred when compared to one year ago, April 2019.

Lower interest rates have also been known, generally speaking, to stimulate investment in the economy for the same reason as for individual borrowers – credit is cheap. Monetary policy intervention in this respect may *aide* the Canadian economy's recovery once the protocols and measures put in place for COVID-19 plateau and cease interfering with employment and operations.

Benefits anticipated from the Costs

Using a concept known as "Value of a Statistical Life (VSL)",[22] Corcoran tallies that the **benefits** of saving lives, using a 1.0% infection fatality rate in Canada,[23] equals $1.4 trillion. So it would seem that the **benefits** of Canada's government programs related to COVID-19 ($1.4 trillion) *exceed* the **costs** counted by Corcoran ($600 billion+). However, when we use the total of $931 billion above from the Dept. of Finance as at June 10, 2020, the "costs" ($931 billion) are starting to approach the value of the "benefits" ($1.4 trillion).

As the infection fatality rate *decreases,* however, this balancing test is reversed, and the **costs** also start to exceed the **benefits** (as valued by Corcoran using the VSL method). For instance, there is evidence from Canadian provinces and

[21] For instance, businesses may seek to extend the limit of their credit facilities, but may not use them, thus incurring no additional costs of borrowing.
[22] This approach is based on "the amount that a group of people is willing to pay for fatal risk reduction in the expectation of saving one life" (Miller (2000)). A typical example is the amount that work accident insurance charges (in insurance premiums) to reduce mortality risk on the job, classified in the literature as the "wage-risk" method (Miller (2000)). In Canada, WCB coverage administered by the provinces and territories measure job risk to establish WCB premiums, which vary considerably by industry sector and reported injury/fatality rates for companies sponsoring WCB coverage. Greenstone and Nigam comment that "The VSL is a tool from economic theory which is now a standard ingredient in the cost-benefit analyses that undergird decision-making by the United States Government, and scores of foreign, state, and local governments" (p. 10)
[23] Corcoran relies on a predicted mortality rate from COVID-19 related deaths to range from 0.3% to 0.5% to 1.0% in Canada. Oft-reported rates for the US population have clustered around 1.0%, but the consensus to date is that the US mortality rate due to COVID-19 will be twice as high as Canada's.

territories that a 1.0% infection fatality rate is, thankfully, considerably higher than prevailing case and death counts. See Table 1 below. The overall rate for Canada is, at present, 0.2%. The overall rate for the US, at present, is 0.3%.[24]

All injury and litigation lawyers (and the courts) know that valuations are dependent on underlying assumptions, whether explicitly stated or not. In this article, I turn first to the assumption of infection and death rates from COVID-19. In subsequent issues of **Brown's Economic Damages Newsletter,** I comment on other "assumptions" underlying the cost-benefit equation, including an exploration of the VSL methodology and how it compares to the courts' assessments of economic awards to individual litigants when paid and unpaid work[25] is compromised and must be valued in dollar terms.

The cost-benefit analysis depends directly on the predicted mortality rate from COVID-19

Practitioners in injury or fatality cases are well-acquainted with quantum experts' routine inclusion of a mortality "contingency" (applied as a negative percentage to the plaintiff's or decedent/survivor's income, cost of care, housekeeping and tax gross-up projections). The mortality contingency for Canadians are published by Statistics Canada in *Life Tables, Canada and Provinces, 2016-2018* (released January 28, 2020).

The use of the mortality contingency in injury and fatality cases in litigation are based on the same statistics as epidemiologists are attempting to calculate (with minimal and rapidly-changing data) from COVID-19.

John Ioannidis[26] exposes the range of predictions of COVID-19 related deaths in his article entitled "A fiasco in the making? As the coronavirus pandemic takes hold, we are making decisions without reliable data" (March 17 2020). Although Ioannidis' article was published early in the current pandemic, this author cautioned that:

> "Three months after the outbreak emerged, most countries, including the U.S., lack the ability to test a large number of people and *no countries have reliable data on the prevalence of the virus in a representative random sample of the population."* (emphasis added)

Indeed, Ioannidis concludes that "reported case fatality rates, like the official 3.4% rate from the World Health Organization, cause horror – and are meaningless." Instead, he quotes the fatality rates from the Diamond Princess Cruise ship with its quarantined passengers where the fatality case rate was 1.0% -- but this was largely an elderly population, and is based on 7 deaths out of 700 infected passengers. This situation is known as "extremely thin data".

Add to the prediction of COVID-19 death rates are what we call confounding factors.[27] For instance, even so-called mild or common-cold type coronaviruses (not the COVID-19 virus) have been known for decades to have case fatality rates as high as 8% when they infect elderly people in nursing homes. What this means is that "a positive test for coronavirus does not mean necessarily that this virus is always primarily responsible for a patient's demise."

Ioannidis points out that even in the most pessimistic scenario (which he does not subscribe to) of infection/death rates from COVID-19 would be that it infects 60% of the global population and 1% of infected people die which "will

[24] As per data provided by the Johns Hopkins University School of Medicine website (www.coronavirus.jhu.edu/data/) and Statista website (www.statista.com/statistics/). Accessed on June 10, 2020.
[25] The main categories captured in "unpaid" work are household management, food preparation and cleaning, repairs and maintenance, and childcare.
[26] Professor of medicine and professor of epidemiology and population health at the Stanford University School of Medicine.
[27] Another confounding factor mentioned by Ioannidis is that there has been very limited testing so that any resulting "death" rates likely have missed the "vast majority of infections" due to COVID-19, and the impact of such omissions cannot be quantified at present. The author also observes that "patients who have been tested for [COVID-19] are disproportionately those with severe symptoms and bad outcomes", leading to selection bias, which means that the statistical rates are unlikely to be reliably representative of outcomes in the general population.

translate into more than 40 million deaths globally, matching the 1918 influenza pandemic", although the 1918 pandemic affected many young people whereas at present COVID-19 is affecting mostly people with limited life expectancies.

The U.S. COVID-19 mortality rate is approximately twice that of Canada's, but still far lower than those in Spain, Italy and Belgium. Interestingly, in Ontario, the U.S. was by far the largest source of early imported cases. The impact of what occurred in New York City influences the comparison of rates between the countries: the death rate from COVID-19 is nearly identical between Canada and the 47 U.S. states that do not include a New York City suburb.[28] New York City was "clobbered by COVID-19" due in large part to crowding. New York has no rival in Canada when it comes to population density (which epidemiologists identify as a contributing risk); it is twice the density of Vancouver, Canada's most-crowded city. Each weekday, 5.4 million people cram into New York's subway system with a rail ridership more than 6 times that of Toronto's subway and streetcar system.[29]

The CDC in Atlanta, Georgia found that almost 75% of those hospitalized there who were diagnosed with COVID-19 had *pre-existing conditions.* Hypertension was the most prevalent health problem in this group, and severe obesity contributed as well. The Georgia study also pointed to a wide racial disparity: 83% of patients with coronavirus in hospitals it studied were African-American. This proportion is far in excess of the percent of Black or African-American population in Georgia, which is only 32%,[30] confirming the fact that to date, black Americans are being hit harder than any other ethnic groups in North America from COVID-19.

Canadian mortality statistics

Statistics Canada's "Life Tables"

On May 13, 2020, the **Globe & Mail** published an article entitled *Statistics Canada mortality report too limited in data to be useful during pandemic, experts say.* In this article, the authors stated that "to date [mid-May 2020], Canada has recorded 5,304 deaths owing to COVID-19", according to "provincial statistics collected by the Globe & Mail". By June 11, 2020, this total had increased to 7,994 deaths (see Table 1 below).

However, the Statistics Canada report which the **Globe & Mail** referenced conflicts with this information when the country's statistical agency published "estimated excess deaths" between January – March 31, 2020 vis-à-vis January – March 31, 2019. In Table 1 of Statistics Canada's publication entitled *Provisional death counts and excess mortality, January to March 2019 and January to March 2020,*[31] the comparison showed that only 3 provinces had more "excess deaths" – *due to all causes,* not just COVID-19[32] – than in 2020 versus 2019. These 3 provinces are Alberta (+374 deaths), NWT (+5 deaths), and PEI (+2 deaths). The remaining provinces' tallies were *lower* in the same time period in 2020 than in 2019. Statistics Canada published this statement in The Daily article:

> "Statistics Canada does not currently have the information on causes of death necessary to confirm that observed excess mortality can be attributed to COVID-19".

[28] CBC, *3 reasons the COVID-19 death rate is higher in U.S. than Canada* May 06 2020.
[29] CBC, *3 reasons the COVID-19 death rate is higher in U.S. than Canada* May 06 2020.
[30] United States Census, Quick Facts Georgia as at July 1 2019.
[31] The Daily, Wednesday, May 13, 2020.
[32] The Globe & Mail article published May 13, 2020 comments that "The United States, Britain and Italy have all published mortality data showing a spike in the number of deaths in recent months…but excess deaths occurring this year could also be due to other factors, such as people avoiding going to the hospital over fears of virus transmission".

The main caveats to this early information include:[33]

- Statistics Canada's Table 1 excludes information from Ontario, New Brunswick, and Yukon and Nunavut Territories[34]
- Cause of deaths are unknown at this time, so cannot be directly attributed to COVID-19
- This data excludes April and May of 2020, when death counts began to accelerate

Statistics Canada's chief statistician stated that "…the caveats overwhelm any conclusion".[35]

The analysis to date means that mortality statistics for Canadian regions from Statistics Canada used by quantum experts in civil litigation[36] that will reflect the impact of COVID-19 will not be available for at least 2 years, perhaps later.[37] And even if/when such statistics become available, it will be critical to discern if the data appropriately account for cause(s) of death, particularly given the propensity of those who succumbed to COVID-19 to also have pre-existing or high-risk health problems.

Compilation of COVID-19 confirmed cases & deaths, by province and territory in Canada (June 11, 2020)

In Table 1 below, we reproduce the numbers of "confirmed cases" from COVID-19 and "deaths" for Canada as a whole and for each province and territory. These are absolute numbers, i.e., they are not infection fatality rates per province/ territory or for Canada. Beside each geographical region, we have shown current population counts in millions of people. These statistics have been compiled by the Government of Canada from provincial governments.

[33] Additional confounding factors include that the "excess" mortality rate data do not account for changes to the size of the population and its composition between 2019 and 2020.
[34] Mortality statistics are compiled by province and territory and submitted to Statistics Canada. New Brunswick, Nunavut and Yukon have not submitted death tallies to Statistics Canada since 2017.
[35] Globe & Mail, *Statistics Canada mortality report too limited in data to be useful during pandemic, experts say* May 13, 2020.
[36] We expect that data on "confirmed cases", number of deaths, and case rate per population related to COVID-19 will become available as time progresses. Nevertheless, the form of this data does not permit a statistically reliable way to translate into age-, gender- and region-specific mortality rates appropriate for modelling a negative contingency yet in lost earnings cases or for cost of care awards.
[37] The 2016 – 2018 *Life Tables, Canada and Provinces w*as released by Statistics Canada on January 28, 2020. The next set of tables will presumably be for the 2017 – 2019 years.

Table 1
Current situation of COVID-19 in Canada as of June 11, 2020

Canada/Province and Population	Confirmed cases	Deaths
Canada (38 million)	97,519	7,994
Alberta (4.4 million)	7,316	149
British Columbia (5.1 million)	2,694	167
Manitoba (1.4 million)	289	7
New Brunswick (0.8 million)	153	1
Newfoundland and Labrador (0.5 million)	261	3
Northwest Territories (0.04 million)	5	0
Nova Scotia (1.0 million)	1,061	62
Nunavut (0.04 million)	0	0
Ontario (14.7 million)	31,544	2,487
Prince Edward Island (0.1 million)	27	0
Quebec (8.5 million)	53,485	5,105
Saskatchewan (1.2 million)	660	13
Yukon (0.04 million)	11	0

Source: Government of Canada. *Coronavirus disease (COVID-19): Outbreak update*. Accessed at: https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection.html on June 11, 2020; and Statistics Canada. Table 17-10-0009-01 *Population estimates, quarterly.*

Observations from Table 1

- The number of total deaths in Canada (7,994) out of the number of confirmed cases (97,519) means that the **"rate of death"** from these tested patients equaled 21 per 100,000 Canadians
- 87% of **cases** originated in Ontario and Quebec, where 61% of Canada's population reside
- 95% of confirmed **deaths** across Canada occurred in Ontario and Quebec
- Even though Ontario's population is almost twice that of Quebec's population, Quebec has 70% more **confirmed cases** than Ontario
- Again, even though Ontario has more residents than Quebec, twice as many "confirmed cases" resulted in deaths from COVID-19 in Quebec as in Ontario (5,105 versus 2,487)
- Although British Columbia has almost 1 million more residents than Alberta, almost 3 times as many "confirmed cases" were registered in Alberta (7,316) versus BC (2,694)

- Despite the fact that Alberta registered three times as many "confirmed cases" than BC, the number of deaths were *higher* in BC than in Alberta
- Nova Scotia has twice the population of Newfoundland, but registered 4 times as many confirmed cases (1,061 versus 261)
- Although the numbers of deaths in Nova Scotia and Newfoundland are low in absolute terms compared to other regions (62 and 3, respectively), the ratio *between these two provinces* shows an enormous difference in number of deaths

Caveats attached to interpreting the data in Table 1

As Canada's laboratory capacity is limited, not everyone is tested for the coronavirus. Provincial governments have decided to focus tests for COVID-19 on individuals deemed most at risk. The following five categories list individuals who will be assessed as priority for testing:[38]

- Returning international travelers who have symptoms of COVID-19 or direct contacts with symptoms;
- People with severe respiratory illness;
- People in institutional care;
- People living in remote First Nations communities who have symptoms;
- Any health-care workers who are sick with respiratory symptoms.

The testing protocols at present have serious implications for extrapolating raw numbers of confirmed cases or deaths to age-, gender-, and region-specific mortality rates, as well as "confounding factors" and "selection bias". The first issue refers to the pre-existing or health-risk factors which may have contributed to acquiring COVID-19 and to which health factor was the primary cause of death. The second issue simply refers to the fact that all data in Canada, so far, is based on a non-random sample (because the conditions above intentionally circumscribe the total sample), which can compromise statistical representativeness and our ability to extrapolate to the population; and the sample is much smaller than the entire Canadian population. For instance, there could be people who have COVID-19 (or recovered from it) who have not been tested, so they are not included in Table 1 above.

[38] André Picard. *Not everyone can be tested for coronavirus, nor should they be*. The Globe and Mail, March 16, 2020. Available at: https://www.theglobeandmail.com/canada/article-not-everyone-can-be-tested-for-coronavirus-nor-should-they-be/; I. Bailey. *Alberta to focus coronavirus testing on high-risk patients*. The Globe and Mail, March 23, 2020. Available at: https://www.theglobeandmail.com/canada/alberta/article-alberta-to-focus-coronavirus-testing-on-high-risk-patients/; and as per information contained on the Ottawa Public Heath website (https://www.ottawapublichealth.ca/en/public-health-topics/novel-coronavirus.aspx).

Consumer Price Index

Unemployment Rate

From April 2019 to April 2020* (rates of inflation)		For the month of April 2020	
Canada**	-0.2%	Canada:	13.0%
Vancouver:	0.1%	Vancouver:	7.5%
Toronto:	0.0%	Toronto:	7.9%
Ottawa:	0.8%	Ottawa:	6.3%
Montréal:	0.8%	Montréal:	10.5%
Edmonton:	-0.3%	Edmonton:	10.0%
Calgary:	-0.6%	Calgary:	10.8%
Halifax:	-0.3%	Halifax:	8.9%
St. John's, NF:	-1.1%	St. John's, NF:	9.7%
Saint John, NB:	-0.9%	Saint John, NB:	9.5%
Charlottetown (PEI):	-1.3%	Charlottetown (PEI):	10.8%

* Using month-over-month indices. Source: Statistics Canada

** 12 month rolling average up to April 2020 is 1.8% (see table above).

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Updating Non-Pecuniary Awards for Inflation (April 2020, Canada)

		Non-Pecuniary Damages - Sample Awards				
Year of Accident/ Year of Settlement or Trial	"Inflationary" Factors*	$10,000	$25,000	$50,000	$75,000	$100,000
April 2019-April 2020	1.018	$10,181	$25,453	$50,906	$76,359	$101,812
Avg. 2018-April 2020	1.024	$10,239	$25,598	$51,196	$76,794	$102,392
Avg. 2017-April 2020	1.047	$10,471	$26,177	$52,354	$78,531	$104,708
Avg. 2016-April 2020	1.064	$10,638	$26,595	$53,190	$79,785	$106,379
Avg. 2015-April 2020	1.079	$10,790	$26,975	$53,950	$80,926	$107,901
Avg. 2014-April 2020	1.091	$10,912	$27,279	$54,558	$81,837	$109,116
Avg. 2013-April 2020	1.112	$11,120	$27,799	$55,598	$83,396	$111,195
Avg. 2012-April 2020	1.122	$11,224	$28,059	$56,119	$84,178	$112,237
Avg. 2011-April 2020	1.139	$11,394	$28,485	$56,971	$85,456	$113,941
Avg. 2010-April 2020	1.173	$11,726	$29,314	$58,629	$87,943	$117,258
Avg. 2009-April 2020	1.193	$11,935	$29,837	$59,674	$89,511	$119,348
Avg. 2008-April 2020	1.199	$11,991	$29,978	$59,957	$89,935	$119,914
Avg. 2007-April 2020	1.225	$12,254	$30,635	$61,270	$91,904	$122,539
Avg. 2006-April 2020	1.252	$12,516	$31,289	$62,578	$93,867	$125,156
Avg. 2005-April 2020	1.277	$12,766	$31,915	$63,830	$95,745	$127,659
Avg. 2004-April 2020	1.305	$13,049	$32,622	$65,245	$97,867	$130,489
Avg. 2003-April 2020	1.329	$13,291	$33,229	$66,457	$99,686	$132,915
Avg. 2002-April 2020	1.366	$13,658	$34,146	$68,292	$102,438	$136,584
Avg. 2001-April 2020	1.397	$13,967	$34,918	$69,835	$104,753	$139,671
Avg. 2000-April 2020	1.432	$14,319	$35,796	$71,593	$107,389	$143,185
Avg. 1999-April 2020	1.471	$14,709	$36,772	$73,543	$110,315	$147,087
Avg. 1998-April 2020	1.496	$14,963	$37,408	$74,816	$112,225	$149,633
Avg. 1997-April 2020	1.511	$15,112	$37,781	$75,562	$113,342	$151,123
Avg. 1996-April 2020	1.536	$15,357	$38,393	$76,785	$115,178	$153,570
Avg. 1995-April 2020	1.560	$15,599	$38,998	$77,995	$116,993	$155,991
Avg. 1994-April 2020	1.593	$15,934	$39,835	$79,670	$119,505	$159,340
Avg. 1993-April 2020	1.596	$15,960	$39,900	$79,800	$119,700	$159,600
Avg. 1992-April 2020	1.626	$16,258	$40,646	$81,292	$121,938	$162,583
Avg. 1991-April 2020	1.650	$16,500	$41,250	$82,500	$123,750	$164,999
Avg. 1990-April 2020	1.743	$17,429	$43,571	$87,143	$130,714	$174,285
Avg. 1989-April 2020	1.826	$18,263	$45,657	$91,315	$136,972	$182,629
Avg. 1988-April 2020	1.917	$19,173	$47,933	$95,866	$143,798	$191,731
Avg. 1987-April 2020	**1.994**	$19,943	$49,858	**$99,715**	$149,573	$199,430
Avg. 1986-April 2020	2.081	$20,812	$52,031	$104,061	$156,092	$208,123
Avg. 1985-April 2020	2.168	$21,685	$54,212	$108,423	$162,635	$216,847
Avg. 1984-April 2020	2.254	$22,544	$56,359	$112,719	$169,078	$225,437
Avg. 1983-April 2020	2.351	$23,514	$58,785	$117,571	$176,356	$235,141
Avg. 1982-April 2020	2.489	$24,894	$62,236	$124,471	$186,707	$248,943
Avg. 1981-April 2020	2.757	$27,573	$68,933	$137,866	$206,799	$275,732
Avg. 1980-April 2020	3.102	$31,017	$77,544	$155,087	$232,631	$310,175
Avg. 1979-April 2020	3.416	$34,160	$85,399	$170,798	$256,197	$341,596
Jan. 1978-April 2020	**3.891**	$38,909	$97,272	$194,544	$291,816	**$389,088**

$99,715= $50,000 x 1.994 represents the dollar equivalent in April 2020 of $50,000 based on inflation increases since 1987. Similarly, $389,088 (=$100,000 x 3.891) represents the dollar equivalent in April 2020 of $100,000 in 1978 based on inflationary increases since the month of January 1978.

* Source: Statistics Canada, Consumer Price Index, monthly CPI release, rolling average (except for Jan. 1978).

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