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#### **SUMMARY**

- Canadians often misunderstand the true cost of our public health care system. This occurs partly because Canadians do not incur direct expenses for their use of health care, and partly because Canadians cannot readily determine the value of their contribution to public health care insurance.
- In 2021, preliminary estimates suggest the average payment for public health care insurance ranges from \$3,842 to \$15,039 for six common Canadian family types, depending on the type of family.
- Between 1997 and 2021, the cost of public health care insurance for the average Canadian family increased 3.4 times as fast as the cost of clothing, 2.2 times as fast as the cost of food, 1.7 times as fast as the cost of shelter, and 1.6 times faster than average income.
- The 10 percent of Canadian families with the lowest incomes will pay an average of about \$726 for public health care insurance in 2021. The 10 percent of Canadian families who earn an average income of \$75,300 will pay an average of \$6,521 for public health care insurance, and the families among the top 10 percent of income earners in Canada will pay \$41,916.

#### Introduction

Health care in Canada is not "free." While Canadians may not be billed directly when they use medical services, they pay a substantial amount of money for health care through the country's tax system. Unfortunately, the size of these tax payments is hard to determine because there is no "dedicated" health insurance tax. As a result, individuals and families often cannot fully appreciate the true cost they pay towards the public health care system.

The purpose of this research bulletin is to help individual Canadians and their families better understand how much health care actually costs them personally so they can determine whether they are receiving good value for their tax dollars

### Why the misunderstanding?

One reason why Canadians don't know the true cost of health care is because the physician and hospital services that are covered by taxfunded health care insurance are free at the point of use. This situation leads many people to grossly underestimate the true cost of health care. When people speak of "free" health care in Canada, they are entirely ignoring the substantial taxpayer-funded cost of the system.<sup>2</sup>

Furthermore, health care in Canada is financed through general government revenues rather than through a dedicated tax,<sup>3</sup> which blurs the true dollar cost of the service. Indeed, Canadians cannot easily work out precisely what they pay to government each year for health care because there are many different sources of government revenues that may contribute to funding health care, including income taxes, Employment Insurance (EI) and Canada Pension Plan (CPP) premiums, property taxes, profit taxes, sales taxes, taxes on the consumption of alcohol and tobacco, and import duties, among others. Some Canadians might assume that in those provinces that assess them, employer health taxes and contributions cover the cost of health care.<sup>4</sup> However, the reality is that these premiums cover just a fraction of the cost of health care and are paid into general revenue from which health care is funded.

The available numbers can be difficult to digest. For example, health spending figures are often presented in aggregate, resulting in numbers so large they are almost meaningless. For instance, approximately \$174 billion of our tax dollars were spent on publicly funded health care in 2019, the most recent year for which data is available from the Canadian Institute of Health Information (CIHI, 2021).<sup>5</sup> According to

<sup>&</sup>lt;sup>1</sup> Free in a monetary sense. There are, however, costs associated with health care use in Canada that are not monetized, such as wait times for access to medical services. For more on this, see Globerman, 2013.

<sup>&</sup>lt;sup>2</sup> It is also important to consider the costs associated with funding health care through tax revenues. For more on this, see Esmail, 2008.

<sup>&</sup>lt;sup>3</sup> A dedicated tax is earmarked and separated from other taxes; its revenues are used for a particular purpose.

<sup>&</sup>lt;sup>4</sup> In British Columbia and Ontario, the government levies the "employer health tax," which is an annual tax on an employer's remuneration paid to employees. In Quebec, a similar scheme is paid by employers; it is called the "contribution to health services."

<sup>&</sup>lt;sup>5</sup> This figure includes health spending from provincial and territorial government funds, federal health transfers to the provinces and territories, and provincial government health transfers to local governments. It does not include federal direct, municipal government, and social security funds, which

preliminary estimates based on more up-todate provincial public accounts and budgets from Ontario, Saskatchewan, Alberta, and British Columbia, this figure will rise to about \$191 billion in 2021. The "Limitations" section provides a more comprehensive explanation of how these estimates were derived.

It is more informative to measure the cost of our health care system in per capita dollars: the \$174 billion spent equates to approximately \$4,634 per Canadian in 2019 (CIHI, 2021; Statistics Canada, 2021b; authors' calculations). According to our estimates, this figure is \$4,977 in 2021. This would be the cost of the public health care insurance plan if every Canadian resident paid an equal share.

However, Canadians do not pay equal amounts of tax each year. Some Canadians are children and dependents and are not taxpayers. Conversely, higher-income earners bear a greater proportion of the tax burden than lower-income earners and thus contribute proportionally more to our public health care system. Various tax exemptions and credits also further complicate matters. Clearly, the per capita spending measure does not accurately represent the true cost of public health care insurance for Canadian individuals and families.

### The cost of health care by family type

In order to estimate the cost of public health care insurance for the average Canadian family in 2021, we must determine how much tax an average family pays to all levels of government and the percentage of the family's total tax bill<sup>6</sup>

together accounted for 7.7 percent of total public sector spending on health care in 2019 (CIHI, 2021). that pays for public health care insurance. The estimated total tax bill for the average Canadian family in 2021 is derived from Palacios et al. (2021) while total health care expenditures for 2020 and 2021 are based on the aggregate growth rate for four provinces according to data in their provincial 2021 budgets (see "Limitations" for further details). The proportion of the family's tax bill devoted to health care insurance is assumed to be the same proportion of tax revenues the government spends on health care. In 2021/22, an estimated 25.7 percent of tax revenues (income) will be spent on health care (Statistics Canada, 2021a, 2021d, and 2021e; CIHI, 2021; authors' calculations).

Table 1 shows six Canadian family types, the estimated average income<sup>7</sup> for those family types in 2021, and their estimated dollar contribution to health care. The calculations presented in this bulletin assume that the health care insurance each Canadian family pays comes from their total tax bill.

In 2021, the average unattached (single) individual, earning an average income of \$49,215, will pay approximately \$4,296 for public health care insurance. An average Canadian family consisting of two adults and two children (earning ap-

taxes; health taxes; import duties; taxes on the consumption of alcohol and tobacco; fuel taxes; carbon taxes; motor vehicle licence fees; natural resource fees; and a host of other levies. For further details on how the total tax bill is calculated for the average Canadian family, see the methodology section at Palacios et al. (2021).

<sup>&</sup>lt;sup>6</sup> The total tax bill includes income taxes (personal and business); property taxes; sales taxes; payroll

<sup>&</sup>lt;sup>7</sup> The definition of "income" used throughout this article is cash income, which includes wages and salaries, self-employment income (farm and nonfarm), interest, dividends, private and government pension payments, old age pension payments, and other transfers from governments (such as the universal child care benefit).

Table 1: Average Income and Average Total Tax Bill of Representative Families, 2021\*

Family Type	Average Cash Income (\$)	Average Total Tax Bill (\$)	Tax Rate	Health Care Insurance (\$)
Unattached Individuals	49,215	16,736	34.0%	4,296
2 Parents, 0 Children	123,996	52,721	42.5%	13,533
2 Parents, 1 Child	141,749	53,549	37.8%	13,746
2 Parents, 2 Children	150,177	58,588	39.0%	15,039
1 Parent, 1 Child	66,989	15,229	22.7%	3,909
1 Parent, 2 Children	76,890	14,966	19.5%	3,842

<sup>\*</sup> Preliminary estimates

Source: The Fraser Institute's Canadian Tax Simulator, 2021.

proximately \$150,177) will pay about \$15,039 for public health care insurance.

### The impact of the increasing cost of health care on Canadian individuals and families

Figures 1 and 2 show the inflation-adjusted<sup>8</sup> cost of public health care insurance for the six representative family types from 1997<sup>9</sup> to 2021. Since 1997 (the earliest year for which data can be generated for comparison), the cost of public health care insurance (adjusted for inflation) has increased by:

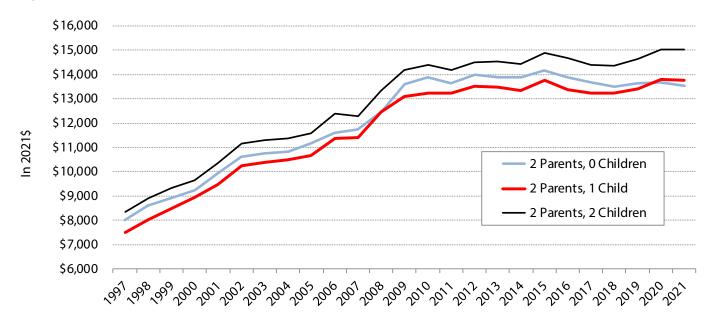
- 69.2% for the average family consisting of 2 adults and no children<sup>10</sup> (from \$7,997 to \$13,533);
- 82.8% for the average family consisting of 2 parents and 1 child (from \$7,518 to \$13,746);
- 79.9% for the average family consisting of 2 parents and 2 children (from \$8,361 to \$15,039);
- 82.6% for the average unattached individual (from \$2,353 to \$4,296);
- 91.8% for the average family consisting of 1 parent and 1 child (from \$2,038 to \$3,909);
- 76.2% for the average family consisting of 1 parent and 2 children (from \$2,180 to \$3,842).

<sup>&</sup>lt;sup>8</sup> Calculated using the consumer price index (CPI), and presented in constant 2021 dollars. For the year 2021, the CPI index was forecast to December based on the average of the monthly index up to May (the most recent month for which information was available).

<sup>&</sup>lt;sup>9</sup> Estimates in this study are based calculations by Palacios et al. (2021), who use Statistics Canada's Social Policy Simulation Database and Model (SPSD/M) to allocate federal taxes to the provinces as well as cash income and tax shares to various family types. 1997 is used as a base year for comparison in this study because it is the earliest year for which the SPSD/M (version 28.0) is capable of generating results.

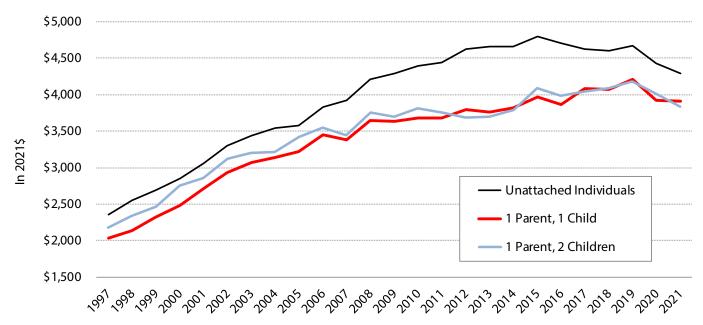
<sup>&</sup>lt;sup>10</sup> "2 adults, 0 children" includes elderly couples who might have children, but whose children do not live with them.

Figure 1: Inflation-adjusted Cost of Public Health Care Insurance for Selected Types of 2-parent Families, 1997-2021



Sources: The Fraser Institute's Canadian Tax Simulator, 2021; Statistics Canada, 2021c; authors' calculations.

Figure 2: Inflation-adjusted Cost of Public Health Care Insurance for Selected Types of Other Families, 1997-2021



Sources: The Fraser Institute's Canadian Tax Simulator, 2021; Statistics Canada, 2021c; authors' calculations.

Examining only the last 10 years (i.e., from 2011 to 2021), the cost of public health care insurance (adjusted for inflation) for the six representative family types has seen mixed changes. It has:

- Decreased by 0.8% for the average family consisting of 2 adults and no children (from \$13,642 to \$13,533);
- Increased by 3.8% for the average family consisting of 2 parents and 1 child (from \$13,244 to \$13,746);
- Increased by 6.0% for the average family consisting of 2 parents and 2 children (from \$14,187 to \$15,039);
- Decreased by 3.4% for the average unattached individual (from \$4,447 to \$4,296);
- Increased by 6.1% for the average family consisting of 1 parent and 1 child (from \$3,685 to \$3,909);
- Increased by 2.2% for the average family consisting of 1 parent and 2 children (from \$3,758 to \$3,842).

One way to understand the impact of the financial burden of public health care insurance on Canadian families is to compare it with changes in income and the cost of basic necessities (food, clothing, and shelter).

Table 2 and figure 3 show that between 1997 and 2021, the average Canadian family's cash income increased by 109.9 percent.11 At the same time, spending on shelter increased by 106.4 percent,

spending on food increased by 81.5 percent, expenditures on clothing rose by 51.8 percent. By contrast, since 1997, the cost of health care insurance for the average Canadian family (all family types) increased by 177.6 percent.

Put differently, the cost of public health care insurance for the average Canadian family grew 1.6 times faster than its average income between 1997 and 2021. Further, since 1997, the cost of public health care insurance increased 3.4 times as fast as the cost of clothing, 2.2 times as fast as the cost of food, and 1.7 times as fast as the cost of shelter.

It is notable that when examining only the last 10 years (i.e., from 2011 to 2021), the cost of health care insurance for the average Canadian family (all family types) increased by 17.0 percent. This increase in the cost of health care insurance is higher than the increase in the cost of clothing (5.3 percent), but lower than the increase in the average Canadian family's cash income (26.9 percent) as well as spending on food (27.5 percent), and spending on shelter (27.8 percent).

Although a comprehensive examination of this departure over the last 10 years from the longer historical trend observed between 1997 and 2021 is beyond the scope of this paper, it is partially explained by the fact that the cost of health care insurance for the average family has increased at a much slower pace over the last 10 years (1.6 percent per year) than it did between 1997 and 2011 (6.4 percent per year). There has also been a slowdown in the average annual growth over the last 10 years on spending on clothing (0.9 percent) and shelter (2.6 percent) in comparison to the observed spending growth for each between 1997 and 2011 (2.8 percent and 3.5 percent, respectively).

<sup>&</sup>lt;sup>11</sup> The results shown in table 2 and figure 3 are not adjusted for inflation since the consumer price index (CPI) is used as one of the measures to compare health care insurance, income, and other expenditures.

Table 2: Income, Cost of Health Care, and Selected Expenditures of the Average **Canadian Family\* (Current Dollars)** 

Year	Average Cash Income (\$)	Health Care Insurance (\$)	Consumer Price Index (2002=100)	Average Expenditures (\$)**		
				Shelter	Food	Clothing
1997	46,186	3,383	90.4	9,892	6,070	2,074
1998	48,351	3,688	91.3	10,207	6,032	2,132
1999	50,345	3,921	92.9	10,432	6,206	2,182
2000	53,342	4,198	95.4	10,657	6,380	2,233
2001	55,602	4,630	97.8	11,184	6,684	2,303
2002	56,333	5,113	100.0	11,711	6,989	2,373
2003	57,680	5,390	102.8	12,013	7,120	2,392
2004	60,324	5,559	104.7	12,316	7,250	2,411
2005	63,422	5,857	107.0	12,420	7,312	2,539
2006	66,740	6,244	109.1	12,864	7,484	2,492
2007	70,639	6,402	111.5	14,393	7,717	2,848
2008	72,736	7,048	114.1	13,965	8,024	2,893
2009	72,740	7,595	114.4	14,377	7,452	2,758
2010	73,993	7,862	116.5	14,578	7,556	2,705
2011	76,413	8,027	119.9	15,975	8,646	2,991
2012	78,406	8,330	121.7	16,760	8,113	3,054
2013	80,521	8,379	122.8	16,496	8,440	3,745
2014	82,550	8,519	125.2	17,341	9,008	3,656
2015	84,957	8,838	126.6	18,821	9,555	3,561
2016	83,800	8,756	128.4	17,577	9,124	3,677
2017	86,525	8,770	130.4	18,799	9,128	3,780
2018	88,425	8,902	133.4	19,180	9,295	3,812
2019	91,004	9,209	136.0	19,683	10,662	3,228
2020***	96,333	9,378	137.0	20,023	10,911	3,171
2021***	96,952	9,390	139.5	20,421	11,020	3,148
% increase 2011-2021	26.9%	17.0%	16.3%	27.8%	27.5%	5.3%
% increase 1997-2021	109.9%	177.6%	54.3%	106.4%	81.5%	51.8%

#### Notes:

Sources: Statistics Canada (various issues), Spending Patterns in Canada; Statistics Canada, 2021c and 2021f; The Fraser Institute's Canadian Tax Simulator, 2021; authors' calculations.

<sup>\*</sup> The average family includes unattached individuals.

<sup>\*\*</sup> All expenditure items include indirect taxes.

<sup>\*\*\*</sup> Expenditures for 2020 and 2021 were estimated using the results of the 2019 Survey of Household Spending and adjusting final results for inflation. Inflation numbers for 2021 are estimates.

200% 177.6% 180% 160% Percentage increase since 1997 140% 109.9% 120% 106.4% 100% 81.5% 80% 54.3% 51.8% 60% 40% 20% 0% Clothing Consumer Price Food Shelter Average Cash Health care Index Income insurance

Figure 3: How Health Care Insurance Has Increased Relative to Other Costs, 1997-2021

Source: Table 2.

Table 3: Average Income and Total Tax Bill in Each Decile, 2021\*

Decile	Average Cash Income (\$)	Average Total Tax Bill (\$)	Tax Rate	Health Care Insurance (\$)
1	18,686	2,827	15.1%	726
2	38,110	7,009	18.4%	1,799
3	49,596	12,790	25.8%	3,283
4	61,073	18,923	31.0%	4,857
5	75,300	25,404	33.7%	6,521
6	91,097	33,177	36.4%	8,516
7	109,374	42,284	38.7%	10,854
8	131,552	54,627	41.5%	14,022
9	166,740	74,662	44.8%	19,166
10	286,808	163,290	56.9%	41,916

#### Notes:

Source: The Fraser Institute's Canadian Tax Simulator, 2021.

<sup>\*</sup> Preliminary estimates

<sup>\*\*</sup> Deciles group families from lowest to highest incomes with each group containing 10 percent of all families. The first decile, for example, represents the 10 percent of families with the lowest incomes.

### The cost of health care by income group

Table 3 divides Canadian families into 10 income groups (or "deciles") to show what families from various income brackets will pay for public health care insurance in 2021.

According to this calculation, the 10 percent of Canadian families with the lowest incomes will pay an average of about \$726 for public health care insurance in 2021. The 10 percent of Canadian families who earn an average income of \$75,300 will pay an average of \$6,521 for public health care insurance, and the families among the top 10 percent of income earners in Canada will pay \$41,916.

#### Limitations

Of course, COVID-19 has affected Canada's public health care system in a number of ways that are yet to be accounted for by official estimates of health care spending in 2020 and 2021, and as such the estimates contained in this bulletin should be interpreted with caution.<sup>12</sup>

As mentioned previously, in the absence of more recent data from the CIHI, this study estimates health care spending will grow by 6.1 percent from \$174.2 billion in 2019 to \$184.9 billion in 2020, and then by 3.3 percent to \$191.0 billion in 2021 based on more up-to-date provincial public accounts and budgets. Specifically, we used the cumulative health spending growth rates of four provinces (Ontario, Saskatchewan, Alberta, and British Columbia) 13 for 2020 and 2021 to arrive at these figures for Canada (Alberta, 2021; British Columbia, 2021; Ontario, 2021; Saskatchewan, 2021). Together, these four provinces represented 66 percent of total health care spending in 2019 (CIHI, 2021). We compared historical data about growth rates from the provincial public accounts or budgets with the CIHI data for these four provinces to gauge the comparability for our forecasts.14

Estimates of income and total taxes for the different types of Canadian families have also been significantly affected by the economic response to COVID-19 and should also be interpreted with caution.

The estimates of the total tax bill for families in 2021 are based on preliminary estimates from Palacios et al. (2021). Their estimates for the tax burden on families in 2021 do not account for deficits, which will have to be paid for by taxes on future generations. Specifically, all Canadian governments (federal and provincial) are pro-

<sup>&</sup>lt;sup>12</sup> In a report published in January 2021, CIHI estimated that as of early October 2020, COVID-19related health funding announced by federal, provincial, and territorial levels of government amounted to more than \$29 billion, most of which was planned to be spent in 2020-2021, though some may be spent in future years (CIHI, 2021).

<sup>&</sup>lt;sup>13</sup> Quebec, which represents 22 percent of Canada's total health spending in 2019, was excluded from our estimations because its budget documents combine health spending and social services (Quebec, 2021).

<sup>&</sup>lt;sup>14</sup> We found an absolute difference in the aggregate growth rate for the four provinces between the two sources of 0.2 percentage points in 2019 (the latest year with available data for both sources), and an annual mean absolute difference for the latest 5 years with available data (2015-2019) of 1.5 percentage points. The absolute difference in the aggregate growth rate between the four provinces (using the provincial public accounts or budgets) and Canada (CIHI, 2021) is 0.6 percentage points in 2019 (the latest year with available data for both sources), and the annual mean absolute difference for the latest 5 years with available data (2015-2019) is 0.9 percentage points.

jecting large deficits (\$233.5 billion in 2021) that will have to be paid in the future through increasing taxes or reduced spending (Palacios et al., 2021). If governments were obliged to cover current health care spending with current taxation, the cost of public health insurance for all family types would increase.

Based on these estimates, the proportion of the family's tax bill devoted to health care insurance is 25.7 percent) in 2021.

#### Conclusion

Through the lens of a variety of representative Canadian families, tables 1 and 3 present a much different perspective on the costs of public health care insurance than the per capita figures from CIHI. In addition, the large gap between the growth rate of income and that of public health care insurance between 1997 and 2021 provides an important insight into the impact of changes in the cost of health care for Canadian individuals and families. Our hope is that these figures will enable Canadians to more clearly understand just how much they pay for public health care insurance, and how that amount is changing. With a more precise estimate of what they really pay, Canadians will be in a better position to decide whether they are getting a good return on the money they spend on health care.

#### References

Alberta (2021). Budget 2021: Protecting Lives and Livelihoods, 2021-24. Government of Alberta. <a href="https://open.alberta.ca/dataset/6f47f49d-d79e-">https://open.alberta.ca/dataset/6f47f49d-d79e-</a> 4298-9450-08a61a6c57b2/resource/ec1d42ee-ecca-48a9-b450-6b18352b58d3/download/budget-2021-fiscal-plan-2021-24.pdf>, as of June 29, 2021.

British Columbia (2021). Budget and Fiscal Plan 2021/22 - 2023/24. Government of British Columbia. <a href="https://www.bcbudget.gov.bc.ca/2021/">https://www.bcbudget.gov.bc.ca/2021/</a>

- pdf/2021\_Budget%20and%20Fiscal%20Plan.pdf>, as of July 19, 2021.
- Canadian Institute for Health Information [CIHI] (2021). National Health Expenditure Trends, 2020. Canadian Institute for Health Information. <a href="https://www.cihi.ca/en/national-health-expen-">https://www.cihi.ca/en/national-health-expen-</a> diture-trends>, as of June 19, 2021.
- Esmail, Nadeem (2008). Medicare's Steep Price: An In-depth Look at the Hidden Costs of Health Care. Fraser Forum (September): 31-34.
- Globerman, Steven (2013). Reducing Wait Times for Health Care: What Canada Can Learn from Theory and International Experience. Fraser Institute.
- Ontario (2021). Ontario's Action Plan: 2021 Ontario Budget. Government of Ontario. <a href="https://budget.">https://budget.</a> ontario.ca/2021/pdf/2021-ontario-budget-en. pdf>, as of July 19, 2021.
- Palacios, Milagros, Jake Fuss, and Nathaniel Li (2021). Canadians Celebrate Tax Freedom Day on May 24, 2021. Research Bulletin (June). Fraser Institute. <a href="https://www.fraserinstitute.org/stud-">https://www.fraserinstitute.org/stud-</a> ies/canadians-celebrate-tax-freedom-day-onmay-24-2021>, as of June 21, 2021.
- Quebec (2021). Quebec Budget 2021-2022. Government of Quebec. <a href="http://www.budget.finances.">http://www.budget.finances.</a> gouv.qc.ca/budget/2021-2022/en/documents/ BudgetPlan\_2122.pdf>, as of July 19, 2021.
- Saskatchewan (2021). Saskatchewan Provincial Budget 2021-22. Government of Saskatchewan. <a href="https://www.saskatchewan.ca/government/">https://www.saskatchewan.ca/government/</a> budget-planning-and-reporting/budget-2021-22/ budget-documents>, as of July 19, 2021.
- Statistics Canada (2021a). Table 10-10-0039-01: Consolidated Federal, Provincial, Territorial and Local Government Revenue and Expenditures. Statistics Canada. <a href="https://www150.statcan.gc.ca/t1/tbl1/">https://www150.statcan.gc.ca/t1/tbl1/</a> en/tv.action?pid=1010003901>, as of June 20, 2021.
- Statistics Canada (2021b). Table 17-10-0005-01: Population Estimates on July 1st, by Age Group and Sex. Statistics Canada. <a href="https://www150.statcan.">https://www150.statcan.</a> gc.ca/t1/tbl1/en/tv.action?pid=1710000501>, as of June 14, 2021.

Statistics Canada (2021c). Table 18-10-0006-01: Consumer Price Index, Monthly, Seasonally Adjusted. Statistics Canada. <a href="https://www150.statcan.gc.ca/">https://www150.statcan.gc.ca/</a> t1/tbl1/en/tv.action?pid=1810000601>, as of June 21, 2021.

Statistics Canada (2021d). Table 36-10-0477-01: Revenue, Expenditure and Budgetary Balance - General Governments. Statistics Canada. <a href="https://www150.statcan.gc.ca/t1/tbl1/en/">https://www150.statcan.gc.ca/t1/tbl1/en/</a> tv.action?pid=3610047701>, as of June 14, 2021.

Statistics Canada (2021e). Table 36-10-0484-01: Revenue, Expenditure and Budgetary Balance - Provincial Administration, Education and Health. Statistics Canada. <a href="mailto://www150.statcan.gc.ca/t1/">https://www150.statcan.gc.ca/t1/</a> tbl1/en/tv.action?pid=3610048401>, as of June 14, 2021.

Statistics Canada (2021f). Survey of Household Spending (SHS) 2019. Custom tabulation. Statistics Canada.

Statistics Canada (various issues). Spending Patterns in Canada. Catalogue No. 62-202-XIE. Statistics Canada.

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