



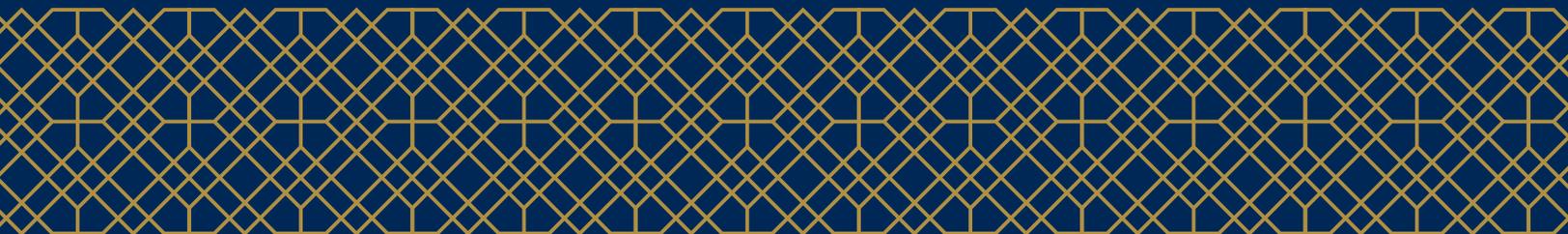
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Health Care Costs: A Challenge for Canadian Governments

Summer 2019



About this Document

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ABSTRACT

Provincial and territorial governments are mainly responsible for managing and funding Canada's health care system. The federal government partially funds health care costs through the Canada Health Transfer (CHT) program. It also provides health care services to certain groups, including Indigenous people living on reserves, members of the military and veterans.

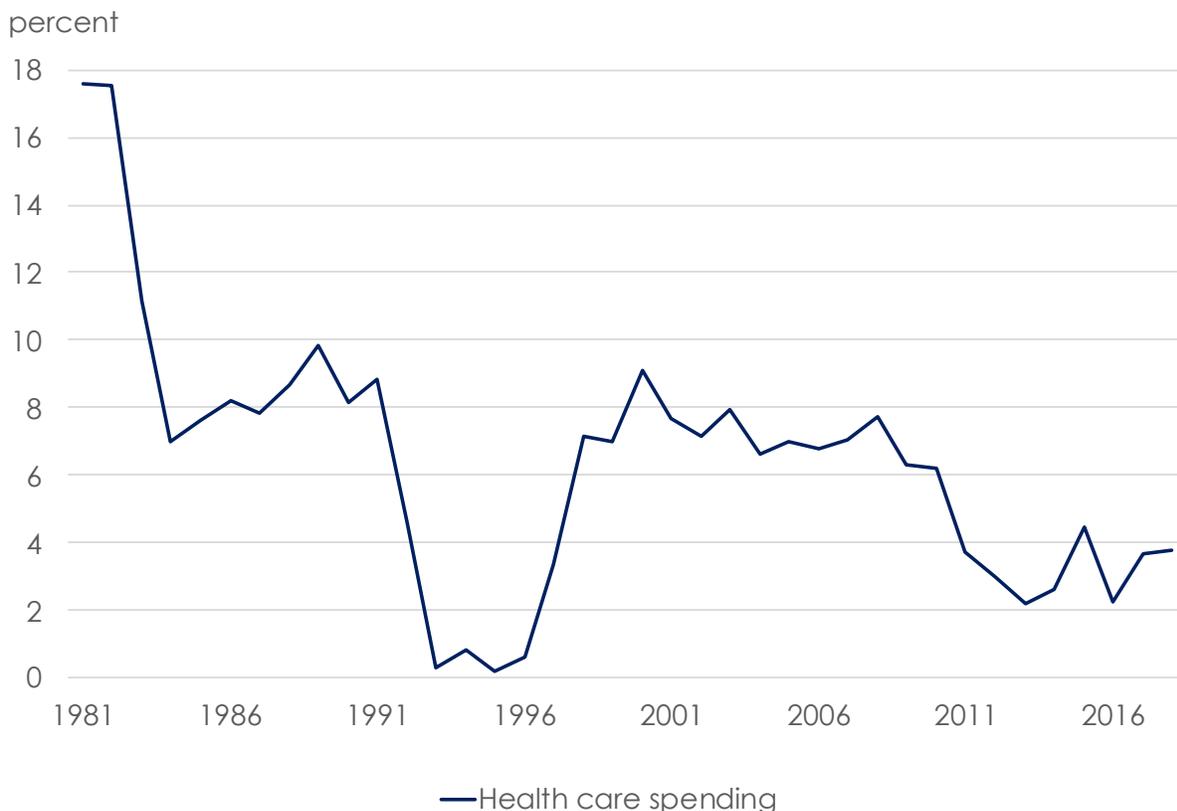
This report focuses only on health care spending by provincial and territorial governments. It examines changes in health care costs over the past 33 years and estimates the contribution of fundamental determinants of the costs. The analysis then uses a standard methodology to project health care costs over the next 25 years for each province and the three territories combined.

HISTORICAL HEALTH CARE COSTS IN CANADA

The rate of growth in aggregate health spending by provincial-territorial governments over the past 37 years has been volatile, but it has largely followed the ups and downs in economic activity.

As Chart 1 shows, in periods of strong economic growth, as represented by growth in nominal gross domestic product (GDP), health care spending increased significantly. In the early 1990s, when the economy was weak, and in the aftermath of the 2009 financial crisis, the provinces and territories reduced the rate of growth in health care spending.

Chart 1: Health Care Spending Growth

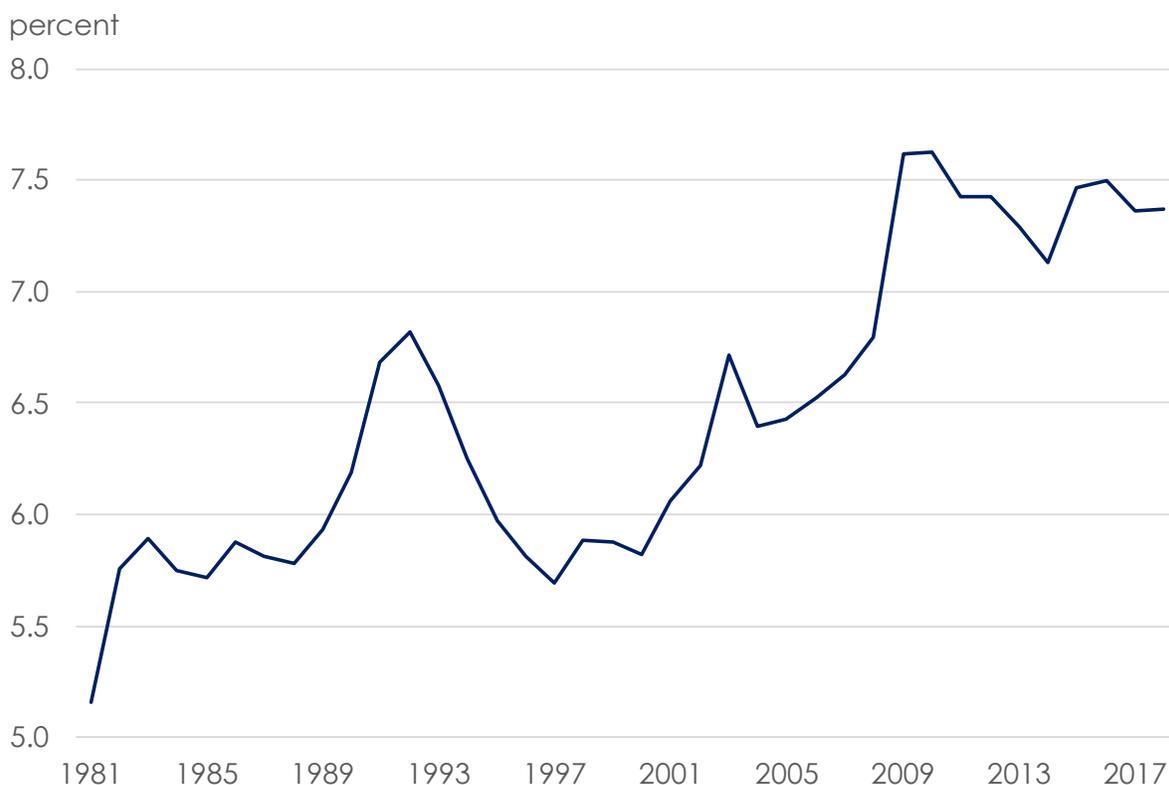


As a share of GDP, health care spending increased from 5.2 per cent in 1981 to a projected 7.4 per cent in 2018 (Chart 2). For most of this period, health spending increased at a faster pace than GDP; it also assumed an increasing share of provincial-territorial government spending.

The threat that health care spending might overwhelm their budgets has forced the provincial and territorial governments to find ways to reduce the growth in such spending. This is reflected in the relatively stable ratio of health spending as a share of GDP since 2009.

The key question is whether this stability can be sustained in the face of cost pressures arising from two sources: the ageing of the population and the inevitable future technological progress in health care.

Chart 2: Health Care Spending to GDP Ratio



To better understand the evolution of health care spending, we will decompose the spending growth into its fundamental drivers for all provinces and the territories.

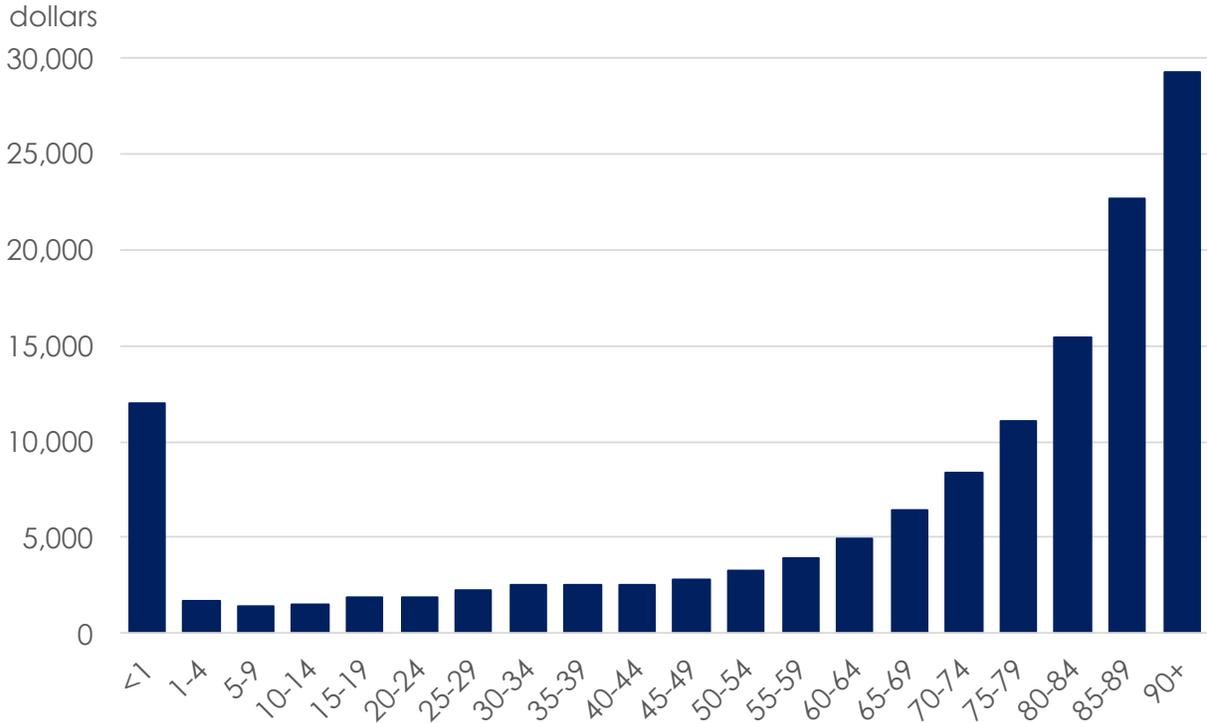
Growth in per capita health expenditure is assumed to be affected by three fundamental factors:

- a. Income.** There is a large body of research on the link between health expenditure and income. In all OECD countries, health expenditure has risen faster than GDP. This has led to the hypothesis that health service is a luxury good with an income elasticity of greater than 1. However, the empirical estimate of the elasticity does not support this hypothesis conclusively. In fact, some studies conclude that the elasticity is much lower than 1, while others have

estimates close to 1 or higher than 1. See Baltagi and Moscone (2010) for a review of literature on income elasticity of health spending. Given the range of possible estimates, it is reasonable to assume unitary income elasticity for health expenditure. This means that a 1 per cent increase in income per capita (GDP per capita) would lead to a 1 per cent increase in health expenditure per capita.

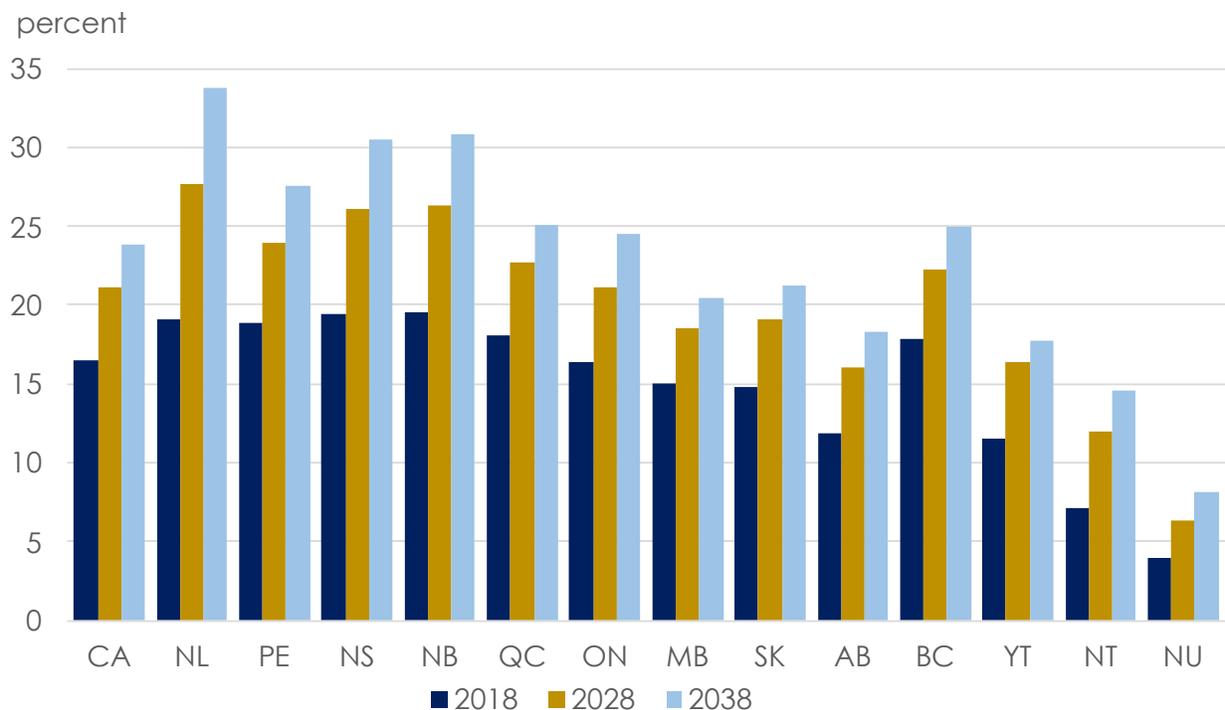
b. Ageing. It is evident that health care needs increase with age. According to data from the Canadian Institute of Health Information (CIHI), per capita health spending in Canada rises significantly as people get older (Chart 3). Canada, like all other OECD countries, is undergoing a demographic transition. Life expectancy is rising, the fertility rate is well below the replacement rate of 2.1, and the rate of growth in the population is declining. This means that the share of the population aged 65 and older will continue to rise, increasing the demand for health care (Chart 4). Statistics Canada’s population projections show that by 2033, nearly one in four individuals (23 per cent) in Canada will be 65 or older compared with 17.3 per cent in 2018.

Chart 3: Per Capita Health Care Cost by Age in Canada (2016)



Source: Canadian Institute for Health Information.

Chart 3: Share of Canadians Aged 65 and Over in the Population



Source: Statistics Canada, Institute of Fiscal Studies and Democracy.
 Note: Population projections are from Statistics Canada's M1 (medium) scenario.

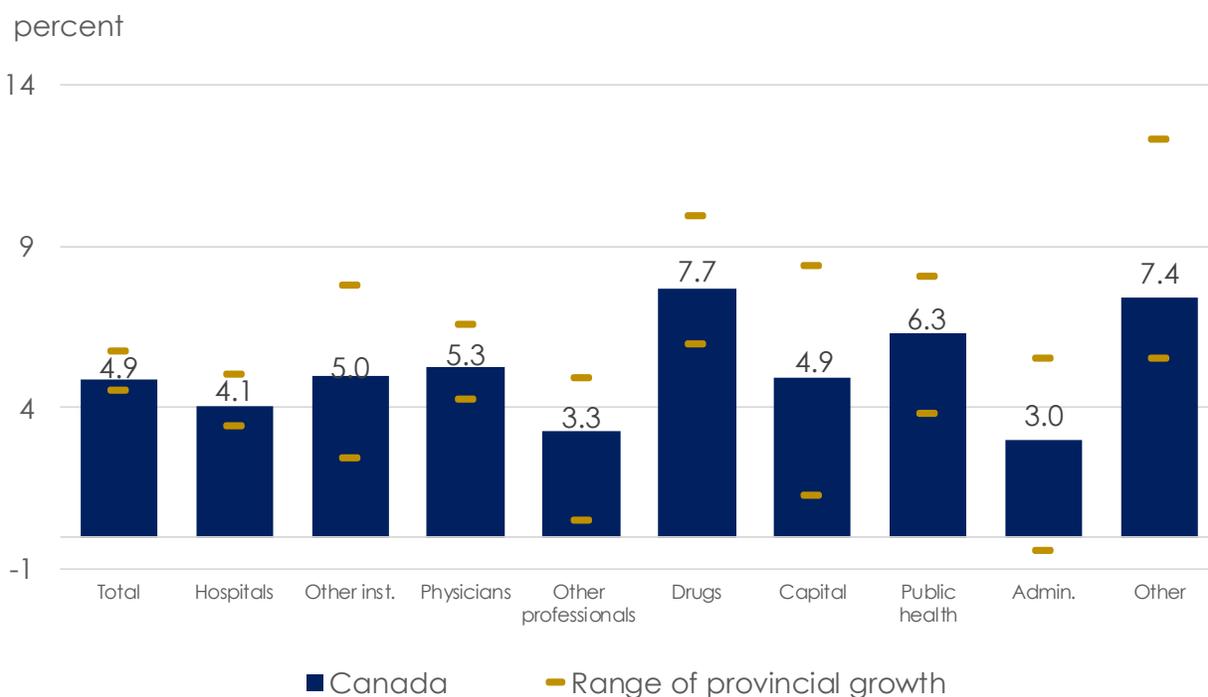
c. 3. Excess cost (enrichment factor). The increase in per capita health expenditure that cannot be explained by income and the ageing factor is excess cost, or the “enrichment factor”. This factor could represent technological progress in health care, including new treatments and new drugs, which would increase demand for health care and its quality, but would also increase the cost of treatment. It could also represent other factors that are not captured by income and ageing. The excess cost is not observed. Thus, it needs to be estimated residually.

Table 1 shows the contribution of these three factors to the rate of growth of per capita total provincial -territorial government health expenditure for five distinct periods .

	1981-2018	1981-1991	1992-1999	2000-2008	2009-2018
Health expenditure per capita	4.86	8.12	1.89	6.17	2.42
GDP per capita	3.85	5.36	3.56	4.14	2.79
Ageing	0.68	0.66	0.45	0.80	0.79
Excess cost	0.33	2.10	-2.10	1.23	-1.16

Over the entire sample period of 1981-2018, health expenditure per capita increased at a healthy pace of 4.86 per cent a year, on average. This was slightly faster than the average growth rate of 4.53 per cent in income and ageing, its two macroeconomic drivers combined. The difference was .33 percentage points or about one-third of 1 per cent per year.

Chart 5: Growth in Health Spending by Category (1981 to 2018)



Source: Canadian Institute for Health Information, Institute of Fiscal Studies and Democracy.

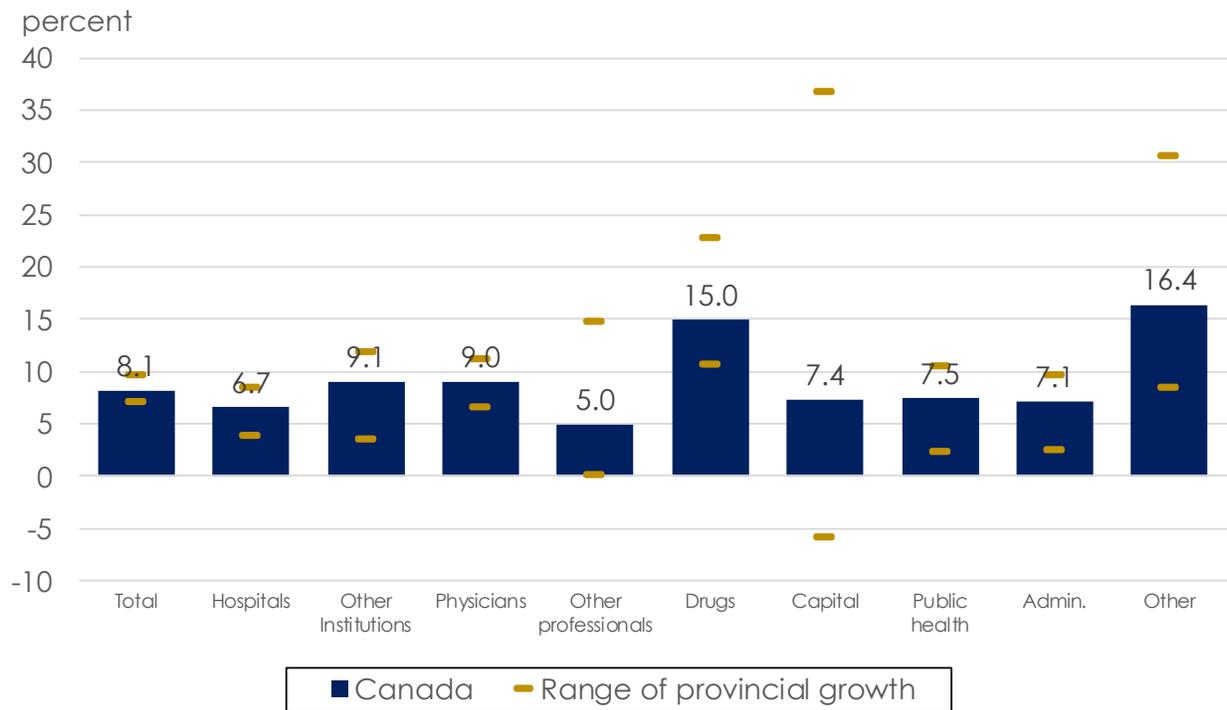
Note: 'Other health spending' includes expenditures on home care, medical transportation (ambulances), hearing aids, other appliances and prostheses, health research and miscellaneous health care.

Chart 5 shows that all provinces experienced similarly strong growth, which was widespread among the key components of health expenditure. The main drivers were spending on drugs, public health, physicians and the “other” category.

The strong average growth over the entire four-decade period masks the volatility in health spending at various points. For example, the 1980s were a period of significant gains in health spending. From 1981 to 1991, per capita health spending increased at an average annual rate of 8.1 per cent, which was 2.1 percentage points higher than its fundamental determinants, income and ageing (Table 1).

All provinces showed strong growth, especially Ontario which experienced an annual average increase of nearly 10 per cent. Expenditures on drugs and the ‘other’ category were the main drivers, with physicians and other institutions not far behind (Chart 6).

Chart 6: Growth in Health Spending by Category (1981 to 1991)



Source: Canadian Institute for Health Information, Institute of Fiscal Studies and Democracy.

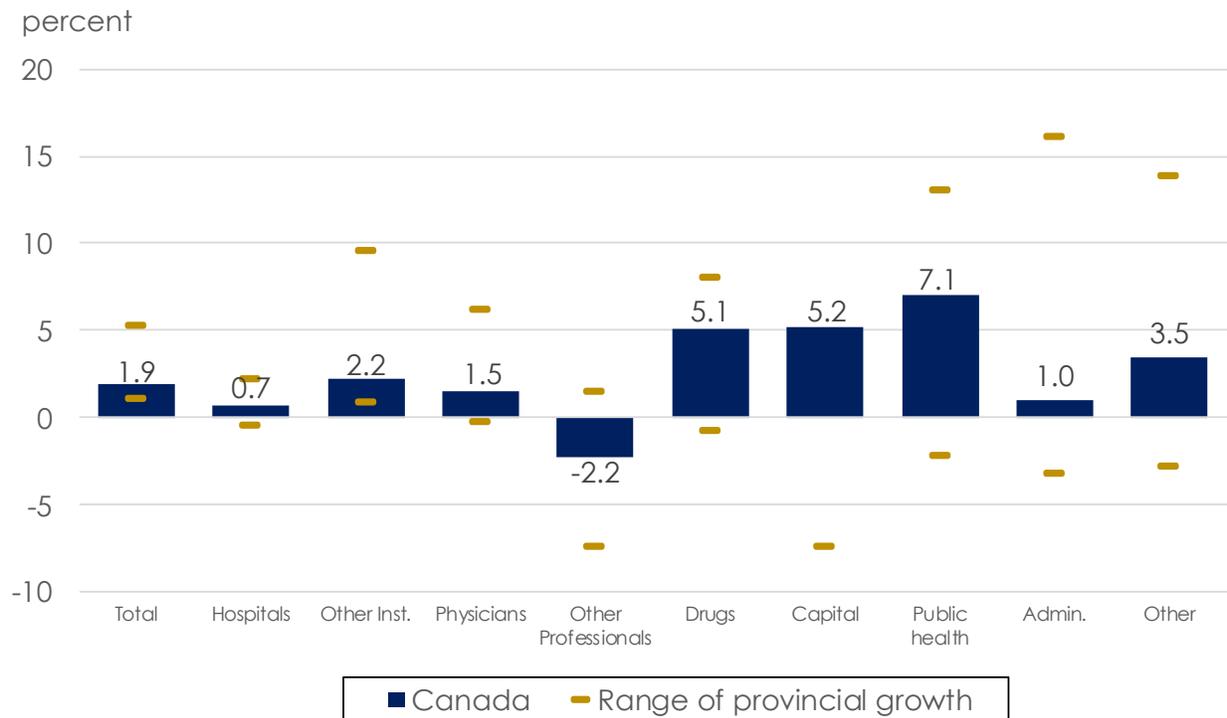
Note: 'Other health spending' includes expenditures on home care, medical transportation (ambulances), hearing aids, other appliances and prostheses, health research and miscellaneous health care.

The 1990s were difficult years economically. Canada suffered a recession in the beginning of the period and a very slow recovery in the first half of the 1990s. In addition, the federal government faced significant fiscal challenges that led to a period of severe fiscal austerity at the federal level.

One area of federal spending significantly affected was federal transfers to provinces and the territories. As a result, total subnational health expenditures increased at a modest annual pace of only 1.9 per cent, down substantially from 8.1 per cent in the previous decade.

All provinces encountered a significant slowdown in the growth of health expenditures in all categories of spending, except for drugs, capital and public health. The sole exception was Newfoundland and Labrador, which experienced a 5.2 per cent gain in health expenditures, spurred by a whopping 34 per cent increase in health capital spending (Chart 7).

Chart 7: Growth in Health Spending by Category (1992 to 1999)



Source: Canadian Institute for Health Information, Institute of Fiscal Studies and Democracy.

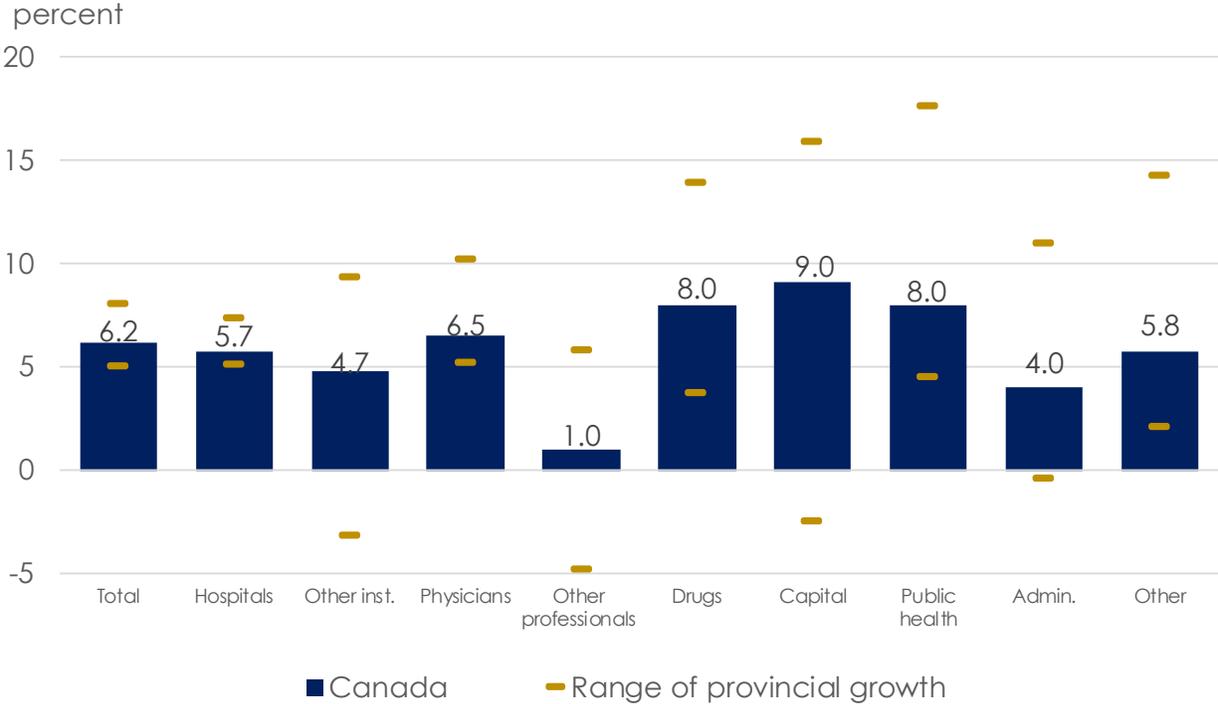
Note: 'Other health spending' includes expenditures on home care, medical transportation (ambulances), hearing aids, other appliances and prostheses, health research and miscellaneous health care.

In the latter part of the 1990s and for most of the 2000s, the Canadian economy, at both the national and subnational levels, showed consistent strength. More importantly, the fiscal situation of both levels of government improved markedly during this period.

As a result, the federal government increased the size of health transfers to provinces. Provincial governments sharply increased their health spending to compensate for the significant slowdown in spending growth in the previous decade.

Health expenditures increased 6.2 per cent a year on average from 2000 to 2008, about 1.2 percentage points above the combined contributions from GDP and the ageing factor (Table 1). The sharp increase in health spending was driven mainly by spending on drugs, capital and public health (Chart 8).

Chart 8: Growth in Health Spending per capita by Category (2000 to 2008)



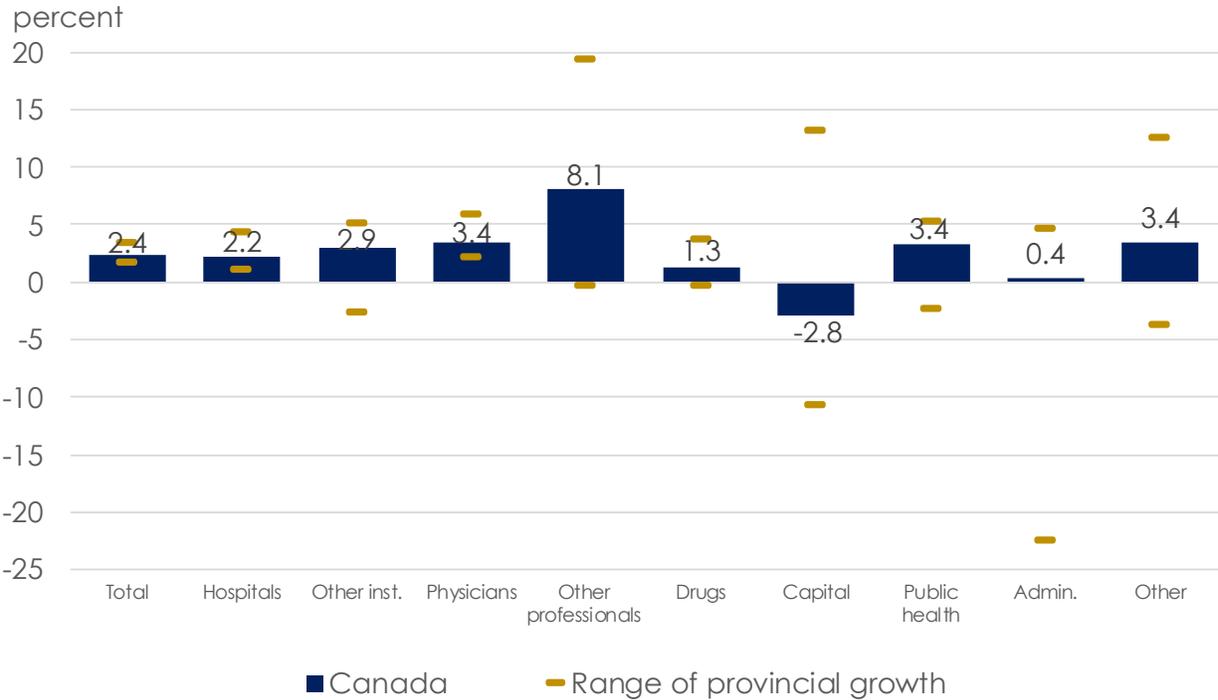
Source: Canadian Institute for Health Information, Institute of Fiscal Studies and Democracy.
 Note: 'Other health spending' includes expenditures on home care, medical transportation (ambulances), hearing aids, other appliances and prostheses, health research and miscellaneous health care.

The 2009 financial crisis and the oil price shock in 2014-15 led to a significant reduction in economic growth between 2009 and 2018. Two other developments affected health care spending during this period.

First, most provinces experienced a significant deterioration in their fiscal situation, partly because of the two economic shocks. Second, in 2015, the federal government announced that starting in 2017, total CHT transfer payments would grow in line with a three-year moving average in growth of nominal GDP. Increases would be much lower than the 6 per cent annual growth in the CHT from 2004 to 2016.

These factors together led to a significant drop in the growth of health care expenditures from 2009 to 2018. Spending increases averaged only 2.4 per cent a year, which was 1.2 percentage points below the combined contributions from GDP growth (2.8 per cent) and the ageing factor (0.8 per cent). The slowdown was widespread among all categories of spending, except for the other professionals category (Chart 9).

Chart 9: Growth in Health Spending per capita by Category (2009 to 2018)



Source: Canadian Institute for Health Information, Institute of Fiscal Studies and Democracy.
 Note: 'Other health spending' includes expenditures on home care, medical transportation (ambulances), hearing aids, other appliances and prostheses, health research and miscellaneous health care.

OUTLOOK FOR HEALTH CARE COSTS IN CANADA

A. THE APPROACH

To assess the outlook for health care costs in the medium term, from 2019 to 2023, we used health care expenditure forecasts from the most recent provincial and territorial budgets. Where the budgets do not provide forecasts for the whole five years, we assumed the expenditure would grow in line with the moving average of the previous five years.

To forecast costs in the long run, we used the growth accounting approach that we used in the previous section to examine the fundamental drivers of health care costs over time, namely income, ageing and excess cost. Health care cost is assumed to be determined by the following equation:

$$HCPC = HCPC(-1) * (GDPPC / GDPPC(-1)) * (AGEING / AGEING(-1)) * (1 + ECC)$$

Where HCPC is per capita health expenditure; GDPPC is per capita nominal GDP; AGEING measures the ageing of the population; and, ECC is the excess cost growth.

To estimate the future values of HCPC, we need forecasts for GDP, population, ageing and the excess cost growth.

GDP

Over the medium term, we used provincial budget forecasts for nominal GDP. In the long run, we assume GDP will grow at its trend rate, which is equal to the estimated trend real GDP growth rate, plus 2 per cent inflation (in line with the national inflation target).

Table 2 shows our estimate of the long-run nominal GDP growth for all provinces and territories.

TABLE 2: Trend Nominal GDP Growth Rate (%)	
Newfoundland and Labrador	2.59
Prince Edward Island	3.37
Nova Scotia	2.75
New Brunswick	2.39
Quebec	3.35
Ontario	3.51
Manitoba	4.21
Saskatchewan	4.16
Alberta	4.32
British Columbia	4.36
Territories	3.28
Canada	3.71

POPULATION AND AGEING

Population forecasts come from Statistic Canada's medium scenario population projection. Using population projections by age group and the 2016 per capita health expenditure by age group (latest available data), we can forecast the ageing factor. It represents the change in health expenditures that is due to the change in the ageing composition of the population of a given jurisdiction.

EXCESS COST GROWTH

Since the excess cost growth is calculated residually over the history and is not well defined, it is not possible to forecast. It is, however, reasonable to assume that the historical value of the excess cost growth could be a reasonable estimate of how health expenditures will grow in the future beyond the contributions from income and ageing.

In the previous section, we showed that estimates of the excess cost growth change significantly when we change the period over which it is estimated (Table 1). In this report, we chose the estimate of excess cost growth between 2000 and 2018, for two reasons.

First, the period reflects recent changes in the structure of the health care system in Canada and recent advancements in technology. Second, this period consists of some years of significant increases in health spending, followed by years of restraint. Thus, one can argue that combining those years together represents a “normal” situation.

Table 3 shows the estimate of the average excess cost growth between 2008 and 2018 for all provinces and the three territories combined.

TABLE 3: Excess Cost Growth (%)	
Newfoundland and Labrador	-1.40
Prince Edward Island	0.90
Nova Scotia	1.07
New Brunswick	0.43
Quebec	0.55
Ontario	0.37
Manitoba	0.46
Saskatchewan	0.12
Alberta	1.42
British Columbia	-0.49
Territories	2.31
Total	0.57

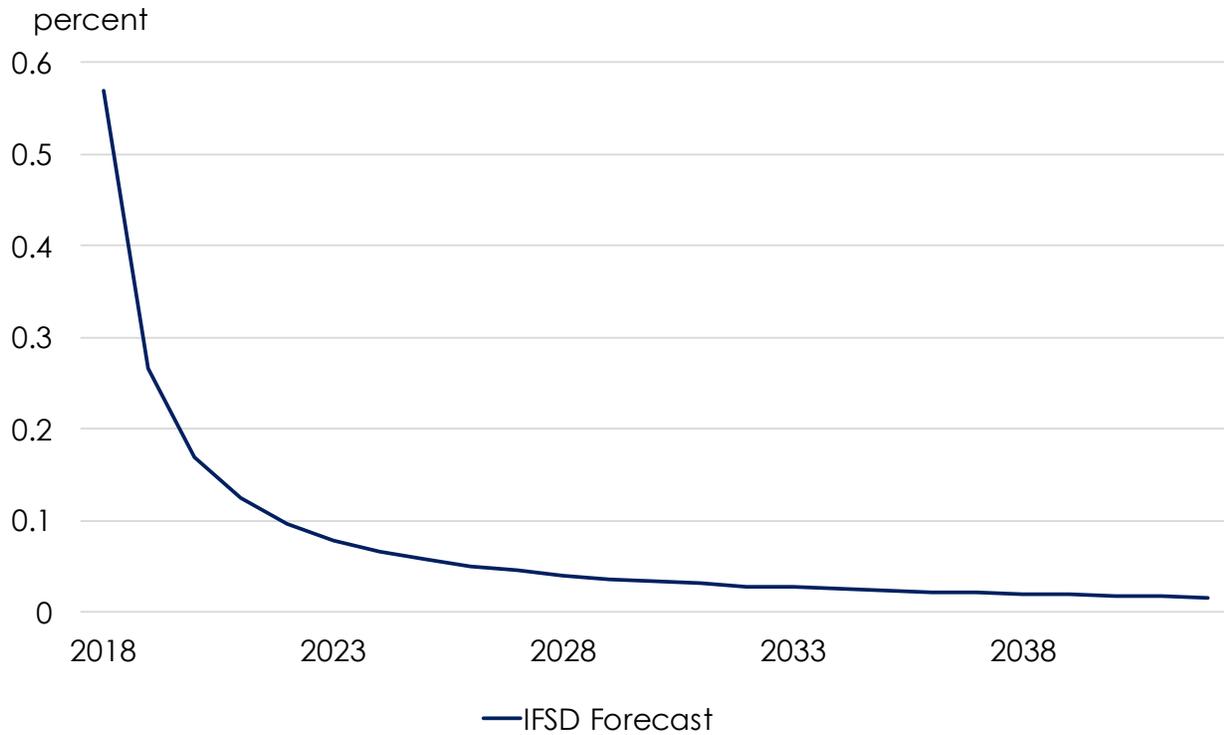
One could assume that these estimates for excess cost growth will apply through the entire forecast period. This would mean that a jurisdiction with an excess cost growth of 1.07 per cent (Nova Scotia) would experience an increase of more than 30 per cent in its health expenditures, in addition to the contributions from income and ageing, over the next 25 years.

Given that health care expenditure is the largest single item in provincial-territorial budgets, it would be unreasonable to assume that the governments will continue to increase their health spending beyond what the rise in income and ageing would require. As well, for those jurisdictions with a negative excess cost growth, it would be unreasonable to assume that they would continue to spend below what the fundamental determinants of health care spending require.

Therefore, it is reasonable to assume that provincial-territorial governments will take measures to ensure that, over time, health care spending will grow in line with GDP growth and ageing. Thus, in this projection, we assume that excess cost growth will decline by about 50 per cent every year over the forecast period.

Chart 10 shows the path for the excess cost growth for total provincial-territorial health care expenditure.

Chart 10: Excess Cost Growth Profile (2018 to 2043)

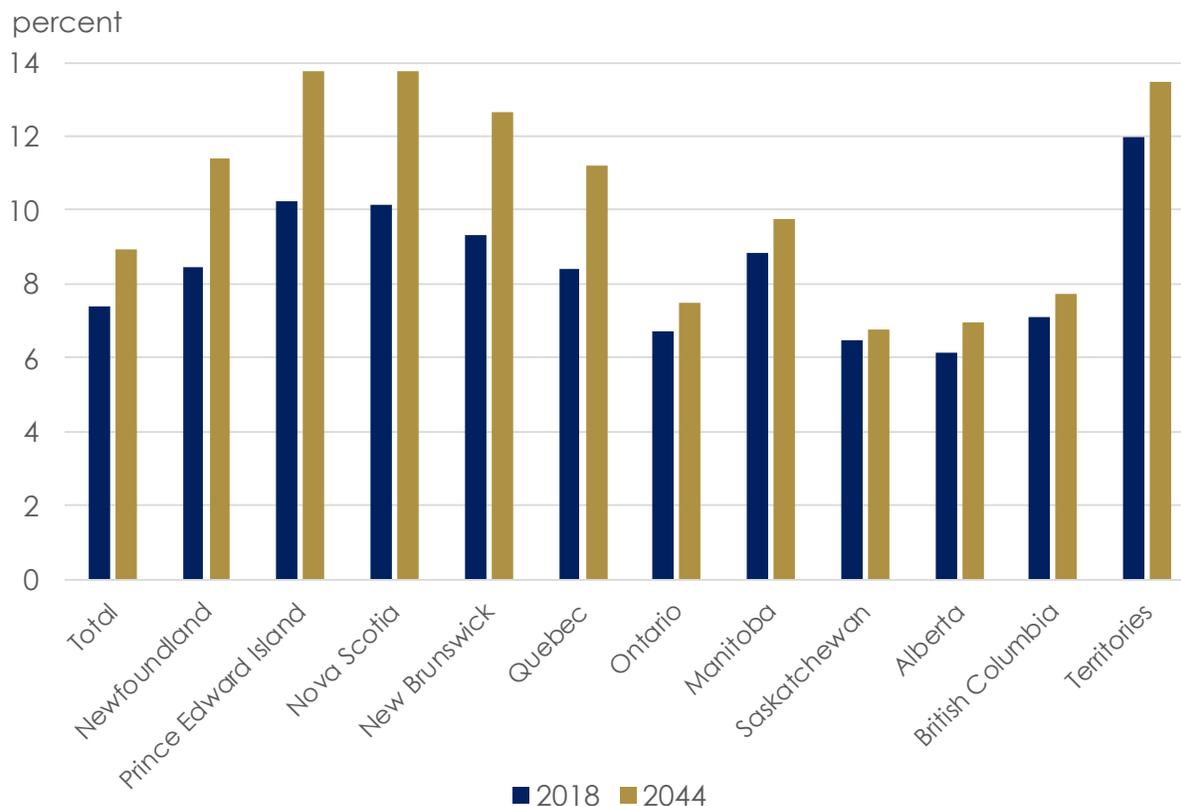


Source: Statistics Canada, Institute of Fiscal Studies and Democracy.
Note: Population projections are from Statistics Canada's M1 (medium) scenario.

A. THE OUTLOOK BY JURISDICTION

Using the approach described above, we forecast per capita health expenditure for each province and the three territories combined. Chart 11 compares health expenditure as a share of GDP in 2018 and 2044 for each jurisdiction.

Chart 11: Health Expenditure as a Share of GDP

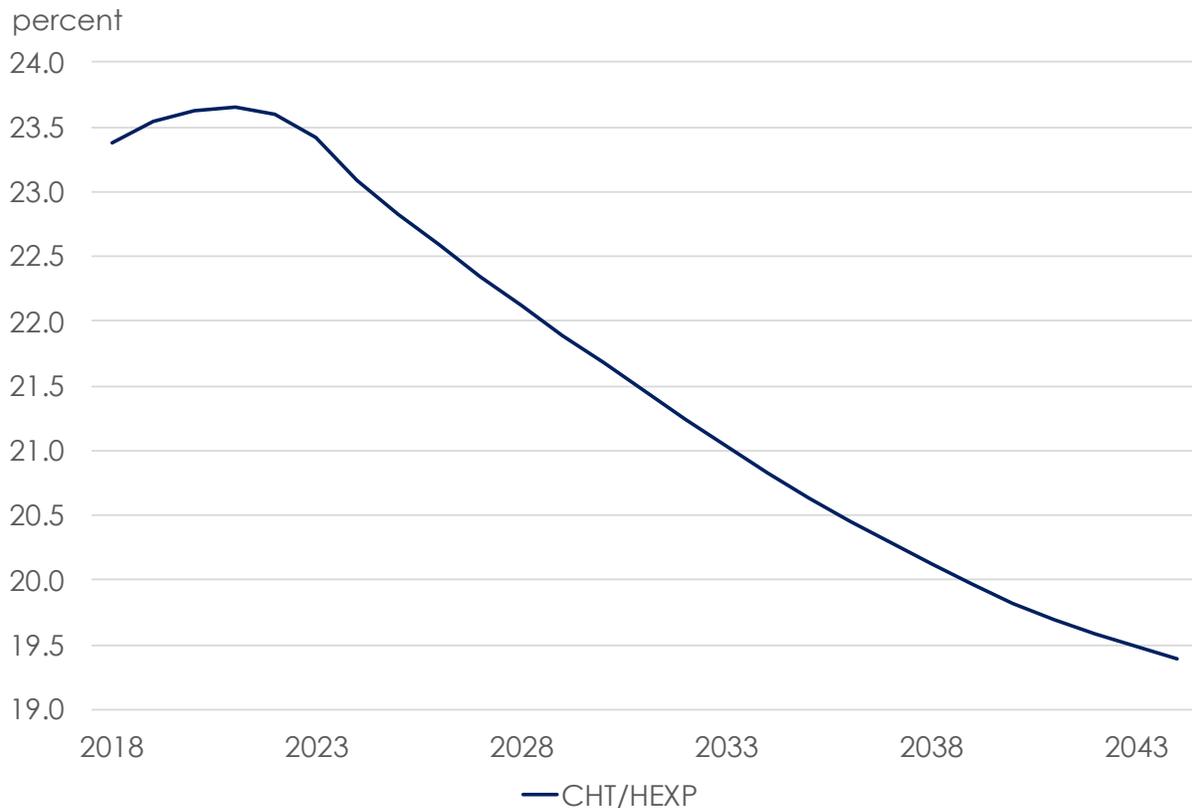


The Atlantic provinces and Quebec are expected to see the largest increases in health expenditure as a share of GDP, mainly because of their larger ageing problem. This also means that in these provinces, health care costs will likely assume a relatively larger share of government program spending over the projection period, which poses a significant fiscal challenge for their governments.

The fiscal challenge is expected to become more difficult since the Canada Health Transfer (CHT) will not keep pace with the rise in provincial health expenditures. From 2017, the CHT increases with a three-year moving average of nominal GDP growth, which is lower than the rate of growth in total provincial health expenditures (Chart 12).

Over the next five years, the share of the CHT in total health expenditures remains relatively stable, as most provincial-territorial governments plan to restrain health care spending. During the following 20 years, however, federal support for health care is forecast to decline relative to total health expenditures. This will force provincial-territorial governments to fund the shortfall from their own-source revenues, which will amount to just over \$20 billion by 2044.

Chart 12: Share of CHT in Total Health Expenditure



CONCLUSION

Health care spending is the largest single spending item in all provincial-territorial budgets. Historically, health care spending has grown faster than the rate of growth in gross domestic product, which is the broadest measure of the tax base. Demand for health care has been increasing because of the ageing of the population and advancements in medical technology. These trends are expected to continue in the future .

The estimates in this report show that over the next 25 years, health care expenditures will comprise an increasing portion of provincial-territorial GDP and budgets, which is not sustainable. The sub-national governments must find new ways of delivering health care that would be more efficient.

Under the Canada Health Act, provinces and territories must respect five principles: public administration, accessibility, comprehensiveness, universality and portability. These principles limit the options for making the health system more cost efficient. Given the challenge facing the governments, it may be time for a review of the Canada Health Act.

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