



CHT and the Federation

Institute of Fiscal Studies and Democracy
at the University of Ottawa



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This report was prepared under the supervision of Kevin Page, President & CEO of the Institute of Fiscal Studies and Democracy (IFSD).

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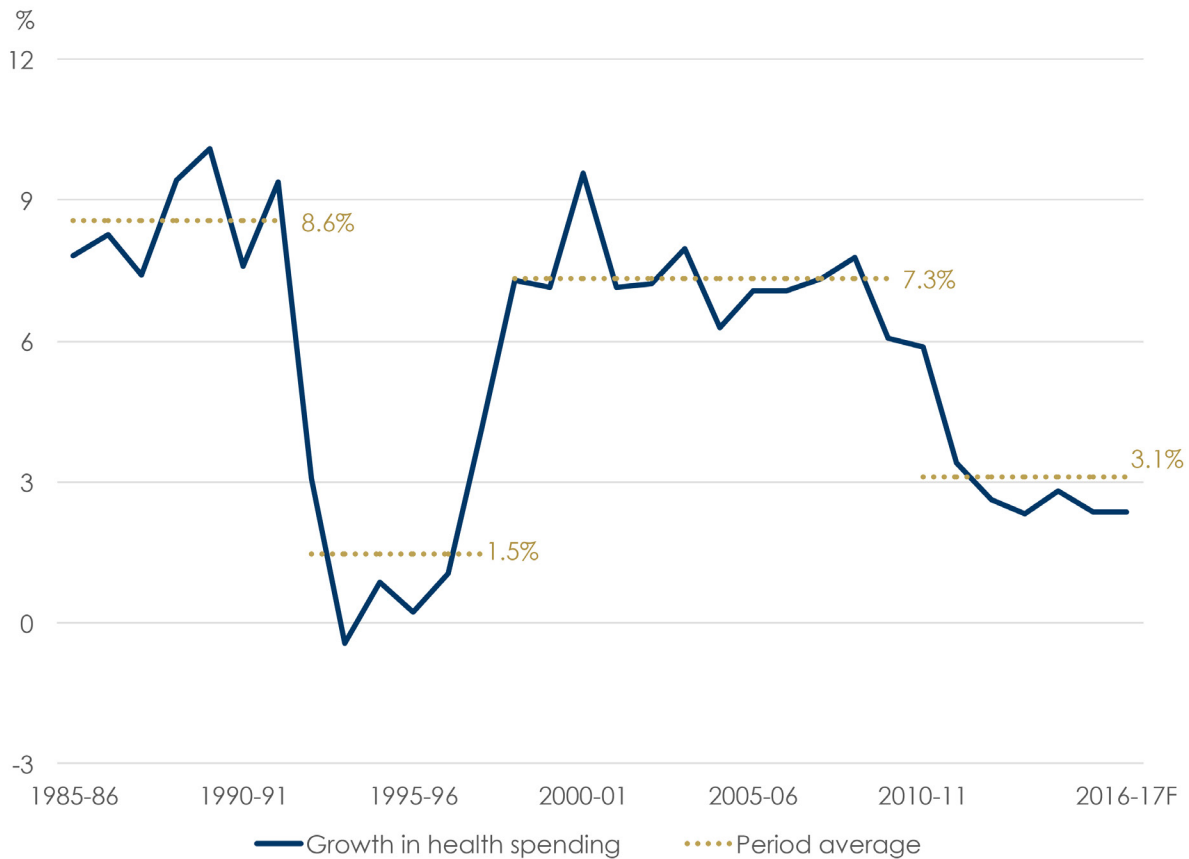
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Key Points

- Over the past 30 years, health care spending in Canada has followed a pattern of peaks and troughs tied to overall economic activity and fluctuations in federal funding (see Chart A). Throughout this period, health spending varied significantly across provinces and territories. This has led to notable differences between actual expenditures and the notional health care costs derived from the macroeconomic fundamentals of population growth, aging, real income growth, and inflation. For instance, jurisdictions such as Newfoundland & Labrador and Quebec have maintained health spending below where the underlying cost drivers would suggest it should be. Meanwhile, most other provinces have spent more than these notional health costs would have warranted.

Chart A: Annual Growth in Total Health Expenditures in Canada



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

- More recently, from 2010 to 2014, national health spending growth slowed relative to the previous decade, reaching an average annual pace of 3.4%. This pattern of weaker spending growth was observed in all provinces and territories. As such, it has allowed higher-spending provinces to close some of the gap between annual spending and notional health care costs. But, while restraint was exercised across most expenditure categories, capital investment has borne the brunt of the adjustment, contracting by an average of -1.3% annually. This was underpinned by declines in average annual capital spending in Prince Edward Island (-21.0%), Nova Scotia (-14.1%), Alberta (-11.5%), Manitoba (-5.3%), New Brunswick (-3.6%), Ontario (-3.1%), British Columbia (-1.7%), and Newfoundland & Labrador (-1.2%) over this period. The contraction in spending on capital is particularly concerning as some of these provinces continued to further restrain investment in 2015 and 2016, meaning these provinces may be just ‘kicking the can down the road’ by deferring investment today at a higher cost in the future. In contrast to these provinces, the territories have

managed to buck this trend, with Nunavut (45.9%), the Northwest Territories (24.1%), and the Yukon (17.1%) all experiencing double-digit average annual growth in capital expenditures from 2010 through 2014. Quebec (5.6%) and Saskatchewan (4.9%) also increased capital investment over this period.

- Looking to total health care costs on a per capita basis, Quebec, Ontario, and British Columbia are at the top of the leaderboard, and are the only provinces with spending below the national average (see Table A). At the other extreme are the territories, whose per capita health spending is multiples higher than the national average. But cost is only one consideration when evaluating health outcomes. Looking to health care system performance among the provinces and territories, Ontario and Quebec yet again lead the pack, while the territories continue to lag their provincial counterparts. The results are similar when comparing the health status of the respective provincial-territorial populations, with some minor reshuffling of the relative ranking, notably for British Columbia and New Brunswick.

Table A: Relative Ranking of Population Health Status, Health Care System Performance, and Per Capita Cost			
Ranking	Health Status (Conference Board)	Health Care System Performance (CIHI/IFSD)	Per Capita Cost (CIHI)
1	British Columbia	Ontario	Quebec
2	Ontario	Quebec	Ontario
3	Quebec	New Brunswick	British Columbia
4	Prince Edward Island	Prince Edward Island	New Brunswick
5	Alberta	Alberta	Nova Scotia
6	New Brunswick	British Columbia	Prince Edward Island
7	Nova Scotia	Newfoundland & Labrador	Manitoba
8	Manitoba	Manitoba	Saskatchewan
9	Saskatchewan	Nova Scotia	Alberta
10	Newfoundland & Labrador	Saskatchewan	Newfoundland & Labrador
11	Yukon	Yukon	Yukon
12	Northwest Territories	Nunavut	Northwest Territories
13	Nunavut	Northwest Territories	Nunavut

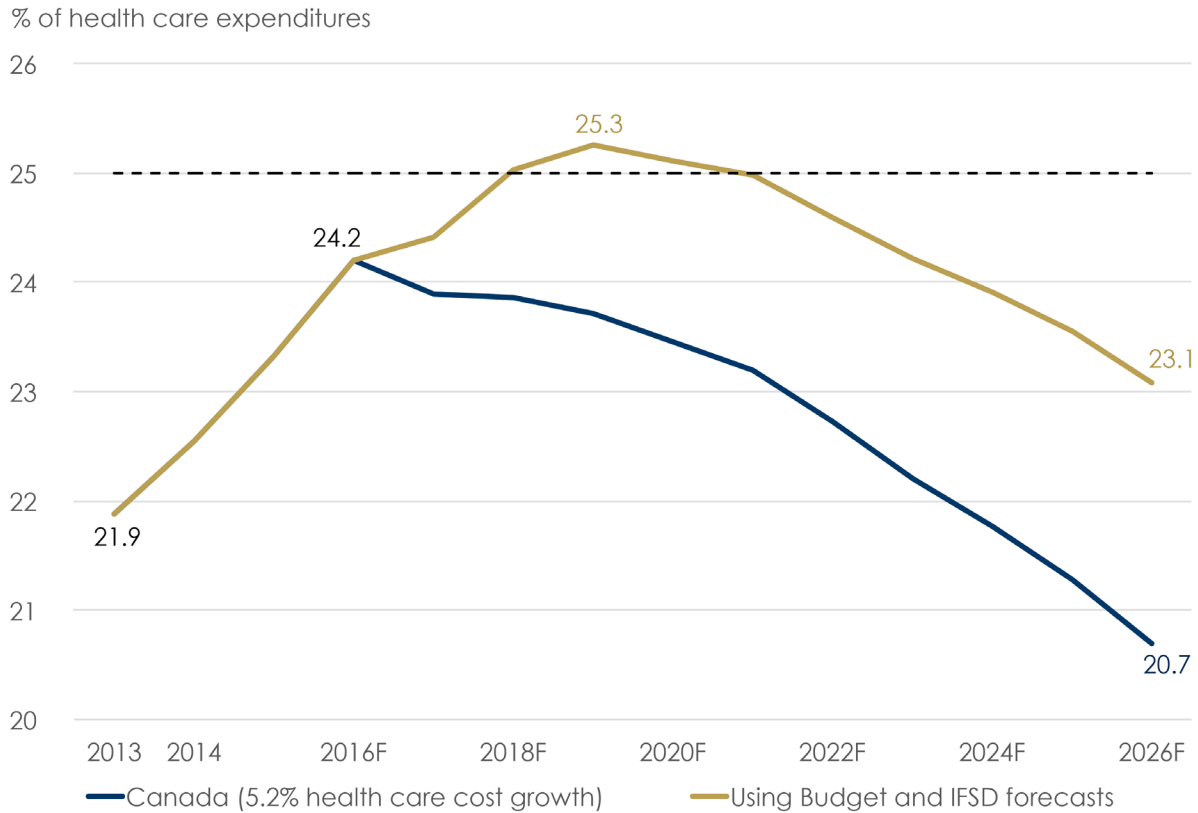
Source: Conference Board of Canada, Canadian Institute for Health Information (CIHI), Institute of Fiscal Studies and Democracy (IFSD).

Note: Ranking calculations of health care system performance using CIHI data were done by the IFSD, by assigning values to above average (1), average (0), or below average (-1) performance for 15 indicators and then ranking the totals. Per capita cost ranking is from lowest to highest using CIHI data from 2014.

- In 2015, the Council of the Federation called on the federal government to commit to maintaining a 25% participation in provincial health care expenditures (excluding transfers from the equalization program). In order to meet this request, the provinces and territories asked the federal government to commit to grow the Canadian Health Transfer (CHT) by 5.2% annually. Instead, the Government of Canada decided to move forward with an increase in the CHT tied to the pace of nominal GDP growth. An additional commitment of \$11.5 billion over ten years was promised for federal health priorities, namely mental health and home care, although much of this additional health funding is back-end loaded to the end of the 5-year budget planning horizon. To date, all provinces have agreed to this offer, with the exception of Manitoba.
- As a result of this agreement, the federal share of national health spending will rise over the next few years as fiscal restraint among provinces and territories continues. However, as the underlying cost pressures keep rising due to the macroeconomic cost drivers, the Institute of Fiscal Studies and Democracy (IFSD) is forecasting a gradual decline in the federal share of health spending (see Chart

B). Indeed, by 2026, the federal share of health expenditures will have fallen below its current level. And if health spending restraint is relaxed, the federal share will fall even further.

Chart B: Federal Share of Health Care Costs in Canada

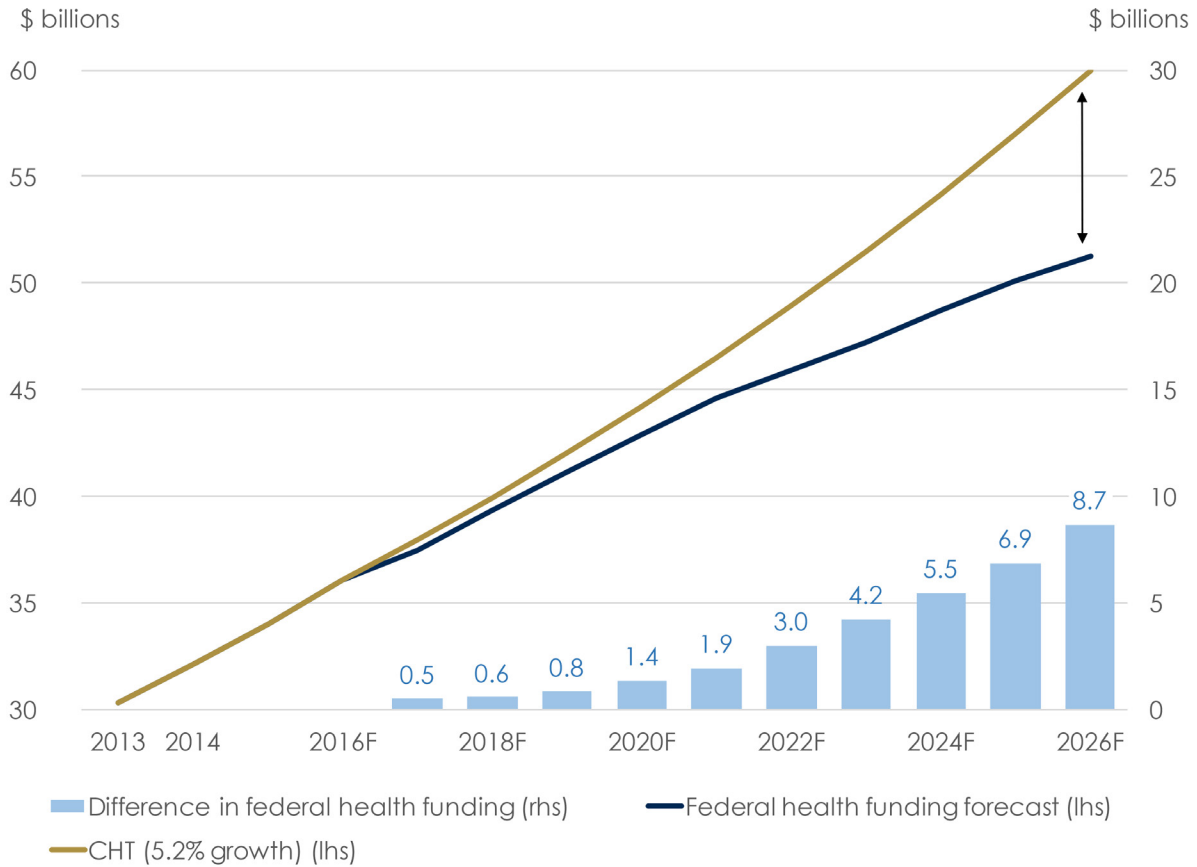


Source: Canadian Institute for Health Information, Council of the Federation, Conference Board of Canada, Institute of Fiscal Studies and Democracy, official budgetary estimates and forecasts.

Note: Years refer to fiscal years. Numbers include both public and private health expenditures.

- Notably, if federal health funding were to increase at an average annual pace of 5.2% over the next five fiscal years, the provinces and territories would receive an additional \$5.2 billion in total federal support for their health care systems (see Chart C). When examined over the next decade, the gap increases to a cumulative \$33.5 billion. As Canada’s most-populous province, Ontario will see the total amount of federal support for its health care system be the most negatively impacted as a consequence of accepting the federal government’s recent offer. The federal health funding gap for Ontario equates to a cumulative \$2.0 billion and \$12.9 billion in the 2017 to 2021 and 2017 to 2026 periods, respectively. The size of this gap is then followed, in descending order, by the provinces of Quebec, British Columbia, and Alberta.

Chart C: Federal Health Funding Forecast



Source: Finance Canada, Council of the Federation, Conference Board of Canada, Institute of Fiscal Studies and Democracy.

Note: Years refer to fiscal years. Numbers include both public and private health expenditures. The federal health funding forecast is comprised of the federal Budget 2017 forecast through the 2021–22 fiscal year, and IFSD forecasts thereafter.

- In summary, while additional federal funds dedicated to home care and mental health will provide modest support to provincial finances, this agreement is neither sufficient nor transformative in helping the provinces to meet the health care needs of their citizens. And given the back-end loaded nature of additional health funding, the more paramount concern is that health care reforms have been largely deferred to beyond the 2019 election.**

CHT and the Federation: Past, Present, and Future

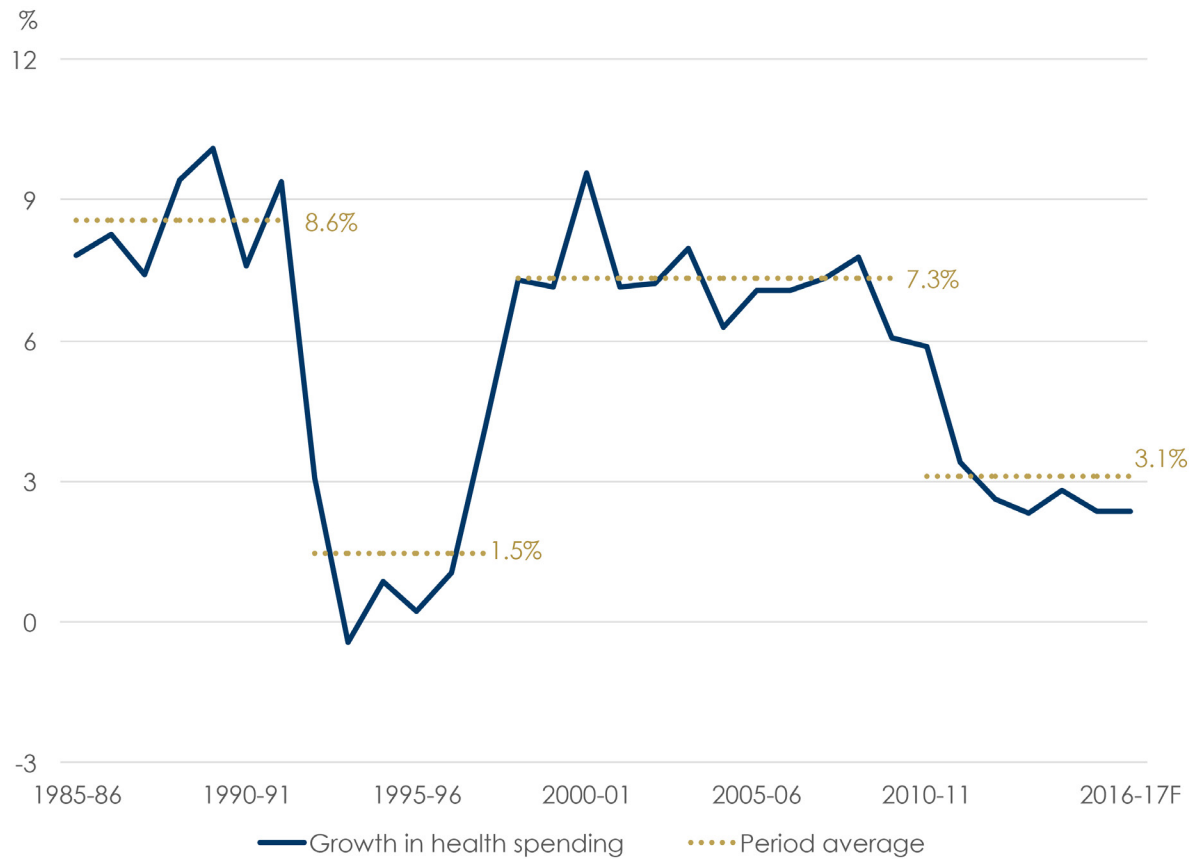
A great deal has been written about the state of Canada's health care system. Under the administration of the provinces and territories, there are dramatic differences in both the levels and drivers of health care costs as well as outcomes across jurisdictions. This, in part, reflects the diverse nature of the country, with the highly urban, large provinces at one extreme being subject to very different forces than the more remote territories at the other. As a result, the former regions have managed to keep costs comparatively low on a per capita basis, while the latter have not, and the remaining provinces are distributed in between.

In this report, the Institute of Fiscal Studies and Democracy (IFSD) will examine the differences in health care cost drivers across Canada, how these have evolved over time, and how they can be expected to change going forward. This analysis also looks at the role that federal health funding has played in supporting the health care mandate of the provinces and territories, and what that role can be expected to be in the future given the recent negotiations around the Canada Health Transfer (CHT). The approach used to do this analysis is very similar to that outlined in the IFSD's February 2017 report, [CHT Conundrum: Ontario Case Study](#) (Bartlett, 2017a). Further, more focused analysis is presented in the individual background notes for each of Canada's ten provinces which accompany this national overview. Similar notes on each of Canada's northern territories will be the subject of future analysis.

Historical Health Care Costs in Canada

The evolution of health spending in Canada has been subject to significant variability over time. However, some trends have emerged which allow patterns to be identified and insights to be drawn. Take, for instance, the growth in aggregate health spending over the past 30 years, as determined by the Canadian Institute for Health Information (CIHI). At a national level, this can be divided into four distinct periods: 1985–1991, 1992–1997, 1998–2009, and 2010–2016 (see Chart 1). And, notably, the pattern of health spending in each of the provinces and territories maps relatively well to this national trend. Note that this health spending analysis, and all of that which follows, is done using data from CIHI's *National Health Expenditure Trends, 1975 to 2016: Data Tables* (Canadian Institute for Health Information, 2016).

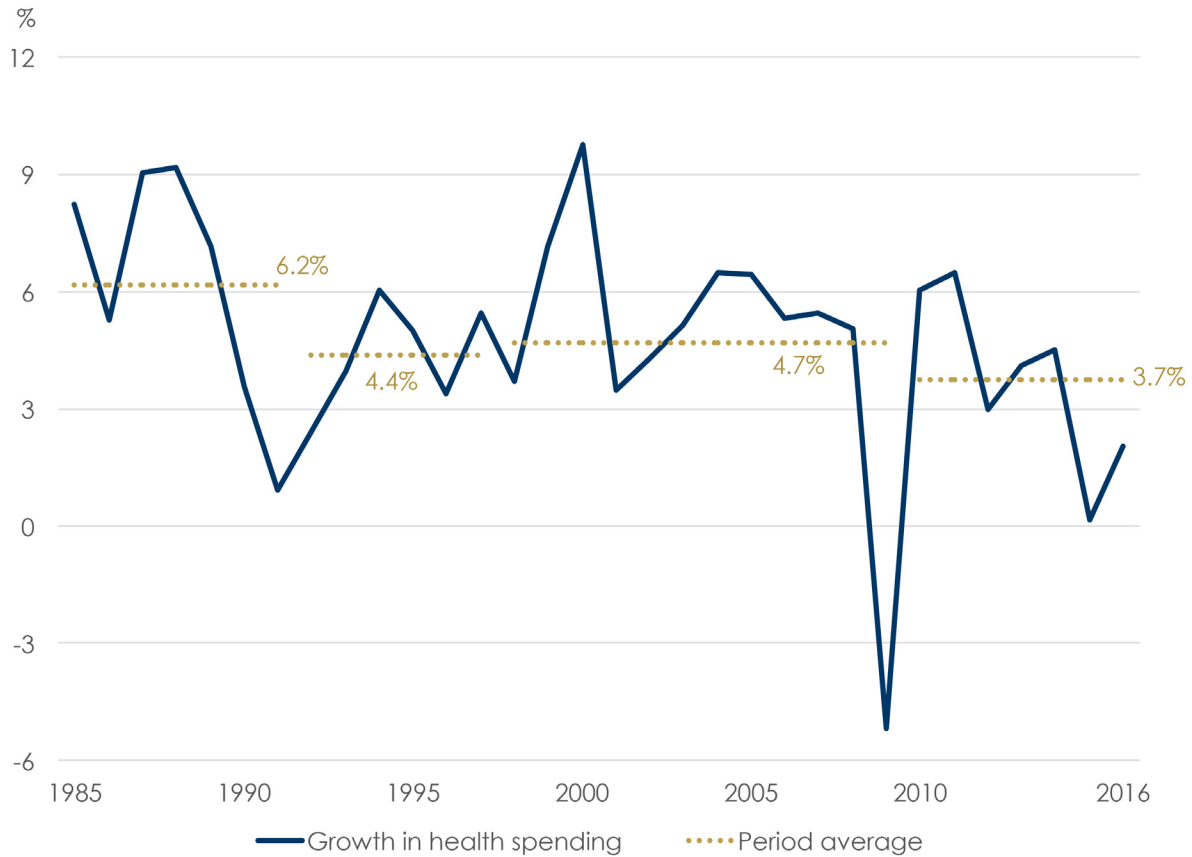
Chart 1: Annual Growth in Total Health Expenditures in Canada



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

These four time periods are important as they overlap with distinct periods of higher economic growth and federal transfers to the provinces in the case of the 1985–1991 and 1998–2009 periods, and the opposite circumstance in the case of the 1992–1997 and 2010–2016 periods. Take, for instance, average growth in nominal GDP—the broadest measure of the tax base—during these periods (see Chart 2). Measured on a per capita basis, it becomes clear that, as the growth in economic activity has ebbed and flowed, so have expenditures on health care.

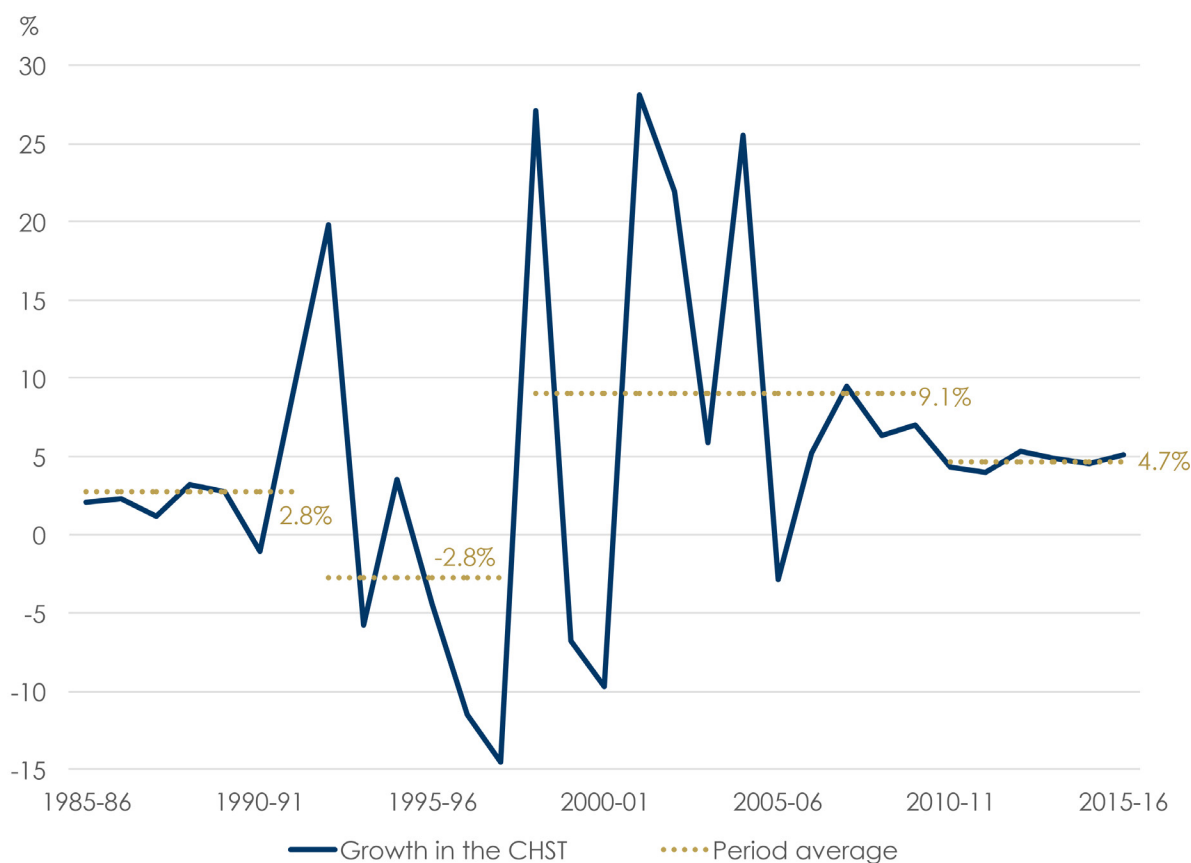
Chart 2: Annual Nominal GDP Growth in Canada



Source: Statistics Canada, Haver Analytics, Institute of Fiscal Studies and Democracy.

Unfortunately, historical data on federal health funding are more difficult to tease out from the available information than is nominal GDP growth. This is because, prior to April 2004, the CHT and Canada Social Transfer (CST) were lumped together in the Canada Health and Social Transfer (CHST) (Government of Canada, 2016a). But, even then, the CHT is only presented separately in the Public Accounts of Canada starting in the 2008–09 fiscal year (Government of Canada, 2009 to 2016b). Further, the CHST was introduced in the 1996–97 fiscal year to replace the Canada Assistance Plan, education support, and insurance and medical care, collectively. For this reason, Chart 3 presents the growth in the CHST over the past 30 years, estimated as the sum of the Canada Assistance Plan, education support, and insurance and medical care prior to fiscal 1996–97. As can be observed, the periods of high and low average growth in the CHST broadly correspond to the four distinct periods of health expenditure growth previously identified.

Chart 3: Annual Growth in the Canada Health & Social Transfer



Source: Finance Canada, Institute of Fiscal Studies and Democracy.

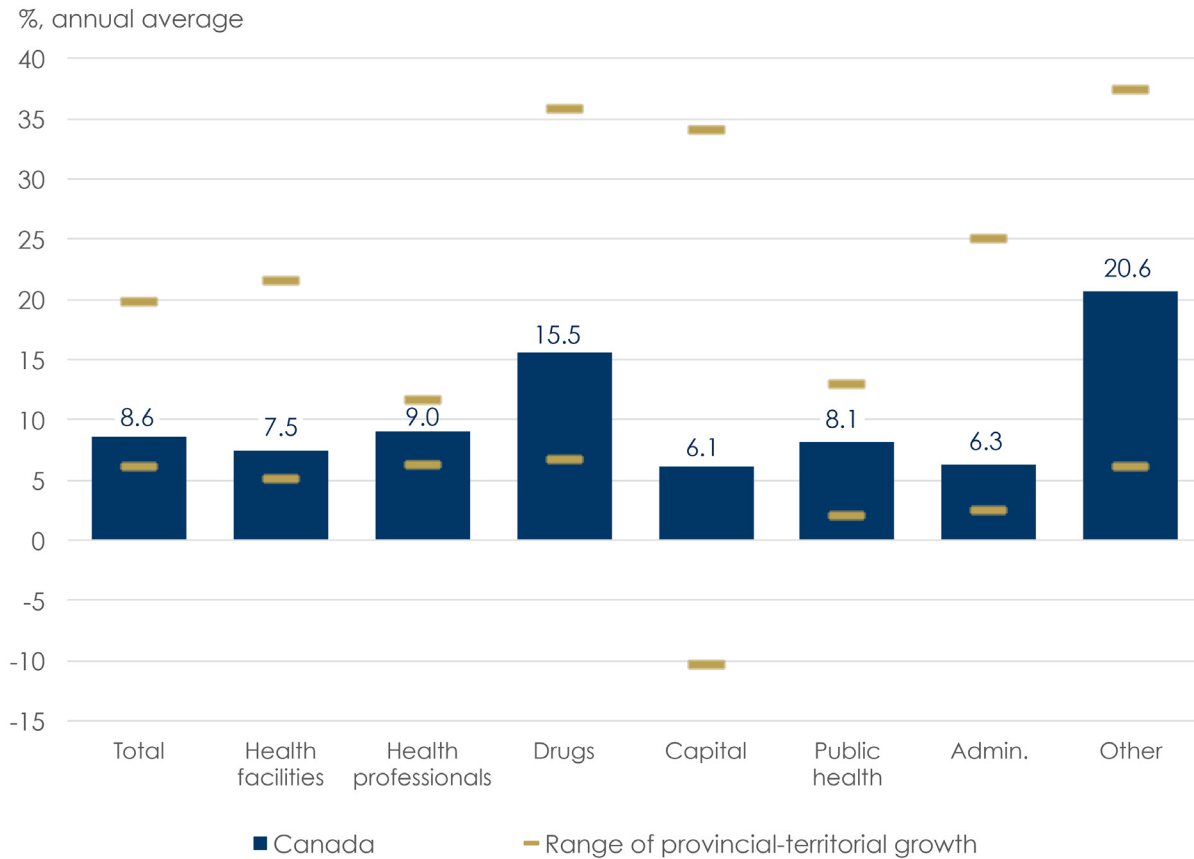
But looking exclusively at aggregate CHST data is little better than judging a book solely by its cover. Unfortunately, the data can't be disaggregated to clearly identify the specific level of federal funding beyond the past decade. A deeper dive into provincial-territorial budgets and Public Accounts is therefore warranted, although that goes beyond the scope of this analysis. That said, disaggregated data around the drivers of health care costs at the national and provincial-territorial levels are readily available from CIHI. These data are also compiled in the same manner across jurisdictions, making comparisons possible.

To begin, the 1980s were a period of significant health spending growth (see Chart 4). From 1985 through 1991, total health expenditures grew at an average annual pace of 8.6% nationally, spurred by notable advances in other health spending (20.6%) and drug costs (15.5%).¹ All other spending categories increased at a healthy, albeit more modest, pace. But scratching beneath the surface, the stronger pace of health spending was not distributed equally across the country. While all provinces and territories saw relatively strong average annual growth in health spending over this period, both the advance in total spending and the drivers of this growth differed significantly between jurisdictions. For instance, the fastest pace of average provincial health care cost growth over this period was in Ontario (10.8%), which was surpassed only by the Northwest Territories (19.8%). Given that Ontario is the province with the largest population and economy, its leading cost drivers were the same as those at the national level. In contrast, the Northwest Territories saw double-digit growth in all expenditure categories, with the exception of capital investments and spending on public health.

¹ At the aggregate level, 'other health spending' includes expenditures on home care, medical transportation (ambulances), hearing aids, other appliances and prostheses, health research and miscellaneous health care (Canadian Institute for Health Information, 2016).

Meanwhile, Alberta’s health spending grew at the slowest average annual pace in the country, at 6.1%, which becomes more understandable when put in the context of the oil price shock which resulted in lower revenues for the province at this time.

Chart 4: Growth in Health Spending by Category (1985 to 1991)

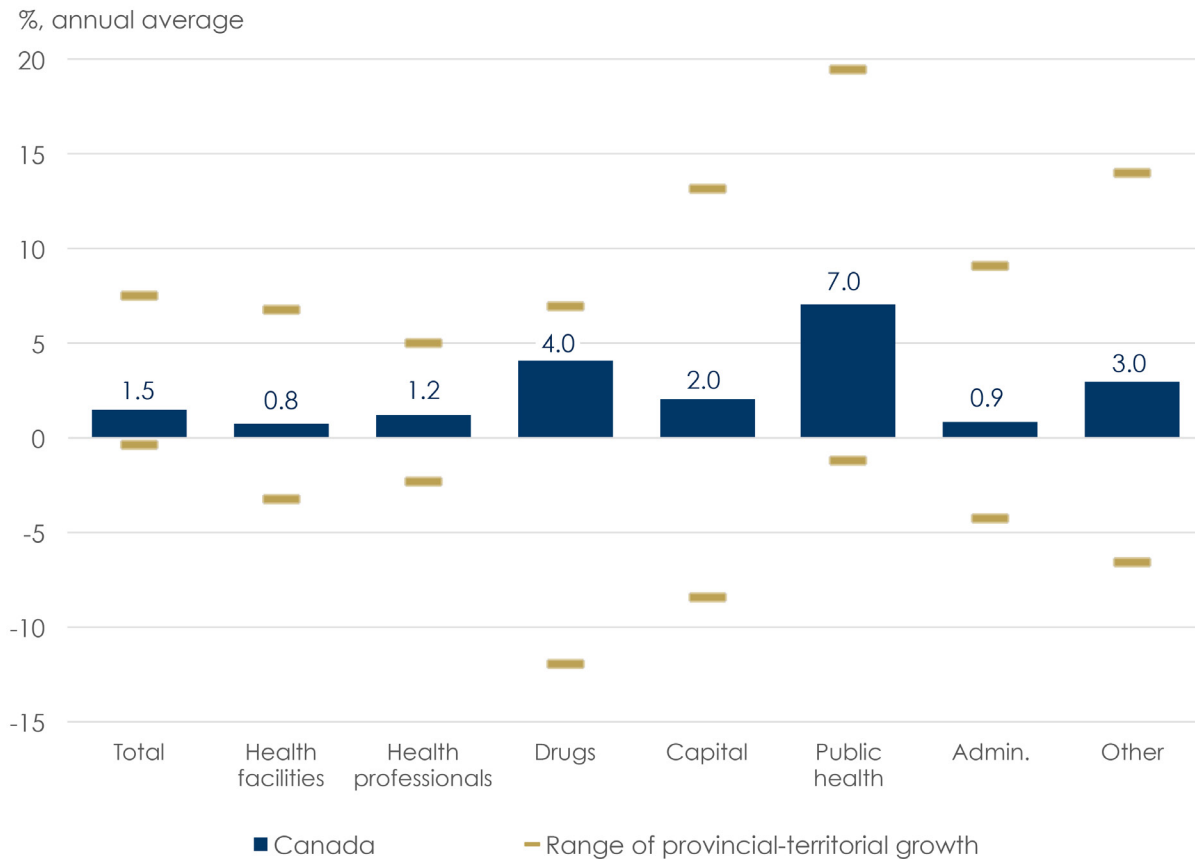


Source: Canadian Institute for Health Information, Institute of Fiscal Studies and Democracy.

Note: Years refer to fiscal years. Health facilities include hospitals and other institutions. Health professionals include physicians and other professionals. ‘Other health spending’ includes expenditures on home care, medical transportation (ambulances), hearing aids, other appliances and prostheses, health research and miscellaneous health care.

Then came the more austere years of the 1990s, when economic activity and federal transfers went into reverse (see Chart 5). As a result, national health spending slowed dramatically, and no province or territory was spared. Total health spending in Canada slowed from an average annual pace of 8.6% to 1.5% from 1992 through 1997. This was largely the result of growth in spending on health facilities (0.8%), administration (0.9%), and health professionals (1.2%) slowing to a crawl, although expenditures on public health (7.0%) continued at a solid clip. Drilling down into the provinces and territories, the Northwest Territories (-0.4%) experienced the heaviest restraint, with Ontario (0.6%) not far behind. Health spending in Quebec (1.0%) and Saskatchewan (1.0%) also showed marked sobriety over this period, while the Yukon (7.5%) and British Columbia (4.6%) managed to buck the trend, at least in a relative sense.

Chart 5: Growth in Health Spending by Category (1992 to 1997)

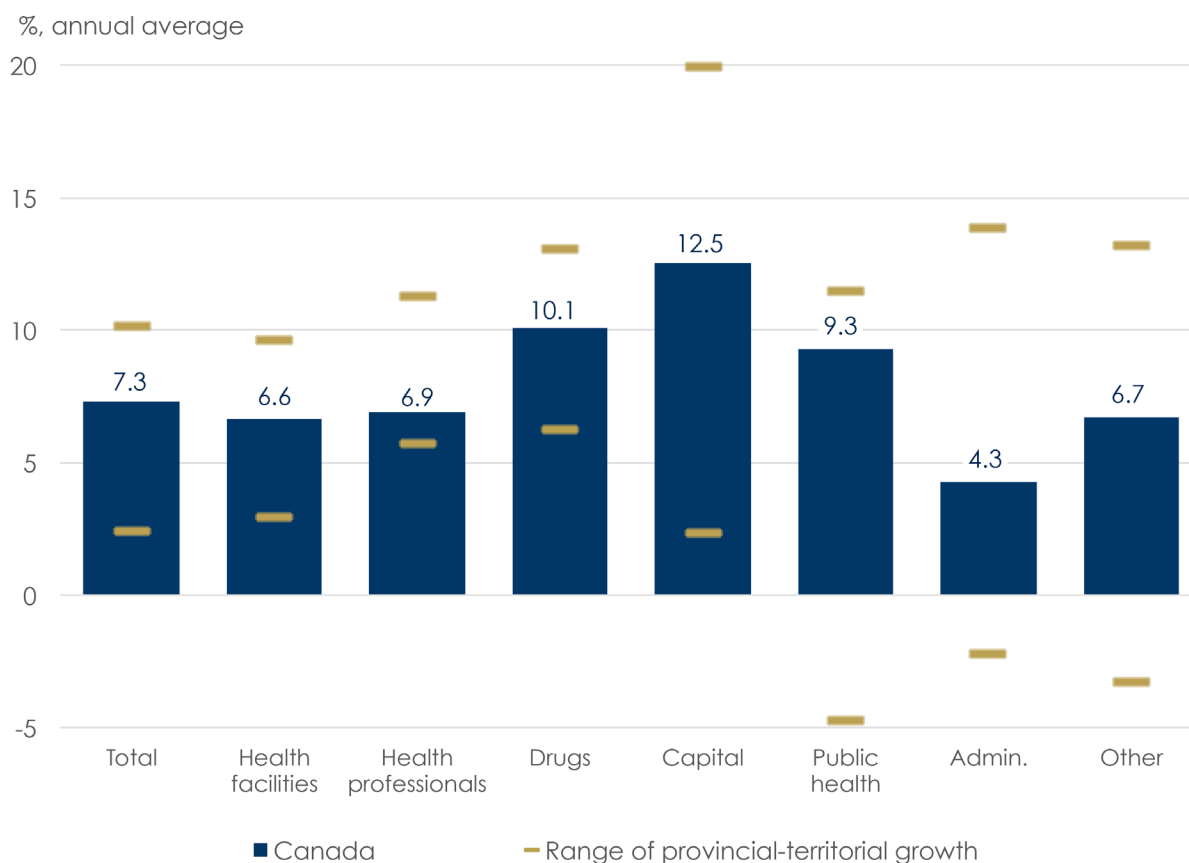


Source: Canadian Institute for Health Information, Institute of Fiscal Studies and Democracy.

Note: Years refer to fiscal years. Health facilities include hospitals and other institutions. Health professionals include physicians and other professionals. 'Other health spending' includes expenditures on home care, medical transportation (ambulances), hearing aids, other appliances and prostheses, health research and miscellaneous health care.

Fast forward to the late-1990s and early-2000s, and spending on health care resumed with gusto (see Chart 6). Nationally, health expenditures hit an average annual clip of 7.3%, bolstered by double-digit advances in capital investment (12.5%) and spending on drugs (10.1%). At the provincial-territorial level, the pace of average annual health spending in Alberta stands out as being well ahead of the pack at 10.8%, due to double-digit gains in spending on capital investment, drugs, and health professionals. At the same time, British Columbia (6.1%) and Nova Scotia (6.2%) brought up the rear, held back by restraint in spending on administration in the former province and public health in the latter.

Chart 6: Growth in Health Spending by Category (1998 to 2009)



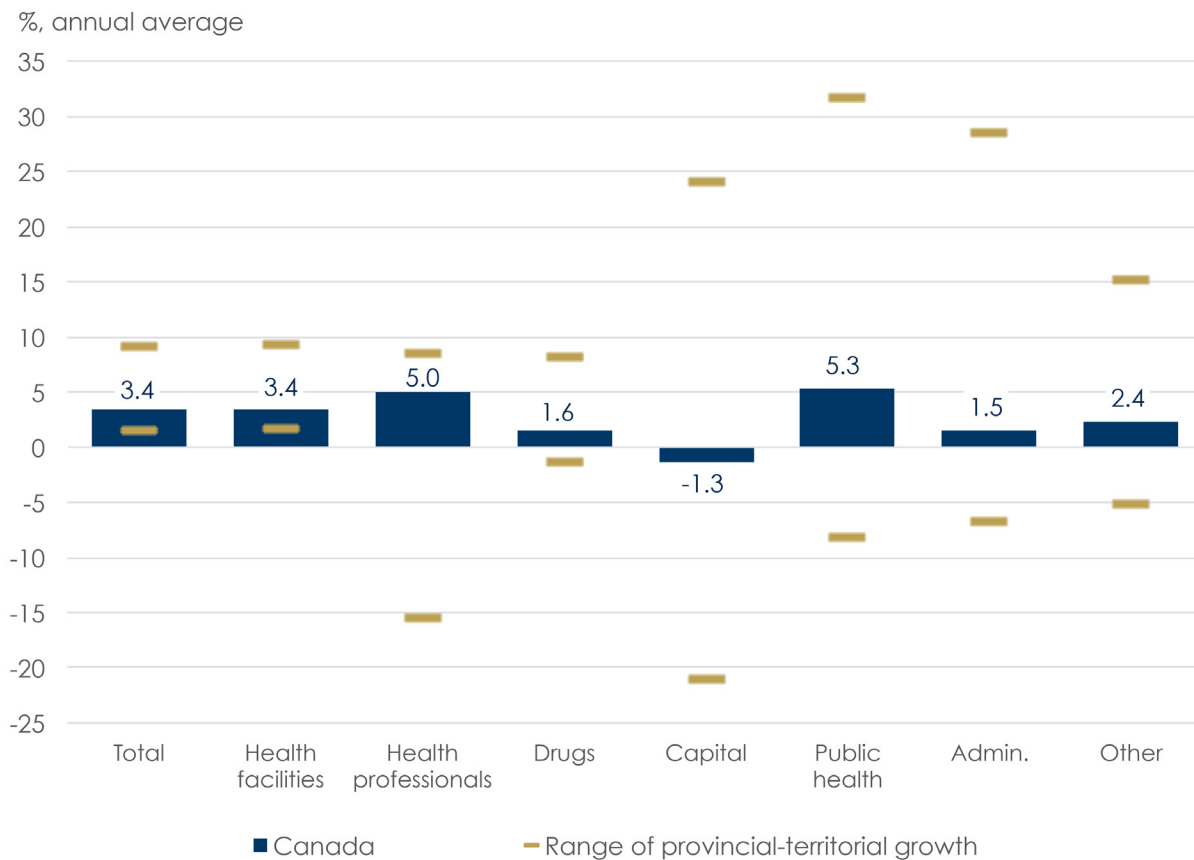
Source: Canadian Institute for Health Information, Institute of Fiscal Studies and Democracy.

Note: Years refer to fiscal years. Health facilities include hospitals and other institutions. Health professionals include physicians and other professionals. ‘Other health spending’ includes expenditures on home care, medical transportation (ambulances), hearing aids, other appliances and prostheses, health research and miscellaneous health care.

And then came the 2008–09 recession, and the resulting weakness in economic activity and revenue growth. Governments had to find savings, and they found some of those savings in health spending—the largest expenditure category for provincial-territorial governments in Canada.² Growth in health care costs slowed to an average annual pace of 3.4% nationally from 2010 through 2014, as a result of across the board restraint but particularly due to a -1.3% contraction in capital investment (see Chart 7). This was underpinned by declines in average annual capital spending in Prince Edward Island (-21.0%), Nova Scotia (-14.1%), Alberta (-11.5%), Manitoba (-5.3%), New Brunswick (-3.6%), Ontario (-3.1%), British Columbia (-1.7%), and Newfoundland & Labrador (-1.2%). The contraction in spending on capital is particularly concerning as deferring investment means these provinces may be just ‘kicking the can down the road’ at a higher cost in the future. In contrast to these provinces, the territories have managed to buck this trend, with Nunavut (45.9%), the Northwest Territories (24.1%), and the Yukon (17.1%) all experiencing double-digit growth in capital expenditures from 2010 through 2014. This supported the territories having had the highest growth in total health expenditures. Quebec (5.6%) and Saskatchewan (4.9%) also increased capital investment over this period. Meanwhile, Alberta (5.5%), Saskatchewan (4.5%), and Manitoba (4.0%) experienced the highest average annual growth in health care costs among the provinces.

² National level health expenditure data by category are only available through the 2014–15 fiscal year due to the exclusion of Quebec. “The ministère de la Santé et des Services sociaux du Québec (MSSS) requested that the Canadian Institute for Health Information exclude the Quebec provincial government health spending forecasts, by category, for 2015 and 2016, because adjustments will need to be made to the forecasting methodology in light of a major restructuring of the Quebec health and social services network as of April 1, 2015. Consequently, health expenditures by category for Canada are not available for 2015 and 2016.” (Canadian Institute of Health Information, 2016)

Chart 7: Growth in Health Spending by Category (2010 to 2014)



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

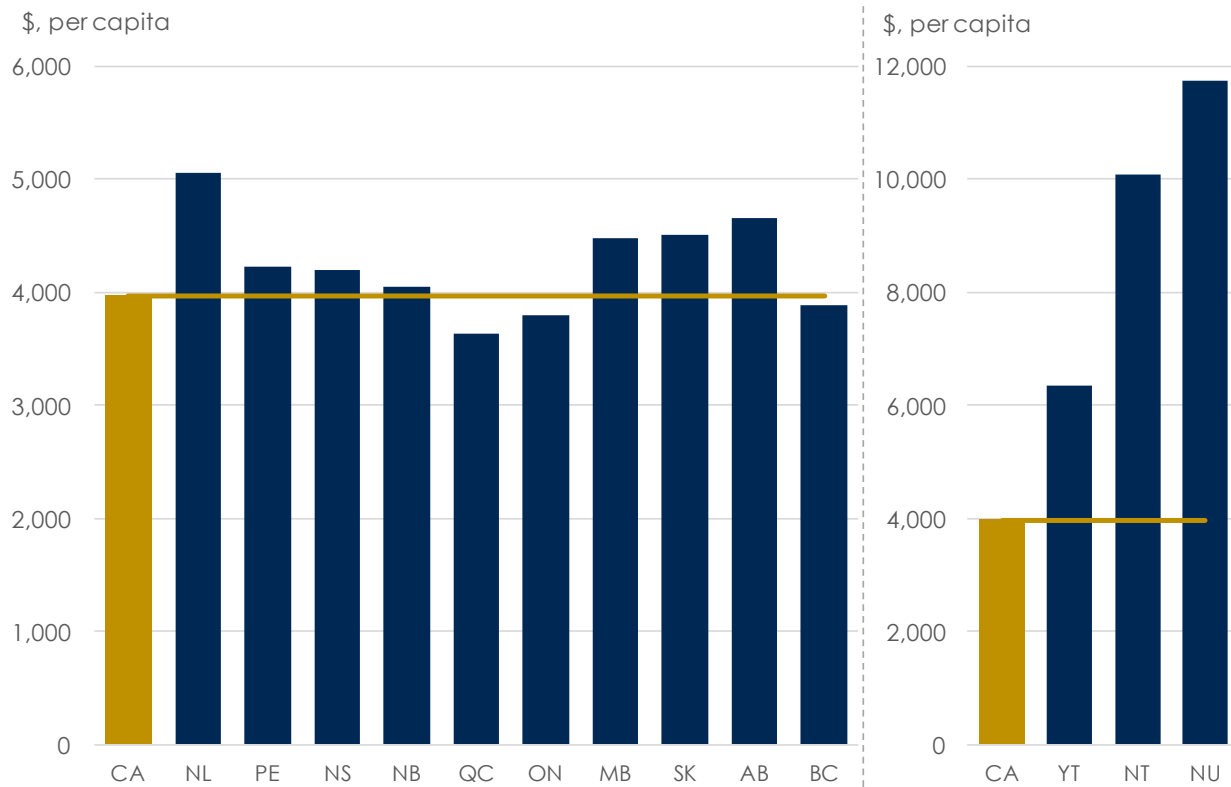
Note: Years refer to fiscal years. Health facilities include hospitals and other institutions. Health professionals include physicians and other professionals. 'Other health spending' includes expenditures on home care, medical transportation (ambulances), hearing aids, other appliances and prostheses, health research and miscellaneous health care.

Current State of Play of Health Spending

While average annual growth in health spending has been more modest since the 2008–09 recession than in prior years, this masks the trend deceleration in spending over this period. Indeed, at 2.3%, the 2016–17 fiscal year is in line with fiscal 2013–14 for the slowest pace of national health care expenditure growth since the 1996–97 fiscal year. Despite restraint has been exercised across the board, among the leading causes of the sharply-slower pace of health expenditure has been capital investment, which has continued to contract in some provinces. And, if provincial budget forecasts are to be believed, weak aggregate health spending growth should continue over the next few years.

Drilling down to health spending on a per capita basis, the most recent year of data (2014) reveals that health spending is highly variable across the country (see Chart 8). Only the highly populated and urban provinces of Quebec, Ontario, and British Columbia have health spending below the average (from lowest to highest per capita cost). The Maritime provinces of New Brunswick, Nova Scotia, and Prince Edward Island (PEI) also have per capita health care costs that are roughly around the average. In contrast, Newfoundland & Labrador has the highest per capita cost of health care of any province in Canada. Alberta takes the second-place spot, despite having a very young population, with Saskatchewan and Manitoba not far behind. Finally, the remote Canadian territories are subject to the highest per capita cost of health care of any region in Canada by a wide margin.

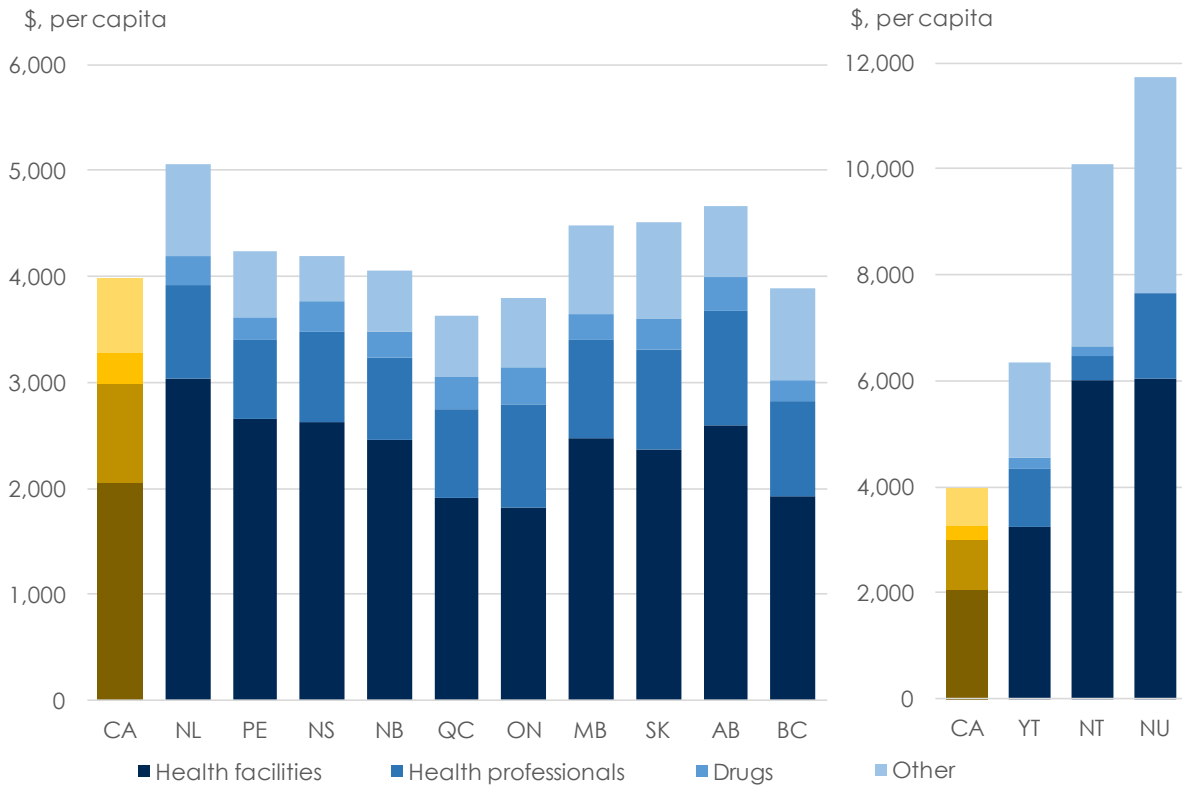
Chart 8: Per Capita Health Cost by Region (2014)



Source: Canadian Institute for Health Information.

Looking more closely at the territories, the per capita cost drivers are consistent across these remote regions. Spending on health facilities is the main cost driver, as is the case in every province and territory (see Chart 9). However, the territories are unique in that they have very high other costs—in this instance, “other costs” are defined as those costs that aren’t attributed to health facilities, health professionals, or drugs—on a per capita basis. These higher costs are very likely related to the additional cost of providing health care to small populations in remote areas, at least in part, although that aspect of health spending is beyond the scope of this analysis.

Chart 9: Contribution to Per Capita Health Cost by Region (2014)

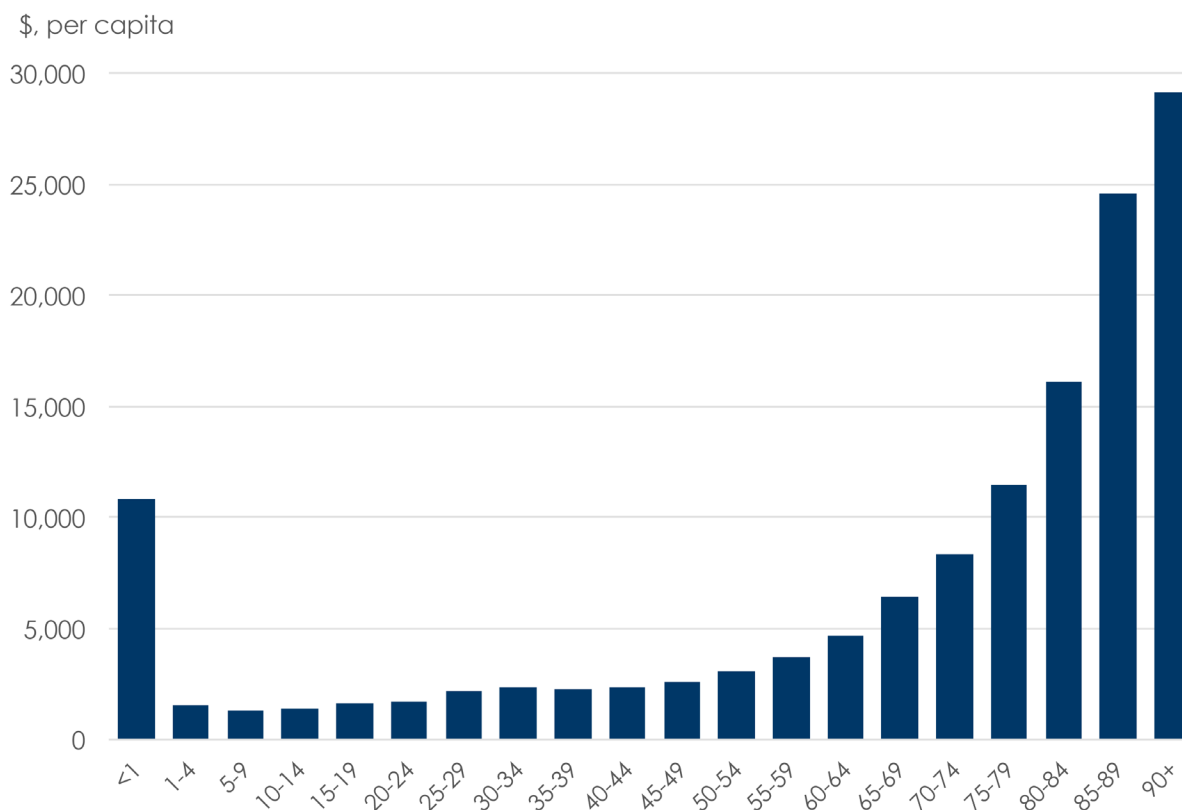


Source: Canadian Institute for Health Information.

Note: Health facilities include hospitals and other institutions. Health professionals include physicians and other professionals.

Finally, from an age perspective, the differences in per capita costs are equally stark. While costs in the first year of life stand out as being high, on average, costs tend to remain relatively low through early- and mid-life until about age 45, at which time they begin to increase nearly exponentially (see Chart 10). For instance, in 2014, the per capita cost of health care for a person aged 45 to 49 averaged about \$2,600. For someone ten years older, this average cost increases to \$3,700. Then, for a person aged 65–69, the cost increases to about \$6,400, rising to \$11,500 for someone aged 75–79, and to \$24,600 for someone in their late 80s. And for someone aged 90 or older, the average per capita cost increases further still to \$29,200. As such, the aging of the Canadian population has been an important driver of health care costs recently, and will continue to be instrumental in pushing costs higher in the future. As an aside, population characteristics other than aging that have also been identified by CIHI as being important determinants of health care cost. These include the sizes of a jurisdiction’s rural, immigrant, and Aboriginal populations, as well as the total population size. Further investigation of these determinants is an important area of future research, but is beyond the scope of this analysis.

Chart 10: Per Capita Health Care Cost by Age in Canada (2014)



Source: Canadian Institute for Health Information.

But costs cannot be evaluated in isolation. Also pivotal to the discussion of provincial-territorial health spending are outcomes. And when it comes to the measurement of outcomes, no one organization has a monopoly on indicators. Instead, evaluating performance requires an examination of multiple indicators from multiple sources, and then juxtaposing these with the costs associated with achieving these outcomes.

The perennial touchstone for information on health system performance in Canada is the Canadian Institute for Health Information. CIHI helpfully publishes comparable information across provinces and territories for a variety of indicators representing five themes which Canadians told CIHI were important to them. These five themes include access, quality of care, spending, health promotion and disease prevention, and health outcomes (Canadian Institute for Health Information, 2014). The IFSD then evaluates the relative performance of 15 indicators across these themes for each province and territory relative to the Canadian average, and aggregates them to determine an overall performance measure for each jurisdiction. This analysis suggests that, in the context of health care system performance, Ontario is the top-performing jurisdiction in Canada, followed closely by Quebec (see Table 1). These are also the provinces with the lowest per capita cost of health care, as well as being the largest and most urban jurisdictions. Ontario and Quebec are followed at a relative distance by New Brunswick and Prince Edward Island, and then by Alberta and British Columbia. At the back of the pack are the three territories, which each spend more per capita than any of the provinces while also being subject to significant cost pressures not present in more populous and urban provinces.

Table 1: Heat Map of CIHI Health Care Performance Indicators and Provincial-Territorial Ranking

Theme	Health Care Performance Indicator	ON	QC	NB	PE	AB	BC	NL	MB	NS	SK	YT	NU	NT
Access	People who report they have a regular medical doctor (2014)	Green	Red	Green	Green	Red	Yellow	Green	Yellow	Green	Red	Red	Red	Red
	Patients waiting longer than 3 months to see a specialist (2013)	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
	Patients receiving cancer radiation treatment within 4 weeks (2015-2016)	Green	Green	Green	Yellow	Green	Red	Green	Green	Red	Yellow	Yellow	Yellow	Yellow
	Patients receiving a hip or knee replacement within 6 months (2015-2016)	Green	Green	Red	Green	Green	Red	Green	Green	Red	Green	Green	Green	Green
Quality of Care	Patients urgently readmitted to hospital within 30 days of discharge (2014-2015)	Yellow	Yellow	Yellow	Yellow	Yellow	Red	Green	Green	Green	Red	Yellow	Yellow	Yellow
	Comparison of hospital deaths to the average Canadian experience (2015-2016)	Green	Green	Yellow	Yellow	Yellow	Yellow	Red	Red	Red	Green	Green	Green	Green
	Mental health patients with at least 3 hospital stays in a year (2013-2014)	Yellow	Yellow	Yellow	Yellow	Green	Red	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Yellow
	Residents on antipsychotic drugs in long-term care homes without a diagnosis of psychosis (2015-2016)	Green	Green	Green	Green	Green	Red	Red	Red	Red	Red	Red	Yellow	Yellow
Spending	Government spending per person after adjusting for differences in population age and sex among provinces/territories (2013)	Green	Green	Green	Red	Red	Green	Red	Red	Red	Red	Red	Red	Red
	Cost of a standard hospital stay (2014-2015)	Green	Green	Green	Green	Red	Red	Red	Red	Red	Red	Red	Red	Red
	Adults considered obese based on self-reported height and weight (2014)	Yellow	Green	Red	Yellow	Yellow	Green	Green	Red	Red	Red	Yellow	Yellow	Red
Health Promotion and Disease Prevention	Daily or occasional smokers (2014)	Green	Red	Red	Yellow	Yellow	Green	Red	Yellow	Red	Red	Red	Red	Red
	Average years a Canadian is expected to live (2007 to 2009)	Green	Green	Green	Green	Red	Green	Green	Green	Green	Green	Green	Green	Green
	Deaths per 100,000 that were potentially avoidable with better prevention or care (2010 to 2012)	Green	Yellow	Red	Yellow	Red	Green	Green	Red	Red	Red	Red	Red	Red
Health Outcomes	Children vulnerable in areas of early development	Green	Green	Yellow	Green	Red	Red	Green	Red	Yellow	Red	Red	Red	Red
	OVERALL RANKING	Green	Green	Yellow	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow

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

Note: Ranking calculations of health care system performance using CIHI data were done by the IFSD, by assigning values to above average (1), average (0), or below average (-1) performance for 15 indicators and then ranking the totals. Green refers to an above-average value, yellow refers to an average value, and red refers to a below-average value. Per capita cost ranking is from lowest to highest.

Providing a useful comparison to the work of CIHI is that of the Conference Board of Canada, which publishes its own evaluation of the health status of Canadians by region and then compares that with the health status of Canada's peers around the world (Conference Board of Canada, 2015). To do this, the Conference Board examines 10 indicators: life expectancy, premature mortality, infant mortality, self-reported health status, mortality due to cancer, mortality due to heart disease and stroke, mortality due to respiratory disease, mortality due to diabetes, mortality due to diseases of the nervous system, and suicides. Assigning a letter grade to each of these indicators, the Conference Board then aggregates them to determine an overall letter grade for health status by region. Unsurprisingly, much like the results found when using CIHI's data, the Yukon, Northwest Territories, and Nunavut each receive the lowest letter grade—a *D minus* (see Table 2). Newfoundland & Labrador received the same grade, while Nova Scotia, Manitoba, and Saskatchewan all squeaked by with *Ds*.

Health Care Performance Indicator	BC	ON	QC	PE	AB	NB	NS	MB	SK	NL	YT	NT	NU
Life expectancy (2011)	A	A	B	C	B	B	C	C	D	C	D-	D-	D-
Premature mortality (2011)	A	A	A	B	B	B	B	D	D	B	C	D-	D-
Infant mortality (2009–11)	B	C	C	B	D	B	C	D-	D-	D	C	D-	D-
Self-reported health (2012 or most recent year)	A	A+	A+	A	A+	A	A	A+	A	A	A	A+	A
Self-reported mental health (2013)	B	A	A	B	A	B	B	A	A	A	B	B	D
Mortality due to cancer (2009–11)	A	B	C	C	A	C	D	C	B	D	D-	D-	D-
Mortality due to heart disease or stroke (2009–11)	B	B	A	C	C	B	B	B	B	C	B	C	A
Mortality due to respiratory diseases (2009–11)	B	B	B	C	B	C	C	B	B	C	D	D	D-
Mortality due to diabetes (2009–11)	C	C	B	B	B	C	C	D	D	D-	D-	A	A+
Mortality due to nervous system diseases (2009–11)	B	B	B	B	B	B	B	B	B	B	B	A	A
Suicides (2009–11)	B	A	B	A	B	B	B	B	C	B	A	C	D-
Overall Ranking	A	B	B	B	B	C	D	D	D	D-	D-	D-	D-

Source: Conference Board of Canada.

Note: The Conference Board of Canada methodology is available at <http://www.conferenceboard.ca/hcp/provincial/health.aspx>.

While the six leading provinces were the same using both CIHI and Conference Board of Canada indicators, the ranking is different depending on which data one uses and how they are used. For instance, British Columbia is the only province that receives an *A* from the Conference Board, but its comparatively poor outcomes in CIHI themes of ‘safety’ and ‘appropriateness and effectiveness’ suggest that this may be too generous an assessment. A similarly large difference can be observed in New Brunswick, which was ranked third by the IFSD using CIHI data but only earned a *C* from the Conference Board. Table 3 illustrates the differential ordering of the provinces and territories by health status and health care system performance, as determined by the Conference Board and the IFSD using CIHI data, respectively, as well as by the 2014 per capita cost of health care from CIHI.

Table 3: Relative Ranking of Population Health Status, Health Care System Performance, and Per Capita Cost

Ranking	Health Status (Conference Board)	Health Care System Performance (CIHI/IFSD)	Per Capita Cost (CIHI)
1	British Columbia	Ontario	Quebec
2	Ontario	Quebec	Ontario
3	Quebec	New Brunswick	British Columbia
4	Prince Edward Island	Prince Edward Island	New Brunswick
5	Alberta	Alberta	Nova Scotia
6	New Brunswick	British Columbia	Prince Edward Island
7	Nova Scotia	Newfoundland & Labrador	Manitoba
8	Manitoba	Manitoba	Saskatchewan
9	Saskatchewan	Nova Scotia	Alberta
10	Newfoundland & Labrador	Saskatchewan	Newfoundland & Labrador
11	Yukon	Yukon	Yukon
12	Northwest Territories	Nunavut	Northwest Territories
13	Nunavut	Northwest Territories	Nunavut

Source: Conference Board of Canada, Canadian Institute for Health Information (CIHI), Institute of Fiscal Studies and Democracy (IFSD).

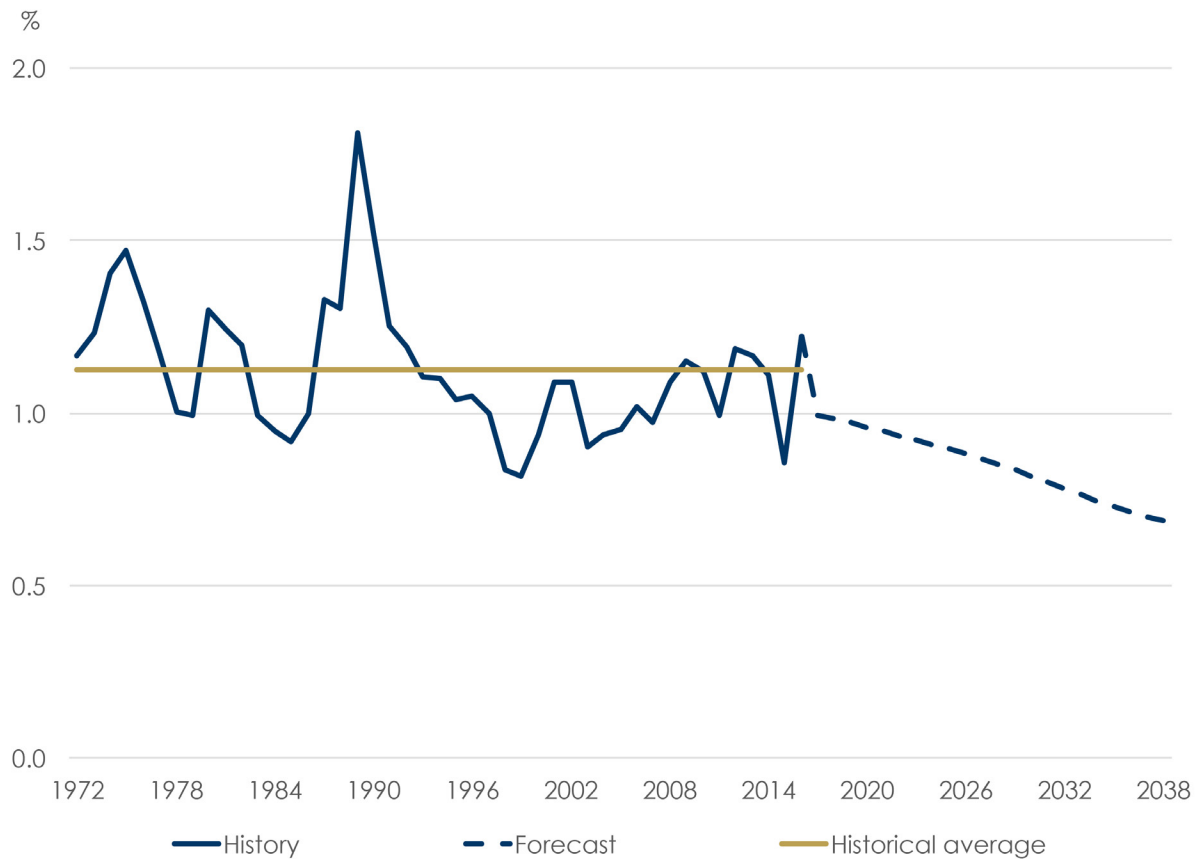
Note: Ranking calculations of health care system performance using CIHI data were done by the IFSD, by assigning values to above average (1), average (0), or below average (-1) performance for 15 indicators and then ranking the totals. Per capita cost ranking is from lowest to highest using CIHI data from 2014.

Future of Health Care Costs in Canada

The past, present, and future of health spending can be broken down in a couple of ways. The first relates to the individual cost drivers tied to direct inputs, such as spending on hospitals, physicians, drugs, and the like. The other approach relates to the macroeconomic drivers of health costs, namely population growth, aging, real income growth, inflation, and enrichment, the latter being the component of health spending that can't be explained by the first four.

Population growth is a key driver of health spending. Since the early-1970s, it has advanced at an average annual pace of 1.1% (see Chart 11). But it is not consistent from year to year, increasing as people are born and immigrants arrive, and falling as Canadians emigrate or expire. Since the post-World War Two Baby Boom, when there were nearly 4.0 children per woman in Canada in 1959, the fertility rate has gradually slowed to 1.6 (Statistics Canada, 2014). In part as a consequence, population growth has slowed. Despite this, immigration to Canada has remained solid and steady—one of Canada's advantages relative to other advanced economies. Given that the current pace of immigration is expected to continue into the future, population growth is also anticipated to remain positive, albeit modest, going forward.

Chart 11: Annual Population Growth in Canada

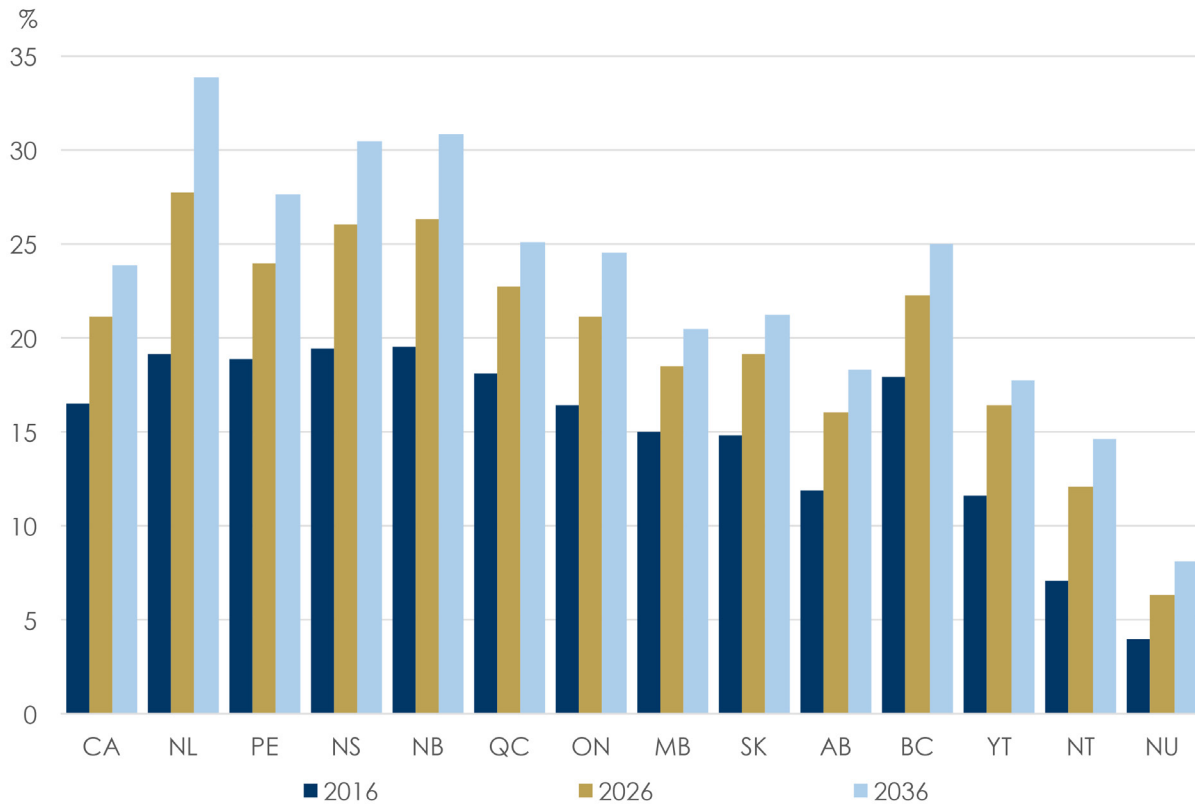


Source: Statistics Canada, Institute of Fiscal Studies and Democracy.
 Note: Population projections are from Statistics Canada's M1 (medium) scenario.

However, at the provincial level, the trends are much more varied. For instance, internal migration toward the resource-rich provinces and away from regions considered to be more economically depressed characterized much of the first 15 years of the 21st century. Of course, the tide turned with the sharp decline in oil prices that began in mid-2014. Consequently, emigration from Alberta trumped immigration in 2015 for the first time since the 2008–09 recession, and the mid-1990s before that. Fertility rates also vary significantly across provinces. For instance, Nunavut had by far the highest fertility rate in 2013, followed by Saskatchewan and Manitoba, while Newfoundland & Labrador and British Columbia had the lowest at less than half Nunavut's rate (Statistics Canada, 2016). Contrasting this with mortality rates, Nunavut again tops the list, with the other territories coming in a distant second at half Nunavut's rate. Meanwhile, Ontario and British Columbia have the lowest mortality rates in the country, at roughly one-third that of Nunavut.

As was previously discussed, aging is an important driver of health care costs. Even if Canada's population remained constant, aging alone would cause health care expenditures to rise as the per capita cost increases nearly exponentially with age. Going forward, the share of the population aged 65 and over is expected to rise from 17% in 2016 to 21% in 2026. By 2036, this share is projected to rise even further, to 24%. As a result, over the next 20 years, the IFSD is projecting that aging will contribute roughly one percentage point on average annually to the growth in national health care costs—much more than was typically contributed over the past 30 years. Of course, the circumstances across provinces vary greatly. For instance, aging is a particularly acute issue in the Atlantic provinces, while the Prairies are anticipated to benefit from a comparatively young population (see Chart 12).

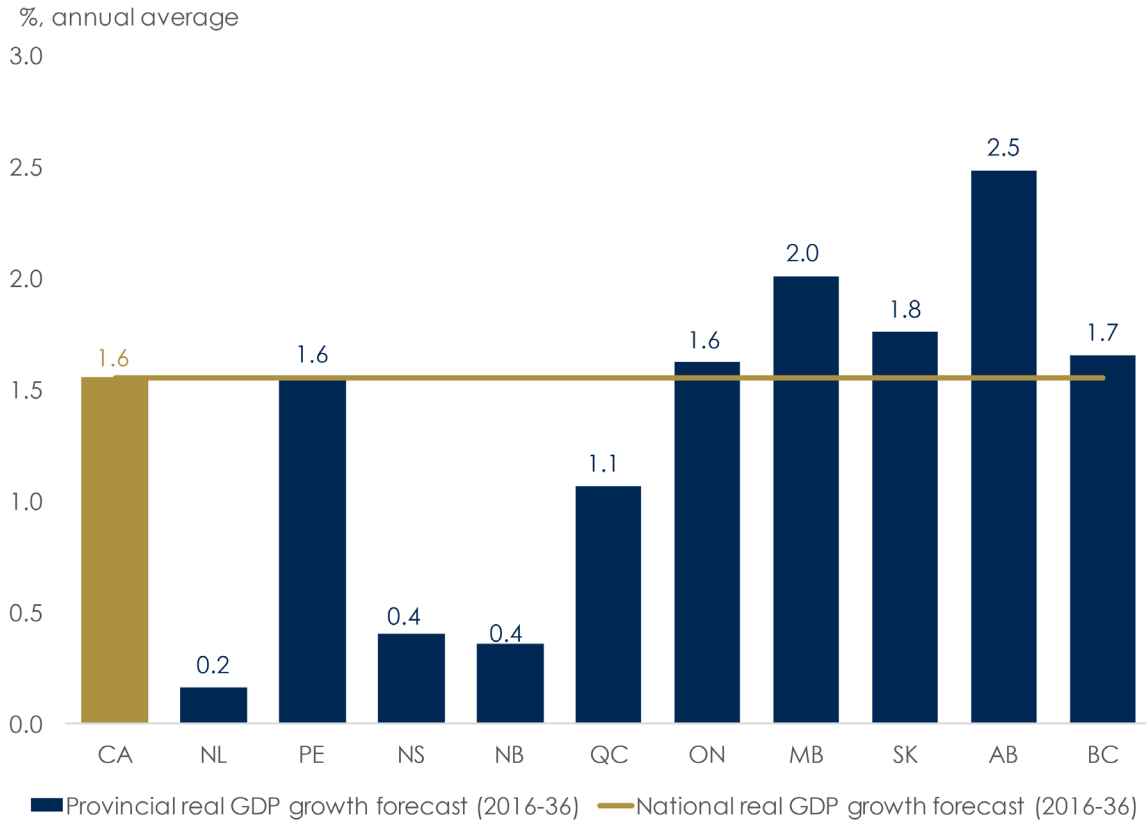
Chart 12: Share of Canadians Aged 65 and Over in the Population



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

Importantly, both population growth and aging also impact real GDP growth. As outlined in recent IFSD analysis, both of these factors impact labour input, the former positively and the latter negatively (Bartlett, 2017b). As such, the aging of the baby boomers will keep labour input growth relatively modest over the next two decades. In contrast, the jury remains out on how the other contributor to real GDP growth—labour productivity growth—is impacted by aging (Beach, 2008). As such, the IFSD has made the simplifying assumption that it eventually returns to its long-run average. Taken together, Canadian real GDP growth is expected to average about 1.6% annually over the long term. But, applying the same approach to the provinces and territories yields very different results (see Chart 13). For instance, Western Canada is expected to outperform relative to its provincial peers. That said, events since the decline in oil prices—such as weak economic growth and net outward migration in oil-producing provinces—suggest that using Statistics Canada's current population projections could overstate the long-term economic potential of the West. At the same time, the shrinking and rapid aging of the Atlantic provinces' populations are a well-known and oft-discussed concern from an employment growth and fiscal standpoint (Nova Scotia Commission on Building Our New Economy, 2014).

Chart 13: Canadian and Provincial Real GDP Growth Forecasts

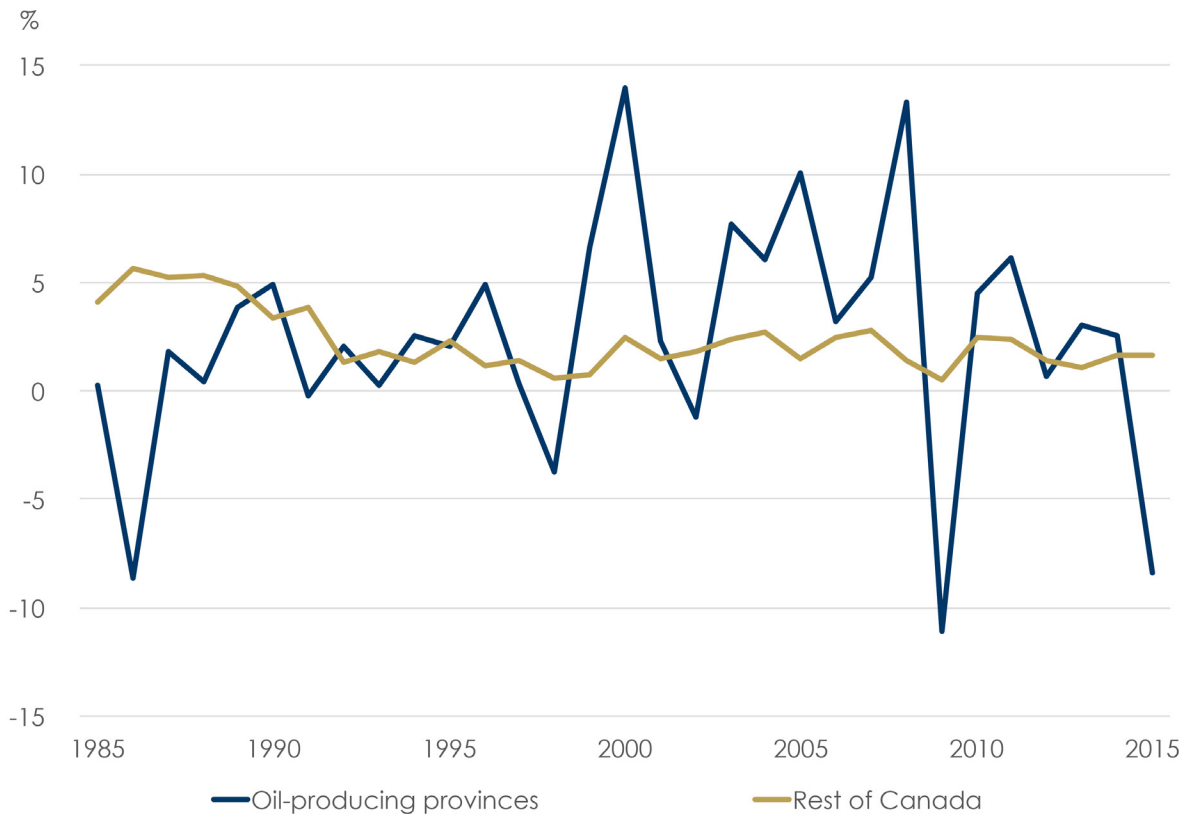


Source: Institute of Fiscal Studies and Democracy.

Note: For background on the IFSD's methodology for projecting long-term real GDP growth, see Bartlett (2017b).

Inflation also plays a key role in driving the evolution of health care costs. Using GDP inflation, which when combined with real GDP is equal to both the gross output and income of the Canadian economy, it can be observed that price growth in Canada is more than just what consumers pay. Given the resource intensity of Canadian output relative to other major economies, as well as the importance of international trade, GDP inflation in Canada has varied significantly from year to year. And this is even more evident at the provincial level. For instance, during the period of high and rising oil prices, there were incidents of GDP inflation hitting a double-digit annual pace in the energy-producing provinces of Alberta, Saskatchewan, and Newfoundland & Labrador (see Chart 14). Of course, this advance did an abrupt about-face along with the decline in oil prices. In contrast, provinces and territories that are not as energy-rich have tended to be subject to less volatility in GDP inflation.

Chart 14: Inflation in Canada

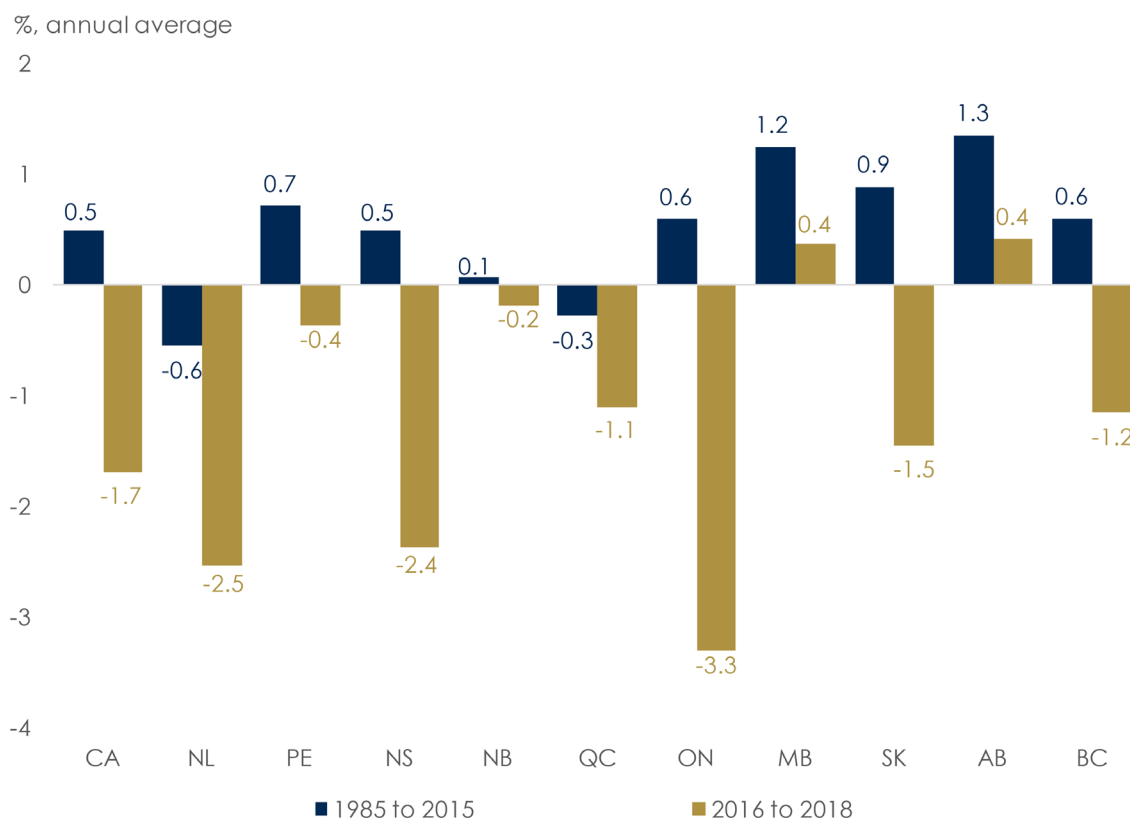


Source: Statistics Canada, Institute of Fiscal Studies and Democracy.

Note: Inflation is defined using the GDP deflator.

The final contributing component of health care cost growth is enrichment—the part health expenditures that can't be explained by any of the other four macroeconomic cost drivers of health spending. At the national level, enrichment amounts to about 0.5 percentage points (ppts) of the 5.6% average annual growth in health spending over the past 30 years. But scratch just beneath the surface, and it quickly becomes apparent that this is one of the cost components that differs most greatly across provinces and territories (see Chart 15). For instance, from 1985 through 2015, enrichment in Newfoundland & Labrador averaged -0.6 ppts annually, meaning growth in health spending was below the level suggested by macroeconomic fundamentals by that amount on average annually. Quebec also experienced negative enrichment over the past 30 odd years, to the tune of -0.3 ppts on average annually. At the opposite provincial extreme are Alberta and Manitoba, which have seen enrichment average 1.3 ppts and 1.2 ppts annually over the same period, respectively.

Chart 15: Canadian and Provincial Health Care Enrichment



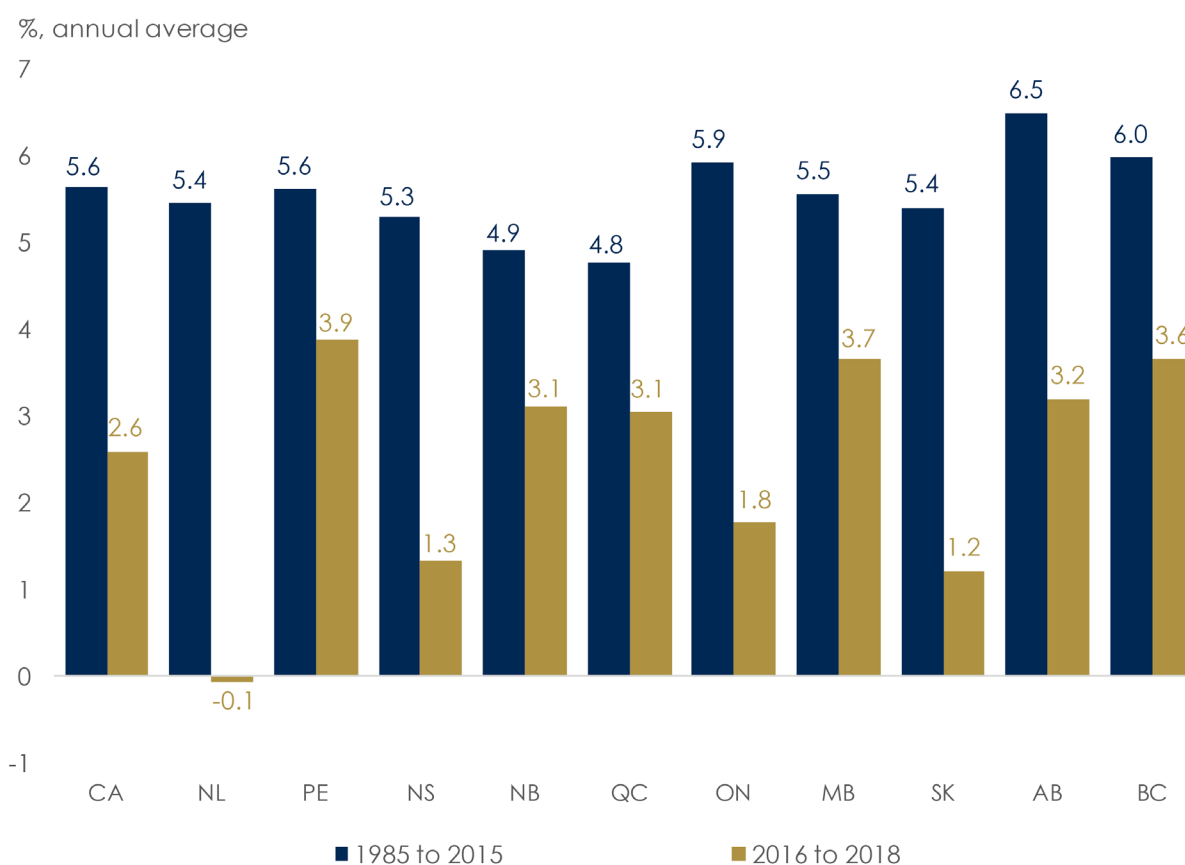
Source: Institute of Fiscal Studies and Democracy.

Note: Enrichment is the difference between growth in actual health spending and the notional health care cost pressures determined by the macroeconomic fundamentals of population growth, aging, real income growth, and inflation.

Looking ahead, the pace of health care enrichment is expected to contract in the 2016 to 2018 period in all provinces except Manitoba (0.4 pts) and Alberta (0.4 pts), although enrichment in both of these provinces should see a considerable deceleration relative to past years (see Chart 15). This means that health care costs will grow more slowly in most provinces than the pace of notional costs determined by the macroeconomic fundamentals of population growth, aging, real income growth, and inflation. Indeed, the IFSD is forecasting that health care enrichment in Canada over this period will be -1.7 pts, meaning that growth in health spending will be held below the notional cost growth determined by macroeconomic cost drivers by this amount on average annually. For some provinces, such as Ontario, this points to reining in total health spending so that it converges to being more in line with the notional costs. For others, such as Newfoundland & Labrador and Quebec, this means that total health spending will move even further away from the underlying costs from 2016 to 2018, suggesting their respective health care systems could benefit from some additional spending. In contrast, Manitoba and Alberta have spent in excess of the notional costs suggested by the macroeconomic cost drivers over the past few decades, and this is a trend that is expected to continue.

Putting this all together, from 1985 to 2015, historical health care cost growth was highest in Alberta (6.5%), followed by British Columbia (6.0%) and Ontario (5.9%), all of which trumped the national average of 5.6% (see Chart 16). In contrast, health care cost growth in Quebec averaged an annual pace of 4.8% over the past 30 years, followed closely by New Brunswick (4.9%). All other provinces fell somewhere in between, with varying degrees of enrichment relative to the underlying macroeconomic fundamentals.

Chart 16: Canadian and Provincial Health Care Cost Growth



Source: Canadian Institute of Health Information, Institute of Fiscal Studies and Democracy, official budgetary estimates and forecasts.

Note: The national forecast assumes health expenditures in the territories grows at a pace 3% faster than the total of the ten provinces, in line with the historical average. Years refer to fiscal years.

Fast forward to the health spending projections contained in recent budgets. When taking these into account, as well as the macroeconomic cost drivers projected by the IFSD, the story is very different. From 2016 to 2018, national health spending is expected to average 2.6% annually, down from 3.2% in the prior six years (see Chart 16). However, the projected growth is much more variable across provinces than was the case in the prior three decades. For instance, health spending is anticipated to average -0.1% annually in Newfoundland & Labrador, well below the pace of any other province. Saskatchewan (1.2%), Nova Scotia (1.3%), and Ontario (1.8%) are also targeting health spending growth below the national average. In contrast, at 3.9%, health spending in Prince Edward Island is projected by the IFSD to be closer to the historical average, followed by Manitoba (3.7%) and British Columbia (3.6%).

Role of the Federal Health Funding in Meeting Future Costs

Having assessed the historic and future cost structure of provincial-territorial health spending, it is now necessary to examine the future path of federal health funding. For the ten fiscal years through fiscal 2016–17, the CHT advanced at an average annual pace of 6%. However, in December 2011, the federal government of the time announced that the CHT escalator would slow to the 3-year moving average of nominal GDP growth, or a minimum of 3%, starting in the 2017–18 fiscal year. That is the pace of growth which has currently been agreed to by the federal and provincial-territorial governments, with the exception of Manitoba. As part of this agreement, the CHT has been supplemented by an additional \$11.5 billion over ten years for home care and mental health, plus some smaller additional measures announced in Budget 2017 (see Table 4). This works out to an average annual advance in federal health funding of roughly 3.6% per year over the next decade.

Table 4: Federal Health Care Funding Forecast

\$ billions	Federal Health Funding*	Canada Health Transfer	New Supplementary Measures	Projected Health Care Costs	Federal Share of Health Costs (%)
2013	30.3	30.3		138.5	21.9%
2014	32.1	32.1		142.4	22.5%
2015	34.0	34.0		145.7	23.3%
2016	36.1	36.1	0.0	149.1	24.2%
2017	37.5	37.1	0.4	153.5	24.4%
2018	39.4	38.4	1.0	157.3	25.0%
2019	41.2	39.9	1.3	163.1	25.3%
2020	42.9	41.4	1.5	170.6	25.1%
2021	44.6	42.9	1.7	178.5	25.0%
2022	45.9	44.4	1.5	186.7	24.6%
2023	47.2	46.0	1.3	195.1	24.2%
2024	48.7	47.6	1.1	203.7	23.9%
2025	50.1	49.2	0.9	212.6	23.6%
2026	51.2	50.9	0.3	222.0	23.1%

Source: Canadian Institute for Health Information, Finance Canada, Institute of Fiscal Studies and Democracy, official estimates and forecasts from subnational sources.

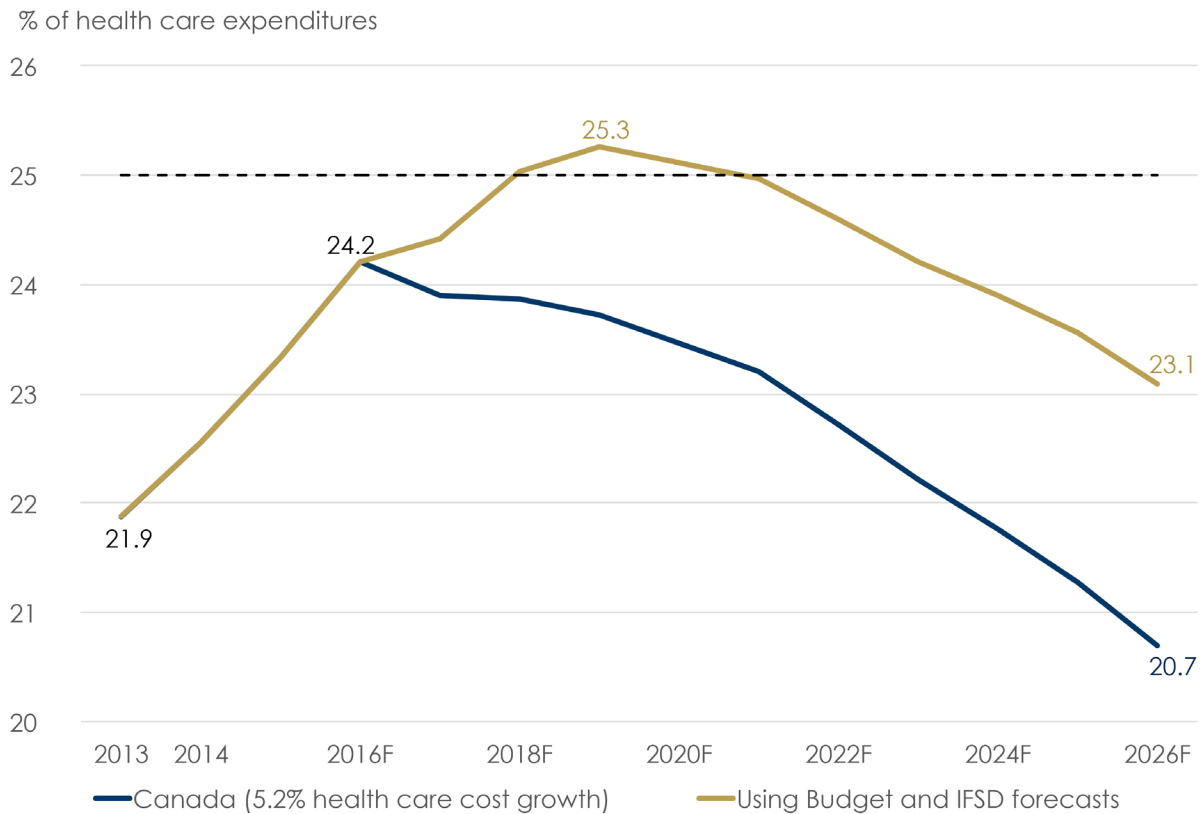
Note: Growth forecasts for health spending, real GDP, and GDP inflation are taken from the most recent budget documents for the period 2016 to 2018. The federal health funding forecast from fiscal 2016–17 through 2021–22 is from Budget 2017. Numbers include both public and private health expenditures.

*Federal health funding includes the CHT and modest new supplementary measures from Budget 2017.

Broadly speaking, most provincial-territorial governments are forecasting continued health care cost restraint through the 2018–19 fiscal year, with growth in aggregate health spending projected to be below that of the CHT. Consequently, the federal share of health spending is expected to rise over the next few years, eventually peaking in fiscal 2019 at 25.3% (see Chart 17). However, this is against the backdrop of rising underlying costs due to macroeconomic fundamentals. As a result, the CHT share of aggregate health spending is projected to fall starting in 2020. By 2026—the last year of the current health agreement—the CHT share of health spending is forecast to have fallen below the level in 2015. And it will fall even further thereafter unless a new agreement is struck. Additionally, if national health care costs increase at the average annual pace of 5.2% referenced by the Council of the Federation during the recent CHT negotiations, the share of federal funding in total health care costs will fall even further (Provincial and Territorial Ministers of Finance and Health, 2017).³ But, regardless of which health care cost growth outlook is used, the CHT is not expected to remain near the 25% share of total health spending requested by the Council of the Federation in 2015 (Canada’s Premiers, 2015).

³ The 5.2% projected annual increase in national health care costs was taken from a long-term economic and fiscal outlook published by the Conference Board of Canada (Beckman, Fields & Stewart, 2014). This forecast has been supported by a similar national projection from Canada’s Parliamentary Budget Officer (Bartlett, Cameron, Lao & Matier, 2012) and an Ontario-specific projection from Ontario’s Financial Accountability Officer (Financial Accountability Office of Ontario, Novak & Ngo, 2017).

Chart 17: Federal Share of Health Care Costs in Canada

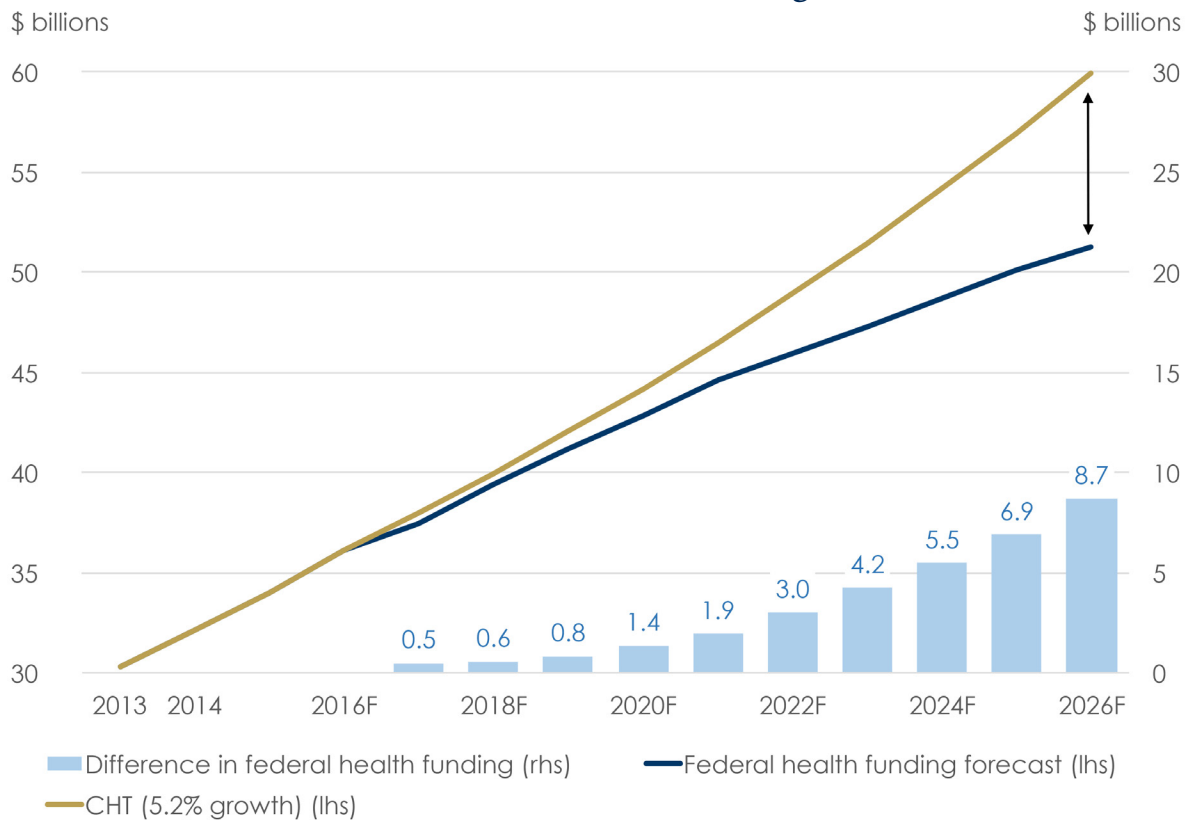


Source: Canadian Institute for Health Information, Council of the Federation, Conference Board of Canada, Institute of Fiscal Studies and Democracy, official budgetary estimates and forecasts.

Note: Years refer to fiscal years. Numbers include both public and private health expenditures.

Notably, if federal health funding were to increase at an average annual pace of 5.2% over the next five fiscal years, the provinces and territories would receive an additional \$5.2 billion in total federal support for their health care systems (see Chart 18). When examined over the next decade, the gap increases to a cumulative \$33.5 billion. As Canada’s most-populous province, Ontario will see the total amount of federal support for its health care system be the most negatively impacted as a consequence of accepting the federal government’s recent offer. The federal health funding gap for Ontario equates to a cumulative \$2.0 billion and \$12.9 billion in the 2017 to 2021 and 2017 to 2026 periods, respectively. The size of this gap is then followed, in descending order, by the provinces of Quebec, British Columbia, and Alberta.

Chart 18: Federal Health Funding Forecast



Source: Finance Canada, Council of the Federation, Conference Board of Canada, Institute of Fiscal Studies and Democracy.

Note: Years refer to fiscal years. Numbers include both public and private health expenditures. The federal health funding forecast is comprised of the federal Budget 2017 forecast through the 2021-22 fiscal year, and IFSD forecasts thereafter.

Conclusion

Over the years, health spending in Canada has tended to follow the ebb and flow of economic growth and federal funding. And the years since the 2008–09 recession have been no exception. With revenues restrained and budget deficits more common, provincial-territorial governments were forced to find savings. But while spending growth slowed across the board in recent years, the expenditure category that saw the most significant restraint was capital investment. Indeed, at the national level, investment in capital fell by an average of -1.3% annually from 2010 to 2014. In many provinces, the contraction in capital spending continued into 2015 and 2016 as well, raising concerns that spending is being deferred to some future date at a higher anticipated cost. As a consequence of this aggregate restraint, the federal funding for health care gradually increased as a share of total health spending over this period, as the CHT increased by 6% annually.

Looking ahead to the next few years, total health spending in Canada is expected to continue advancing at a pace well below its historical average. As a result, the CHT is forecast to rise as a share of total health spending through 2019. However, this isn't likely to last long, as growth in health spending is anticipated to be below the pace of advance in the notional costs related to underlying macroeconomic fundamentals. As such, the IFSD has determined that the federal share of health funding will fall below its 2015 level by 2026. This will force Canadian provinces and territories to disproportionately bear the burden of the cost of meeting the health care needs of their populations, inhibiting their ability to offer the services their citizens need.

With the inking of CHT agreements toward the end of the 2016–17 fiscal year, provincial and territorial governments exchanged short-term gain for long-term pain. Indeed, as the majority of the new federal funding that is in addition to the CHT is back-loaded to the end of the 5-year fiscal planning horizon, and beyond the 2019 federal election. This leads the IFSD to conclude that provincial and territorial governments should have rejected the federal government’s recent offer on health funding and held out for a better deal, as Manitoba continues to do.

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